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#### ECONOMIC COMMISSION FOR EUROPE

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HOUSING COMMITTEE

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Working Party on Housing and Building Statistics .

(Sixth session, from 14 to 16 May 1956)

# ACTIVITY OF THE CONFERENCE OF EUROPEAN STATISTICIANS

Note by the Secretariat

# I. Third Plenary Session of the Conference of European Statisticians

During its third plenary session in September 1955, the Conference of European Statisticians considered the statistical activities of the various technical Committees of the Economic Commission for Europe, on the basis of reports by the Secretariat. The passages of the report of the meeting which are of interest to the Working Party on Housing and Building Statistics are quoted below:

- (a) In the general discussion on the statistical activities of the various ECE Committees, the following remarks were made:
  - "(1) It would be desirable in planning the meetings of statistical working parties in the technical fields, that continuous attention be paid to the place which the subjects discussed have in the general programmes for the development of statistics. In particular, in respect of the frequency of meetings, consideration should be given not only to the needs of the users of the statistics concerned, but also to the question of how they fit in with the general programmes for the development of statistics of national statistical offices.
  - (ii) If technical committees of ECE or their statistical working parties were undertaking new major statistical problems, it was desirable that, wherever possible, they should consult the Conference for general guidance.
  - (iii) It was desirable that the Secretariat should continue to maintain the closest working relations with other international organizations in Europe interested in the same fields as the various statistical working parties, in order to avoid both duplication of work and multiplication of statistical standards.
  - (iv) When statistical classifications are drawn up by Statistical Working Parties, e.g. for the classification of consuming industries, account should be taken of the existing international classifications, such as the International Standard Industrial Classification of all Economic Activities."
     (Conf.Eur.Stats/37, paragraph 66)

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- (b) Discussing the statistical activities under the programme of the Housing Committee the Conference took note of the report on the work of the Working Party on Housing and Building Statistics and "referred the definitions drawn up by the Working Party to its Working Group on Population Censuses, for review in their relation to housing censuses." (Conf.Eur.Stats/37, paragraph 76).
- II. <u>Other Activities of the Conference of European Statisticians which are</u> related to the Work Programme of the Working Party

The Conference of European Statisticians has in its programme of work some other items which are, in a more indirect way, related to the work programme of the Working Party on Housing and Building Statistics.

(a) Statistics on fixed capital formation

The Conference's Working Group on Statistics of Fixed Capital Formation discussed at its third session in March 1956 a draft programme for the collection of statistics on gross fixed capital formation. This programme was adopted by the Group with the exception of two sections. On these two sections re-drafts will be prepared and circulated by the Secretariat, and when agreement is reached on the points concerned the whole programme will be circulated as an agreed document. The Working Group recommended that the Conference of European Statisticians adopt this document for the development of statistics on gross fixed capital formation in Europe (Conf.Eur.Stats/WG.3/44, paragraph 35). It is believed that this programme will provide valuable guidance to the Working Party on Housing and Building Statistics in its work on statistics on investments and the value of construction. Copies of the programme, when it has been adopted by the Conference, will therefore be made available to the members of the Working Party as part of the documentation relating to that item.

(b) <u>Population censuses</u>

The Conference's Working Group on Censuses of Population met for the first time in August 1955 and took note of the draft definitions on housing and households for the purpose of housing censuses by the Working Party on Housing and Building Statistics. In the course of

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discussion it was pointed out "that in most European countries, housing and population censuses were, in fact, taken at the same time and by the same or closely related operations, and it would be difficult to use different definitions for the two purposes. There was a problem, however, in reconciling the data on the usual residence with those for population in individual dwelling units." The Group did not have time to discuss these points in detail but recommended "that the problem of the relation of housing censuses to population censuses should be placed on its programme of work, and in this connexion agreed to review the proposed housing definitions at a later date".

(Conf.Eur.Stats/WG.6/5, paragraph 55).

As indicated above these proposals of the Working Group were endorsed by the Conference at its third plenary session. However, the Conference agreed that a further meeting of the Working Group should be called after its next plenary session in June 1956. During the next plenary session the Conference will again discuss its work programme, and will, in particular, decide upon the programme for the year 1956/ 1957. It is expected that on that occasion the Conference will also reconsider the date of the next meeting of the Working Group on Censuses of Population.

# (c) Indicators of short-term economic changes

The Conference included the subject "indicators of short-term economic changes" in its work programme for 1955/1956. A small group of experts met in November 1955 to establish a detailed programme of work in this field, in preparation for a meeting of a full working group from 22 to 26 May 1956. Discussing the types of statistics needed for short-term economic analyses, the Group of Experts agreed that it would be necessary to have systematic, prompt and frequent - quarterly or more frequent indicators of the broad developments in the main economic flows, and some "forward-looking" series which might give some clues to future movements. One of the subjects selected by the Group for the agenda of the meeting of the full working group was "current estimates of fixed capital formation, with special reference to surveys of current

and prospective capital outlays". In this connexion the Group considered "that the attention of the Working Party on Housing and Building Statistics of the ECE Housing Committee should be drawn to the need for current indicators on fixed capital formation, and that the Working Party should be invited to pay special attention to this aspect in its future work". (Conf.Eur.Stats/WG.7/2, paragraph 13). With regard to forward-looking statistics in this field, the Group considered that <u>inter alia</u> building authorizations, contracts placed, starts, etc. were useful indicators, and suggested that the study of this type of indicator be also referred to the Working Party on Housing and Building Statistics (Conf.Eur.Stats/WG.7/2, paragraph 15).

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# ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Sixth session, from 14 to 16 May 1956)

# DRAFT ANNUAL BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE

1. At its first session the Working Party on Housing and Building Statistics "expressed the hope that at a later stage it might be possible to supplement the quarterly issue (of the bulletin) by a more complete annual publication" and drew up a list of items which it felt should be included in such an annual issue (IM/HOU/WP.3/3, paragraph 9.C, and Appendix). During its subsequent sessions, the Working Party expressed further views on this subject in the light of which the original list should be amended (IM/HOU/WP.3/8, paragraph 17; IM/HOU/WP.3/14, paragraphs 9, 10, 13 and 18; IM/HOU/WP.3/19, paragraphs 34 and 35; IM/HOU/WP.3/25, Item B). In addition the Working Party agreed at its fourth session, "that for practical reasons and, in particular because of the different nature of quarterly and annual statistics in the field of housing and building it would be preferable to issue an Annual Bulletin of Housing and Building Statistics, in addition to four issues of the Quarterly Bulletin, than to issue once a year an enlarged issue of the Quarterly Bulletin" (IM/HOU/WP.3/19, paragraph 33). The final list of items for which statistical information should be published is shown in Annex I,

2. The Secretariat has drawn up a draft of the Annual Bulletin, showing information for the years 1948 to 1954 inclusive. In order to avoid issuing what at this stage might be an unnecessarily voluminous draft document, only two specimen countries, i.e. Denmark and Poland (Annex II.A and B), have been included in the present draft, which is submitted to the Working Party for general discussion. Since the information shown in the country sections is often HOU/WP.3/Working Paper No.5 page 2

incomplete and possibly inaccurate in places, drafts of these sections are being sent direct to the competent authorities for comment, completion and correction where necessary. The Secretariat intends to issue the first Annual Bulletin in the course of 1956, covering also 1955. Countries are therefore invited to send to the Secretariat before 1 June 1956 the necessary completions (among other data for 1955) and corrections for the preparation of the final version of the Bulletin. The layout of this final version will not necessarily be identical with that of the present draft.

#### ANNEX I

# STATISTICAL SERIES FOR INCLUSION IN THE ANNUAL BULLETIN FOR HOUSING AND BUILDING STATISTICS FOR EUROPE

### I. <u>Occupation of Dwellings</u>

1. Pre-war:

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number of existing dwellings and of family households<sup>(1)</sup>

- 2. Post-war:
  - (a) number of dwellings cross-classified by number of occupants and number of rooms<sup>(2)</sup>
  - (b) number of inhabitants and number of family households
  - (c) number of existing dwellings and rooms
- 3. Population data (pre- and post-war years)

# II. Activity in the Housing Sector

- 1. Dwelling construction expressed quantitatively:
  - (a) dwellings completed (total), classified according to:
    - (i) class of builders (public authorities, housing associations, private persons)
    - (ii) size (number of rooms, floor-space, volume)
    - (iii) structure (dwellings in houses and dwellings in flat-buildings)

- (iv) character of building activity
   (new construction, repairs, etc.)(3)
- (b) dwellings under construction
- 2. Rent (index)

(3) Addition to dwelling stock only.

<sup>(1)</sup> For a year as near to 1939 as possible, but not earlier than 1930.

<sup>(2)</sup> Or for countries for which such information is not available, the number of family households cross-classified by number of rooms and persons per family household.

# III. Activity in the Building Sector

- 1. Volume of building (1) :
  - (a) residential buildings (and dwellings therein)
  - (b) non-residential buildings
- 2. Value of building work done (investments):
  - (a) residential buildings
  - (b) non-residential buildings
  - (c) civil engineering
- 3. Production index

# IV. Manpower and Wages 4

- 1. Employment and hours worked:
  - (a) in housing
  - (b) in non-residential building
  - (c) in civil engineering
- 2. Unemployment
- 3. Wages (3)
- V. Building Materials (4)
  - 1. Consumption:
    - (a) cement
    - (b) bricks
    - (c) roofing materials
    - (d) glass
    - (e) wood for building
    - (f) steel for building

(1) Completions.

- (2) With details on qualification.
- (3) Indices of earnings, or if not available, of wage rates,
- (4) Supplemented by data on other materials or on different qualities of the materials listed.

- 2. Prices (index of consumer prices or wholesale prices for the same materials as under 1).
- VI. Index of building costs (1)

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- (a) residential building
- (b) non-residential building
- (c) civil engineering work

<sup>(1)</sup> With detailed breakdown by components.

# ANNEX II.A

# DENMARK

# I. OCCUPATION OF DWELLINGS

# Table 1

# Estimated number of existing dwellings and rooms

P	eriod <sup>(a)</sup>	Dwellings <sup>(b)</sup>	Rooms					
1940		••	••					
1950 1951 1952 1953 1954 1955	•	1,291.0 1,315.9 1,334.8 1,356.2 1,379.5	••					
(a)	(a) Situation at the end of the period unless otherwise indicated.							
(Ъ)	kitchen or	ingle rooms pr cooking instal ered as dwelli	lation which have					

(in thousands)

Table 2	

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Number of existing households and total population

Period <sup>(a)</sup>	Households <sup>(b)</sup>	Total population
1940 (November)	1 <b>,1</b> 58	3,844
1950 (November) 1951 1952 1953 1954 1955	1,318   	4,281 4,304 4,334 4,369 4,405
(a) Mid-year s indicated.	ituation, unles	ss otherwise
(b) Private ho living alc	ouseholds (inclu one).	iding persons

Table 3

# Number of Dwellings. Cross-classified by Number of Occupants and by Number of Rooms (November 1950)(a)

Occupants		Dwellings	with	rooms		• Total	Total		
per dwelling	1	2	3	4	5 and more	dwellings	occupants		
0 1 2 3 4 5 6 7 8 and more	0.4 35.0 8.8 3.7 1.4 0.4 0.1 0.1	1.4 61.0 92.9 76.0 56.6 17.5 5.1 1.5 1.0	0.9 25.6 76.4 61.7 47.9 22.4 8.2 2.8 2.0	0.4 8.9 36.2 33.9 28.9 15.3 6.3 2.8 1.9	0.2 3.6 19.8 21.2 21.6 15.9 8.7 4.5 3.4	3.4 134.1 234.1 196.4 156.4 71.6 28.4 11.7 8.4	- 134.1 468.2 584.3 625.6 357.8 170.4 82.0 73.1		
Total dwellings	49.9	313.1	248.1	134.4	98.9	844.4	-		
Total occupants	72,8	838.8	754.1	448.4	306.6	-	2,500.5		
(a) Coverage: towns and urban areas with more than 1,000 inhabitants.									

(in thousands)

# II. ACTIVITY IN THE HOUSING SECTOR

# 1. Dwelling construction

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Table 4

# Dwellings Completed in the whole Country

Areas	1948	1949	1950	1951	1952	1953	1954	1,955
Urban and principal rural Other rural municipalities	16.9 2.7(a)	21.0 3.8				18.2 3.1	19.5 3.8	19.9 4.1
Total	19.6 <sup>(a)</sup>	24.8	20.4	21.5	19.0	21.3	23.3	24.0
(a) Approximate.								

# <u>Table 5</u> <u>Dwellings Completed in Urban Areas<sup>(a)</sup>, Classified According to Builder</u>

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Builder	1948	1949	1950	1951	1952	1953	1954	1955
Private persons without public assistance Private persons with public	4.9	4.7	2,5	1.9	1.5	1.3	1.4	1.7
assistance Building societies with public	3.8	5.2	5.5	6.5	6.0	8.1	9.7	7.7
assistance	6.0	9.1	7.7	8.5	7.8	8.0	7.3	9.6
Public bodies	2.2	2.0	1.8	1.1	0.9	0.8	1.1	0.9
Total	16.9	21.0	17.5	18.0	16.2	18.2	19.5	19.9
(a) Including principal rural areas.								

(in thousands)

# <u>Table 6</u> <u>Dwellings Completed in Urban Areas (a)</u>, by Number of Royms (b)

Rooms per dwelling	1948	1949	1950	1951	1952	1953	1954	1955
l 2 3 4 5 or more	0.9 3.6 7.6 3.7 1.1	1.4 4.2 9.1 4.8 1.5	0.6 3.2 7.4 4.9 1.4	0.7 2.5 7.8 4.9 2.1	0.8 2.0 7.3 4.3 1.8	0.7 2.4 7.7 5.4 2.0	0.7 2.2 8.0 6.0 2.6	1.1 2.6 7.8 5.9 2.5
Total	16.9	21.0	17.5	18.0	16.2	18.2	19.5	19.9
<ul> <li>(a) Including principal rural areas.</li> <li>(b) With few exceptions all dwellings are equipped with kitchen, but kitchens are not counted as rooms.</li> </ul>								

# Table 7

Dwellings Completed in Urban Areas<sup>(a)</sup>, Classified According to their Structure (in thousands)

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			1951	1952	1953	1954	1955
9.1 6.5 1.3	13.0 6.7 1.3	10.7 6.0 0.8	9.9 7.6 0.5	8.8 6.9 0.5	9.0 8.7 0.5	8.5 10.5 0.5	10.6
16.9	21.0	17.5	18.0	16.2	18.2	19.5	19.9
	6.5 1.3 .6.9	6.5     6.7       1.3     1.3       6.9     21.0	6.5       6.7       6.0         1.3       1.3       0.8         6.9       21.0       17.5	6.5         6.7         6.0         7.6           1.3         1.3         0.8         0.5           6.9         21.0         17.5         18.0	6.5       6.7       6.0       7.6       6.9         1.3       1.3       0.8       0.5       0.5         6.9       21.0       17.5       18.0       16.2	6.5         6.7         6.0         7.6         6.9         8.7           1.3         1.3         0.8         0.5         0.5         0.5	6.5       6.7       6.0       7.6       6.9       8.7       10.5         1.3       1.3       0.8       0.5       0.5       0.5       0.5         6.9       21.0       17.5       18.0       16.2       18.2       19.5

workers, dwellings in prefabricated buildings, those in buildings principally for business purposes and dwelling-units created by conversion.

Table 8
Dwellings Completed in Urban Areas (a), Classified According to
Character of Building Activity

(in thousands)

Building activity	1948	1949	1950	1951	1952	1953	1954	1955
New dwellings Dwellings provided by conversion	16.4 0.5	20.5 0,5	17.2 0.3	17.8 '0.2	16.0 0.2	18.0 0.2	19.3 0.2	19.7 0.2
Total	16.9	21.0	17.5	18.0	16.2	18.2	19.5	19.9
(a) Including principal rural areas.								

		Table 9				4 .
Dwellings	under	Construction	in	the	Whole	$Countrv^{(a)}$

Areas	1948	1949	1950	1951	1952	1953	1954	1955		
Urban and principal rural Other rural municipalities	22.5 1.3	20.4 0.7	21.2 1.1	16.7 0.8	20.6 1.0	22.6 1.5	23.4 1.7	••		
Total	23.8	21.1	22.3	17.5	21.6	24.1	25.1			
(a) Situation at the end of the period.										

 $\frac{\text{Table 10}}{\text{Index of Rent}}(a)$ (1948 = 100)

1949	1950	1951	1952	1953	1954	1955
104	109	113	118	122	0 N	••
		old dwe rter of		level ar.	during	; the

III. ACTIVITY IN THE BUILDING SECTOR

1. Volume of building

Table 11

Buildings Completed in the Whole Country

(in 1,000 m<sup>2</sup>)

Attractor	1948	1949	1950	1951	1952	1953	1954	1955
Urban and principal rural Other rural municipalities	۲ ن ن و	2,218 651	2,069 684	2,229 852	2,133 698	2,368 784	2,567 871	0 8 8 (j
Total	• 0	2,869	2,753	3,081	2,831	3,152	3,438	3,500

# Table 12

# Buildings Completed in the Whole Country, Classified According to Purpose (in 1,000 m<sup>2</sup>)

Purpose	1.948	1949	1950	1951	1952	1953	1954	1955			
Residential buildings	6 g	1,925	1,659	1,844	1,564	1,831	2,048	2,080			
Non-residential buildings <sup>(a)</sup> of which:	0.	944	1,094	1,237	1,267	1,321	1,390	1,420			
Factories and workshops	••	412	307	314	329	- 297	326	360			
Farm buildings		261	340	411	398	362	429	310			
Other buildings for	•	.		Į.				ł			
business purposes		189	304	314	246	257	297	300			
Public, non-business build	<b>e</b> 0	82	143	1.98	294	405	338	450			
Total floor space	<b>0</b> 9	2,869	2,753	3,081	2,831	3,152	3,438	3,500			
(a) Includes also public buildings with an economic character such as electricity-, gas- and water-works.											

# 2. <u>Investments</u>

# Table 13

# Investments in Buildings and Works, 1953 - Prices

(in millions of kronor)

Sector	1948	1949	1950	1951	1952	1953	1954	1955
Building:						1	1	
of which: Residential building Non-residential building Farm buildings Public civilian	••	650 180 70 165	225 65	200 90	190 105	215 105	235 130	••
of which: New building, total Repairs and maintenance	••	1,065 865		1,135 1,060			1,520 1,065	••
Total		1,930	2,175	2,195	2,220	2,465	2,585	••
Works:							· .	
Private works Public civilian works	• •	130 755					115 900	. <b>.</b> .
Total		885	955	905	885	975	1,015	••
Military building and works:	9 🖷	40	40	100	160	185	180	•••
Total	• •	2,855	3,170	3,200	3,265	3,625	<b>3,78</b> 0 <sup>°°</sup>	•••

# IV. MANPOWER AND WAGES

1. Employment and hours worked

# <u>Table 14</u> <u>Manpower</u>(a)

Sector	1948	1949	1950	<b>19</b> 51	1952	1953	1954	1955		
Insured: - Building - Civil Engineering	••	••	•••	••·	••	118,752 60,702 58,050	121,296 61,598 59,698			
Unemployed: - Building - Civil Engineering	••	••	••	••	• • • •	17,623 5,306 12,317	18,030 5,621 12,409	••		
(a) Members of Unemployment Fund.										

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# Table 15

Manpower Employed in Building and Civil Engineering, by Kind of Activity

Sector	1948	1949	1950	1951	1952	1953	1954	1955
Building	•••	69.0	72.5	73.0	, <b></b>	••	••	
New construction	••	28.4	32.9	31.1	••	••	••	••
Residential	· • •	17.5	19.3	17.6	••	••	••	
Industrial and commercial	••	4.7	6.1	5.3	••	•••	••	••
Agricultural		2.5	2.3	3.1	••	•••	••	••
Public buildings		3.7	5.2	5.1	• • •			•••
Maintenance and conversion	••	40.6	39.6	41.9	••	•••	•••	•••
Civil engineering	••	••	56.0	55 to 56	• •	••	••	•••
Total	••	. • .•	128.5	128 to 129		••	••	**

(in thousand workers)

Tabl	<u>le 16</u>	
ex of Ho	ours Worked	

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•	•		1	Index of Hours Worked
				(1950 = 100)
•	·	• •		

· · · Sector · ·	•	1948	1949	1950	1951	1952	1953	1954	1955
Building and construction Building		••	••	100 100	102 102	102 100	111 109	 113	••

· 2. <u>Unemployment</u>

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# Table 17

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Unemployment

(in number of workers and percentages)

Sector	1948	1949	1950	1951	1952	1953	1954	1955
			,				18,030	[
Total Building	••	••	0 9  0 0	•••	••	5,306	5,621	<b>.</b>
Civil engineering Percentage <sup>(a)</sup>	••	••	••	••	••	12,317	12,409 14.9	••
Building Civil engineering			••	• • •	••	8.7.	· 9.1 17.8	· · · · · · · ·

# 3. <u>Wages</u>

Table 18

Index of Wages

(1948 = 100)

Occupation	1949	1950	1951	1952	1953	1954	1955
Bricklayers Hodmen	103 103	112 107	127 116	131 126	.135 128	141	••

# V. BUILDING MATERIALS

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# 1. <u>Consumption</u>

### Table 19

1951 1952 1953 1954 1955 1949 1950 Unit 1948 Materials 106 577 591 653 618 566 611 464 Bricks . . 26 24 106 27 28 26 27 27 Roofing tiles . . 106 25 24 26 19 24 19 • • Moler bricks . . 872 988 989 649 705 597 625 1,000 t. Cement • • 11.3 11.1 9.5 11.5 9.7 1,000 t. 9.8 Window glass ... • • 100 to 105 115 130 125 115 140 1,000 Wash-basins • • . . 7 18 17 16 15 21 Bath-tubs(a)1,000 • • • • 1,000 m<sup>2</sup> (b) 700 660 860 970 **h**060 Radiators 460 .... • • Nails(a) 10 11 13 6 1,000 t. 11 10 • • . . 4.9 5.3 6.2 5.4 5.6 1,000 t. Down pipes . . • • 38 32 39 35 44 1,000 t. 29 Drawn tubes .. . . 11 6 7 11 Pressure pipes 1,000 t. 8 14 • • . . Asbestos-cement 2,8 tubes(a) 5.9 1.9 3.1 4.8 1.000 t. . . . . • • 25 21 20 1,000 t. 15 .11 13. Iron girders . . . . 156 143 1,000 t. 126 138 161 146 . . Other iron . . - of which: concrete 30-32 32-34 28-31 34-37 27 30-31 1.000 t. iron .. . . 31 43 35-36 - 33 35 106 cu.ft. i 36 . . . . Timber

(a) As available data on stocks are incomplete, these figures represent production, plus imports less exports.
(b) Heating surface.

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Consumption of Selected Building Materials

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# 2. Prices

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# Table 20

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Index of Wholesale Prices

(1 July 1949 = 100)

Materials	1948	1949	1950	1951	1952	1953	1954	1955
Cement Bricks Reinforcing bars Timber General <sup>(a)</sup>	••• •• •• 100	•• •• •• 98	••• •• •• 96	··· ·· ·· 117	   124	   118	113 134 112 163 115	• - • • • •
(a) 1948 = 100.								

VI. BUILDING COSTS

Table 21

Index of Building Costs

(1948 = 100)

Items	1949	1950	1951	1952	1953	1954	1955
Materials Wages	102 106	108 113	137 125	141 138	131 142	130 148	••
Total	103 _	109	133	140	134	135	140

#### DENMARK

#### EXPLANATORY NOTES

#### I. OCCUPATION OF DWELLINGS

#### Table 1

The latest housing census (November 1950) only covered towns and urban areas with more than 1,000 inhabitants, corresponding to 2,501,000 occupants and a total population of 2,637,000, i.e. about 62 per cent of the population in the whole country. The number of dwellings counted by the census amounts to 845,000 units. The corresponding figure for November 1940 is 753,000. The number of dwellings existing in the other areas of the country has been estimated at 446,000.

#### Dwelling unit:

Comprises any structurally separated room or suite of rooms in permanent buildings used or intended for habitation by family households and having a separate access to a street or to a common passage or stairway; single rooms of a dwelling occupied by lodgers only, are counted as separate dwellings; single rooms let out directly by the owner of the house (i.e. mostly attics), are considered separate dwellings if they are provided with kitchen or separate cooking installations. A number of such single rooms provided with kitchen or separate cooking installation in November 1950 in towns and urban areas is the following:

> Number of single rooms (= dwellings) : 8,736 Number of occupants : 10,466

#### Room:

As rooms are considered all ordinary rooms for habitation, including servants' rooms and others, insofar as they are actually inhabited, and rooms used for both habitation and business purposes. Kitchens, pantries, and rooms used exclusively for business purposes, (for example offices, shops, storerooms, workshops and the like) are not considered as rooms.

#### Table 2

The number of private households in November 1940 (1,158,000) corresponds to 3,755,000 persons; some further 88,500 persons belonged at that date to institutional households.

#### Table 3

#### Dwellings:

All dwellings, whether occupied or not. For definition see I, Table 1, above.

#### Rooms:

For definition see I, Table 1, above.

#### Occupants:

Usual residents.

# II. ACTIVITY IN THE HOUSING SECTOR

### 1. <u>Dwelling construction</u>:

(a) <u>Dwelling unit:</u>

A dwelling-unit is any structurally separated room or suite of rooms in permanent buildings used or intended for habitation by family households and having separate access to a street or to a common passage or stairway. Also considered as dwelling-units are: single rooms - with admission to kitchen or other cooking installation in houses exclusively inhabited by lodgers. The number of dwellings covers all units added, i.e. new construction (reconstruction after fire, slum-clearance, etc., also being considered as new construction), as well as extensions and conversions, if the latter create new dwelling units.

### (b) Work completed:

Building work is considered as "completed" when the building is taken over for use or is ready for immediate occupation. In the case of residential blocks with several flats, the municipal authorities may not be able closely to check on the completion of the work. This happens particularly in areas where substantial building activity is going on. The time lag in statistical reporting cannot be estimated. Moreover, it is assumed that some municipalities are not reporting completion before the permit to occupy has been issued or the check made to the effect that the construction complies with the approved plans.

(c) <u>Urban (and principal rural)</u> areas:

These refer to the capital area, to the provincial towns, including their suburbs, and to eighty-six rural communities, covering about 85 to 95 per cent of the country's total dwelling construction. It is the duty of the builders to report to the local authorities when work on building has begun, and the local authorities then report to the Central Statistical Office.

#### 2. Rent

#### Table 10

The index is calculated on the basis of reports on the rent paid in about a quarter of the total number of existing buildings; hence the index refers to old as well as new buildings and the relative importance of the latter in the index is increasing yearly.

#### III. ACTIVITY IN THE BUILDING SECTOR

#### 1. Volume of building

#### Table 11

Floor space is defined as gross floor space. Data include new construction as well as extension of buildings even if new dwellings are not created, the increase in floor space being decisive (thus conversion and even major repairs are not included). Reconstruction after fire, slum-clearance, etc., is considered as new construction.

By "floor space" is meant the total area covered by buildings (external measurements) multiplied by the number of storeys in the building.

As regards the attic, only the part occupied is included. Lumber rooms and similar rooms in the attic are not considered as "parts utilized". Cellars are omitted. In the case of rural districts, the special rule applies that the utilized part of the attic is included only if measuring more than half of the whole.

### Table 12

<u>Residential buildings</u>: include those buildings of which more than half the floor space is destined for lodging.

<u>Non-residential buildings</u>: include those buildings of which more than half the floor space is not destined for lodging.

#### IV. MANPOWER AND WAGES

#### 1. Employment and hours worked

#### Table 14

As the statistics are only approximate they afford no direct information on employment. They cover insured workers only, but not the many master artisans who also take part in building work.

#### Table 16

The statistics are based on a stratified sample of the most important construction trades. For some of the trades all establishments above a certain size are included, the number of big establishments being rather small. All the establishments belonging to the contractors' union (i.e. all contractors of importance) are likewise included. The sample includes about 1,200 establishments from six trades. The trades directly included represent more than three-quarters of the total turn-over of the construction industry. When weighting the single trades, the nature of the small trades not directly covered is taken into account. The index of hours worked in the most important trades is as follows:

Trades	1951	1952	1953	1954	1955
Bricklayers	101	89	102	107	••
Carpenters	98	97	106	106	
Painters	100	99	101	100	
Plumbers	96	97	102	105	
Electricians	109	118	120	126	

Index 1950 = 100

#### 2. Unemployment

#### Table 17

This is calculated as the number of average unemployed members of the Unemployment Fund. Trades included are: masons, assistant-masons, carpenters, painters, joiners, glaziers, saddlers, plasterers, electricians, foundry-workers, plumbers, navvies and cement workers.

#### 3. <u>Wages</u>

<u>Table 18</u>

The indices refer to hourly earnings; they include additional payments for official holidays (not Sundays), but exclude additional payments for vacations and other special allowances.

#### V. BUILDING MATERIALS

1. Consumption

<u>Table 19</u>

Bricks: front wall and flamed bricks. Cement: Portland. Wash-basins: hand-basins and lavatory bowls. Radiators: cast or sheet iron. Down pipes: cast-iron pipes, wall thickness up to 6.5 mm. Drawn tubes: rolled or mild steel. Pressure pipes: cast-iron. Iron girders: I-, H- and U- shaped. Other iron: other bar-iron and sectional iron. Timber: sawn.

The percentage of the consumption of the materials used for buildings is indicated below:

	<u>%</u>
Bricks:	100
Roofing tiles:	100
Moler bricks:	100
Cement:	50 to 75
Window panes:	about 100
Wash-basins and lavatory bowls:	100
Bath-tubs:	100
Radiators:	about 100
Nails:	50 to 75
Down pipes:	100
Drawn tubes:	30 to 50

2. Prices

#### Table 20

General: the series includes:

bricks, tiles, cement, window-glass, lavatory basins, washstands, technical porcelain for electrical installation and quicklime.

Cement: ordinary Portland. Bricks: red, manually treated façade bricks, first-class. Timber: pine beams  $l_2^{\perp}$  in. x 6 in., fourth-class, imported.

#### VI. BUILDING COSTS

#### Table 21

This series relates to the index of input-prices for a small dwelling-house; it is based on information on wholesale prices for about twenty building materials and on average hourly earnings in the building trades in the provinces. By the computation of the index of total costs, materials and wages are given the weights 2 and 1 respectively. The index does not take into account changes in production methods or such costs as interest paid on money borrowed, etc.

From April 1954 onwards the general index of building costs is based on a detailed calculation of hours of work and costs of the construction of a certain type of house, the so-called index house, provided by the Ministry of Internal Affairs and Housing. The index house is a residential three-storey building with six stair-cases and thirty-six apartments. The gross floor space is 2,648 m<sup>2</sup>. The outer walls consist of bricks, the roofing of corrugated asbestos-cement sheets and the decks of reinforced concrete.

The apartments consist of two larger and a smaller room, with a floor space of 73.6 m<sup>2</sup>, and a balcony. Among the conveniences may be mentioned: central heating, hot water, bath, built-in cupboards and wood-block flooring. The house is provided with common laundry machinery and waste-shafts.

Designs and descriptions of the index house have been worked out, and the quantities of materials and working operations necessary for the construction have been measured. Further, the number of working hours required for the various trades have been calculated. The purchase price of the site, mortgage expenses and other costs, e.g. fees of architects, engineers and lawyers and interest on loans before the completion of the building, are not included.

As it would be impossible currently to collect prices of the more than 1,000 items of materials, the price movements of the most important or most representative materials are taken into account, totalling 132 and covering 75 to 80 percent of the total material costs.

The prices collected are net prices, i.e. gross prices minus various discounts and bonuses, and it is stipulated that the materials be delivered to the building site, and that payment be made no later than three months after delivery.

Most prices vary from place to place, and are made available by certain architects of twenty-four provincial towns. The Prices for such materials as sanitary and central-heating equipment, are presumed to be similar throughout the country and are provided by the price-controlling office.

Labour costs are provided by Byggeriets Beregningsinstitut (Building Cost Calculating Institute) and are based on price-lists of building work in the provincial towns. Building costs, which include the profit of the master artisans, are based on the total costs of materials and labour; also included are insurance and administrative expenses.

The data are received quarterly. The index is then calculated, by multiplying quantities by prices, and is related to the basis established as from 1 April 1954.

#### SOURCES

- 1. <u>Statistiske Efterretninger, Statistical Department, Copenhagen</u>: Tables: 4, 5, 6, 7, 8, 9, 10, 11, 12, 16 and 18 (bricklayers).
- 2. <u>Housing Statistics, November 1950, Statistical Department, Copenhagen:</u> Tables: 1, 2 (households) and 3.
- 3. <u>Byggeindustrien. Copenhagen:</u>

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Tables: 20 (except the "General" series) and 21.

- 4. <u>Economic Survey of Denmark, 1954, Ministry for Foreign Affairs, Copenhagen:</u> Table: 13.
- 5. <u>Monthly Bulletin of Statistics, United Nations, New York:</u> Tables: 2 (population) and 20 ("General" series).
- 6. <u>Statistisk Arbog</u>, <u>Statistical Department</u>, <u>Copenhagen</u>: Table: 18 (hodmen).
- 7. <u>Directly supplied by the Statistical Department, Copenhagen</u>: Table: 19.
- 8. <u>Redegørelse for Bygge-og Anlaegsvirksomheden, Housing Ministry, Copenhagen</u>: Table: 15.
- 9. <u>Arbeidsløsheden, Statistiske Meddelelser, Statistical Department, Copenhagen</u>: Tables: 14 and 17.

### ANNEX II.B

### POLAND

# 1. OCCUPATION OF DWELLINGS

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# <u>Table 1</u>

# Number of existing dwellings and rooms

Peri od (a)	Areas	Dwellings	Rooms <sup>(b)</sup>
1931(c) 1939(d)	urban urban	1,930 2,800	4.227 7,250
1946 (February)	urban	1,917	4.412
1950 (3 December) 1950 (3 December) 1950 (3 December)	rural urban entire country	2,710 <sup>(e)</sup> 2,445(f) 5,873	7,681 5,970(f) 13,650
1952 1953 1954 1955	urban urban urban urban	• • • • • •	6,348 6,493* 6,634* 6,782*

(in thousands)

(d) Present territory.

(e) Residential buildings, with 14.7 million occupants.

(f) With 9.2 million occupants.

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# Table 2

# Population

# (in millions)

Period <sup>(a)</sup>		Are	98 <b>8</b>
Period	Total	urban	rural
1938 <sup>(b)</sup> 1946 (February)	34.9 23.9 <sup>(c)</sup>	7,5	16.1
1950 (1 January) 1953 (31 December) 1954 1955	24.8 26.5 26.8 27.3	9.1 10.8 11.7	15.7 15.7 15.6
(b) Pre-war territor	of 300,000 inhabit	e indicated. ants according to ur	ban or rural area

# Table 3

Number of existing dwellings in urban areas, classified according to number of rooms (December 1950)

(as percentages)

······································	Dwelli	ngs with	(Teta)		
Percentages	_ 1	2	· 3	4	Total
of dwellings of occupants	21.1 15.0	37.5 34.8	25.2 27.3	16.2 22.9	100 100
(a) The kitchen is	regarded a	s a room.			<u></u>

# Table 4

Density of occupation of dwellings in urban areas, December 1950

	umber of persons per dwellings with .	room(s) <sup>(8</sup>	)	Total
1	2	3	4 and over	
2.70	1.70	1.40	1.20	160 <sup>(b)</sup>

# II. ACTIVITY IN THE HOUSING SECTOR

# 1. <u>Dwelling construction</u>

Table 5

Number of rooms (a) and dwellings completed in urban areas, classified according to builder

Builder	1948	1949	1950	1951	1952	1953	1954	1955
Rooms: State Private Total - Rooms - Dwellings	•• •• (1	••• •• ••	 123.2 51.3	 112.6 46.9	129.9 54.1	 144.9 60.3	141.2 58.8	148.2* 61.8
<ul> <li>(a) The kitchen is regard</li> <li>(b) Between 1945 and 1949 in towns and urban and and repairs.</li> </ul>	9, 810,0	00 room	ns were Lt of ne	made av ew const	vailable cruction	e to the	e popula nstruct:	ation ion

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# Table 6

Dwellings completed between 1951 and 1954, classified according to number of rooms<sup>(a)</sup>

(as percentages)

Dwellings with room(s) <sup>(b)</sup>	Percentages					
l 2 3 4 and over	8.4 26.8 52.1 12.7					
Total	100					
(a) Covers only dwellings constructed by the Central Administration for Urban Construction (ZOR).						
(b) The kitchen is reg	arded as a room.					

### V. BUILDING MATERIALS

# 1. <u>Production</u>

<u>Table 7</u> Production of building materials

(in tons)

Material	Unit	1948	1949,	1950	1951	1952	1953	1954	1955
Cement	10 <sup>6</sup>	1.8	2,3	2.5	2.7	2.6	3.3	• •	
Window glass									••

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#### POLAND

#### EXPLANATORY NOTES

#### OCCUPATION OF DWELLINGS I.

#### Table 1

Dwelling unit: Urban areas: League of Nations definition; rural areas: the number of dwellings is slightly inflated as, under the living conditions peculiar to rural areas the dwellings are not always structurally separate. The figures for dwellings and rooms exclude those in buildings reserved for institutional households, and various premises used as temporary dwellings.

Room: League of Nations definition (in other words, the kitchen is regarded as a room). So-called one-room dwellings have either no separate kitchen or at most a tiny kitchenette; rooms occupied by institutional households are excluded.

The following table gives the estimated number of dwellings and rooms in 1939 and 1946 for the present and pre-war territory of Poland and the regions incorporated after the war.

#### (In thousands)

Period	Present	territory	Pre-war t	erritory	Incorporated regions						
	Dwellings	Rooms	Dwellings	Rooms	Dwellings	Rooms					
1953 (estimate)	2,800	7,250	1,700	3,750	1,100	3,500					
February 1946 (census)	1,917	<sup>.</sup> 4,412	1,432	3,115	485	1,297					
Source: The Hou	Source: The Housing Problem in the Polish People's Republic (in Polish),										

Warsaw, 1952, page 47.

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#### Table 2

و المراجعة المراجع المراجع الم It must be borne in mind, in assessing the development of population in urban and rural areas, that certain rural areas have acquired urban status at various times.

Tables 3 and 4

Dwellings and rooms: For definitions, see Table 1 above.

# II. ACTIVITY IN THE HOUSING SECTOR

#### 1. Dwelling construction

Table 5

Room: League of Nations definition; practically all the rooms are in new buildings.

A large but not definitely known number of rooms were built in students' hostels or to accommodate young workers newly arriving in towns. The basic data are expressed in terms of numbers of rooms, the number of dwellings being evaluated by reckoning an average of 2.4 rooms per dwelling. Practically all the dwellings newly constructed in urban areas are in flats (with a minimum of 40 rooms) accommodating several families; dwellings in one-family houses have mainly been constructed in rural areas. The Central Administration for Urban Construction (ZOR) is the main builder; during the period 1951-54, dwellings built by ZOR accounted for about 70 - 80% of the total number put up in urban areas; most of the remainder were built by municipal authorities and industrial undertakings.

No detailed statistics are at present available on housing construction in rural areas. It is estimated that over 228,000 farms were reconstructed with State aid between 1945 and 1949 in the rural reconstruction drive. In addition, the rural population has reconstructed and built a large number of dwellings from its own resources, private building having been far more intensive in the country than in the towns.

In the last few years there has been a big increase in public funds received by town dwellers for major house repairs and reconditioning. The figures for State aid were as follows:

Period	Value <sup>(a)</sup> (in millions of zlotys)	Rooms <sup>(b)</sup> (in thousands)	
1951 1952 1953 1954 Plan 1955 Plan	369.5 527.3 538.0 830.0 1,120.0	603 644 524 	
(a) The average cost of a newly-constructed room, including conveniences, is about 20,000 - 30,000 zlotys.			
(b) Rooms in buildings subsidized by State funds. The figures include all the rooms in buildings to which major repairs have been made (if only to the roof).			

### Table 6

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For the extent of ZOR activity, see Table 7 above: the average size of dwellings built by ZOR works out at 2.7 rooms; that of dwellings built by other builders is slightly less.

#### SOURCES

# 1. Information supplied by the Polish authorities:

Table 1 (the figures for number of rooms in 1953, 1954 and 1955 are Secretariat estimates). Tables 2, 3, 4, 5 and 6.

### 2. Economic Survey of Europe in 1954, ECE, Geneva:

Table 7.

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Original: ENGLISH

# ECONOMIC COMMISSION FOR EUROPE

### HOUSING COMMITTEE

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MAY 8 1953

# Working Party on Housing and Building Statistics

(Sixth Session, from 14 to 16 May 1956)

# COMPARISON BETWEEN STANDARD DEFINITIONS AND NATIONAL DEFINITIONS

(Completion of Dwellings)

Note by the Secretariat

1. The Working Party has at various times expressed the wish that statistics in the Quarterly and Annual Bulletins be published, at least for the main items, on a subject by subject basis. The progress made by the Working Party in drawing up standard definitions will greatly facilitate this change in presentation. As a further contribution to the achievement of this aim the Secretariat has started a comparative study on the agreed standard definitions and the corresponding national definitions for the various items with a view to assessing the quantitative significance of deviations from the standard definitions. The first preliminary results of this study relating to annual statistics on the completion of dwellings are submitted in the present document for consideration by the Working Party at its sixth session. It is the intention of the Secretariat to extend this study at a later stage to all the items for which the Working Party has drawn up or will draw up standard definitions, and to consider both annual statistics and more frequent statistics.

2. Full or partial information on the definitions relating to statistics on the completion of dwellings are available to the Secretariat for twenty countries. This information is shown in the appendix to the present document and compared with the standard definitions drawn up by the Working Party. This comparison has been made for the following basic elements of the definition:

- (a) Definition of a "dwelling unit"
- (b) Definition of "work completed"
- (c) The location of dwellings, i.e. if the dwellings reported are solely those situated in residential buildings or in both residential and nonresidential buildings

(d) The kinds of building operations which are taken into account (new construction reconstruction, reconstruction repairs, extensions and conversions) and to what extent these are taken into account (e.g. only if an additional dwelling unit is added or not).

The table in the appendix also shows the geographical coverage of national statistics.

3. The following conclusions may be drawn from the information shown in the appendix:

(a) Definition of a dwelling unit

The definition of the dwelling unit is more or less the same for all countries and agrees with the definition proposed by the Working Party, with the following exceptions: the definitions used by Austria, Belgium, Sweden and Yugoslavia do not mention the permanent character of the dwellings erected; in the Federal Republic of Germany, Ireland and Norway they provide explicitly for a kitchen; in Denmark even a single room can eventually be considered as a dwelling, while in Greece socalled "nuclei" are counted as dwellings.

(b) Definition of work completed

The definition used by most countries for which information is available refers to the physical readiness of the dwellings for occupation. In Finland and Italy, however, work completed is recorded when an occupation permit has been granted. The Working Party may wish to consider whether, in respect of annual statistics, these deviations from the standard definitions are of quantitative significance.

(c) Location of the dwellings in residential and in non-residential buildings

Most countries appear to include dwellings located both in residential and in non-residential buildings in their statistics. In Spain, Turkey and probably in Belgium only dwellings in residential buildings are taken into account. It should be noted, however, that the significance of dwellings located in non-residential buildings is apparently very small, as shown by statistics for those countries where separate figures on the completion of dwellings in residential and in nonresidential buildings are available.

(d) Kind of activities

This is perhaps the item where divergences between national statistics are most pronounced. In some countries (e.g. Belgium) new dwelling units created by extensions or conversions are not counted. In others (e.g. Austria, the Federal Republic of Germany and Ireland) all extensions and conversions are included in the statistics even when no additional dwelling unit is created. In both cases the data on the completion of dwellings cannot be used as a basis for estimates of the dwelling stock without adjustments. It should be recalled that during its fifth session, the Working Party pointed out that, for the purpose of measuring changes in the housing stock, only those conversions and extensions should be taken into account which result in a change in the number of dwelling units (if the dwelling stock is measured in terms of dwelling units) or in a change in the number of rooms (if the dwelling stock is measured in terms of rooms). The relevant part of the Working Party's report on this point is reproduced in the footnote to the table in the Appendix.

(e) <u>Geographical coverage</u>

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The statistics usually refer to the country as a whole, but in Poland, Portugal, Spain and Turkey they only cover urban areas; in Ireland they refer to the Stateaided programme only.

4. The following proposals are submitted to the Working Party for consideration:

(a) It would be desirable to include in the near future in the Quarterly Bulletin (and later on also in the Annual Bulletin) a table showing the annual completions of dwellings for all countries for which statistics are available;

(b) One of the main purposes of such a table would be to provide some indications concerning the current development of the housing situation. It is, therefore, desirable for this purpose that conversions and extensions be defined in a narrow sense, i.e. that they include only those conversions and extensions which lead to a change in the number of dwellings available. It is recognized that, for certain purposes, it is preferable that the housing stock should be measured in terms of rooms, and that, if so, conversions and extensions should be defined analogously. It is believed, however, that many countries will find it difficult to provide statistics on the basis of the latter concept, and it is therefore proposed. that for the time being statistics on completions should be limited to data in terms of dwelling units only.

(c) The statistics should include completions of dwellings both in residential and non-residential buildings and they should cover the whole territory of the country.

(d) Countries which are not able at present to supply statistics which are strictly in accordance with the proposed concepts, definitions and coverage should be asked to make estimates of the quantitative significance of the deviations. •

-			In residential					HOU/WP.3/Workin page 9	ng Paper No. 6
•	Dwelling	Work completed	and non-residential buildings		Kind of a Reconstruction- repairs	·	Conversions	Geographical coverage	Remarks
Świtzerland	Any structurally separated room or suite of rooms in permanent buildings used or intended for habitation by	which occupation of a new dwelling			n	If creating add units.	dditional dwelling	Whole country	
	family households and having a separate access to a street or to a common passage or stairway.	is authorized by the municipality, virtually coincides with the completion of the work.	cipality, y s with letion						
<u>Turkey</u>			Residential only.	New construction	••	••		Towns only	Coverage: dwelling construction in rural areas is apparently very small.
United Aingdom (excluding Northern reland)	No firm definition is available. Data relate to permanent "family units of accommodation"; this does not necessarily mean "structurally separate dwellings", although in practice the great majority of the "family units" provided are of this type.	Readiness for occupation.	Non-residential		See under New	If creating add units.	dditional dwelling	Whole country	Repairs: data on dwellings made available by repairs are available. Repairs refer here to previously unoccupied war- damaged dwellings. <u>Coverage</u> : global statistics are also available for Northern Ireland; detailed information as to definitions etc, is however lacking.
<u>Yugoslavia</u>	Any premises destined for dwelling purposes and composed of one or more rooms, with or without accessories and having one or more private entrances.	Readiness for occupation.			See under New	See under New	See under New	Mole country	
Hungary	Any room (premises) constructed or converted, with a building permit and technical plans, in such a way as to form a technical unit, design- ed to serve as a permanent dwelling and used as such. A dwelling occupied by co-tenants, however many they may be, is regarded as a unit.	••		••	••	••	••	Whole country	

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Kind of activity In residential Dwelling Work completed and Reconstructionnon residential New Extensions Cor repairs buildings · . . . Any premises intended for dwelling pur- Full completion Foland All new buildings See under New •• • • constructed from poses, which consist of one or more of all work the foundations. rooms definitely separated from other without defects. and reconstructed dwellings in the same building and Occupied buildwhich have separate access to the ings do not buildings to which street, courtyard, staircase or common the damage was so always satisfy extensive that the hallway, are to be regarded as a the abovevalue of the part separate dwelling. Communicating mentioned conremaining intact rooms in a dwelling having a common ditions. did not exceed 50 kitchen and W.C. or bathroom are not to be regarded as separate dwellings, per cent of the expected cost of even if occupied by separate families or persons living alone. reconstruction.

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nversions	Geographical coverage	Remarks
••	Urban areas	
	only	

	Dwelling		Dwelling Work completed and				Ceographical	Remarks	
			non-residential buildings	New	Reconstruction- repairs	Extensions	Conversions	coverage	Remarks
<u>Western</u> <u>Germany</u>	Any structurally separated room or suite of rooms in permanent buildings used or intended for habitation by a family household and having separate access to a street or to a common passage or staircase and a separate kitchen or kitchenette.	1	Residential and non-residential.	- New: includes also crection of buildings on formerly occupied sites, if the building differs substantially in nature, size and purpose from the pre- vious one. Reconstr- uction: the reconstruc- tion of buildings des- troyed by war action, fire, etc. of which the basement may still be in existence; the site on which the re-building takes place is not necessarily exactly	Rebuilding of destroyed buil- dings, some space of which in addition to the basement, can be perma- nently used for dwelling pur- poses; as a consequence only part of a dwelling is addes by those repairs.	Relate to conver the interior with of additional dw transformation ( additional dwell without increase extension (creat dwelling-space with volume); the dat under this heading necessarily refeat tion of additional units.	hout creation elling-space), creation of ing-space in volume) and ion of additional ith increase in ta reported ng do not r to the crea-	Whole country	The annual data are collected by means of a special enquiry made towards the end of each year, current statistics on completions being incomplete.
				the one on which the destroyed building was previously located.					
Greece	••	••	Residential and non- residential	<ul> <li>New</li> <li>Reconstruction</li> <li>Extension, if creating additional unit.</li> </ul>	••	See under New	••	Whole country	Dwelling: a large part of completed dwellings only consists of one room (i.e. the so-called "nuclei"
Ireland	Any structurally separated room or suite of rooms in a permanent building used or intended for habitation by a family household and having separate access to a street or to a common passage or staircase and a separate kitchen.	Readiness for immediate occupation.	Residential and non- residential.	- New: entirely new dwellings whether provided on virgin sites or on sites which have been cleared of old bulldings. Reconstruction repairs: Dwellings provided by the major reconstruction of cxisting houses in which the founda- tions and substan- tial portions of the walls are retained and an almost entirely new internal structure and a new	See under New	Carrying out of a alteration to the including the ext enlargement there carrying out of a works in relation which, in the opt hinister (for Loc are reasonably ne purpose of render suitable for huma they do not neces an additional dwo	e house, tension or eof, or the any other h to the house inion of the cal Government), ecessary for the ring it more an habitation; essarily create	Whole cou <b>n</b> try	Coverage: data limited to dwel- lings built with state aid. Probably less than 4 to 5 per cent fail to qualify for State aid; the series thus covers almost 95% of all dwellings completed.

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· · · · · · ·	Dwelling	Work completed	In residential and non-residential		Kind of ac Recon-		Conver-	Geographical coverage	Remarks
		· ·	Buildings	New	struction Repairs	E.VI.englong	sions		
taly	Any structurally separated room or suite of rooms in permanent buildings used or intended for habitation by family households and having a separate access to a street or to a common passage or stairway	Granting of a permit to occupy	1954 onwards; be- fore only residen- tial)	New: building of entirely new origin from foun- dation to roof. Reconstruction: any building which is erected on the foundations of a previously existing residen- tial building and which has a volume similar to that of		Enlargement, hori- zontally or vert- ically, of an existing building by the further construction of rooms for the purposes of habit- ation. Only those creating additional units are included.	••		<u>Coverage</u> : Statistic on completed dwelli relate to those for which a "fit for he ation" certificate been granted; the number so establis' should be regarded a minimum estimate the units actuall; completed; the act number was about 25 above the current d
	·			its predecessor.	·				in 1953.
stherlands	Rooms or suite of rooms and their accessories in permanent buildings or structurally separated parts thereof which by the way they are built, rebuilt, converted etc., are suitable for this purpose. The criterion used is the existence of a separate access to a street (direct or via a garden or grounds), or to a common space within the building (staircase, passage, gallery etc.).	-	Residential and non- residential	- New construction - Reconstruction		Only if creating a units	dditional	Whole country	
orway	Unit of one or more rooms together with a kitchen or kitchenette. Single rooms without kitchen are not counted as dwellings, nor are several independent rooms with communal kitchen facilities.		Residential and non- residential	<ul> <li>New construction</li> <li>Reconstruction.</li> <li>Extension, if creating an additional dwelling unit only.</li> </ul>		See under New	•	Whole country	
ortugal	**	••	Residential and non- residential	• •		• •	• P	Urban areas only	
<u>pain</u>	<b>*•</b>	• •	Residential only	New construction		If creating additional dwelling units	• •	Major communes only	
<u>leden</u>	Any separated space provided with special entrance from street, staircase-well or external corridor, containing one or more rooms and/or kitchen, which is used or intended to be used for dwelling purposes.	Readiness for occupation	Residential and non- residential	- New construction - Reconstruction		If creating additional dwelling units	••	Whole country	

	Dwelling		In residential and	· · · · · · · · · · · · · · · · · · ·	Kind of a		Geographical	Remarks	
		Work completed	non-residential   buil <b>d</b> ings	New	Reconstruction- repairs	Extensions	Conversions	coverage	Remarks
ം പ്രായം <del>വിമ</del> വായം നിമ	Any structurally separated room or	Stage when the	Residential and	- New construc-	• •	See under New	See under New	Whole country	
onmark_	suite of rooms in permanent buildings		non-residential	tion	••				
	used or intended for habitation by	taken over for		- Reconstruction			•		in an training and the second s
	family households and having separate	use or is ready		- Extension and					
	access to a street or to a common	for immediate	1	conversion,		i			
	passage or stairway. Single rooms -	occupation.	ŧ	only if crea-		4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4	· · · · ·	<b>a</b> .	
	with use of a kitchen or other	Some municipa-		ting additional			- -		
	cooking installation - in houses inhabited exclusively by lodgers are	lities do not	•	dwelling units.			4 5 9		
	inhabited exclusively by lodgers are	report the							
	also considered as dwelling units.	completion of							
		the work before		- 				•	
		the permit to		2 2 8 8		2. We want to be a first to be			
		occupy has been		-					
		issued or the			-				· · · ·
		inspection has shown that the	:		-				l •-
		construction							
		complies with				a de la companya de la compa			
		the approved				1 7 3			
		plans.			· · · · · · · · · · · · · · · · · · ·		• •		•
16			; 	1 <u>1</u> 1		C N	1	Whole country	n ange - speciente a agrectante e de la constante entre destante de la constante entre entre entre
inlan <b>d</b>	No clear definition is available,	Urban districts:		- New construc-		See under New	• •	whole country	
	the interpretation in this respect	issue of the	and non-	tion.					
	being a matter of field organization	occupation	residential.	- Reconstruction.	2 2 2				
		permit from 1955		- Extension, only	i i i i i i i i i i i i i i i i i i i		1		
		onwards; for		if creating					
		previous periods	7	additional					
		inspection of		dwelling units.				•	
		the work by the local authority;					ar Brane o co		
		rural districts:			•				· ·
		unknown.	2 2 2						
1965 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969			-				-		
rance	Any structurally separated room or	When a dwelling	Residential	- New	Reconstruc-	See under New	See under New	Whole country	Repairs:
	suite of rooms in permanent buildings	is actually	and non-	- Reconstruction	tion of				dwellings mad
14 A.	used or intended for habitation by a	occupied or	residential.	(civil)	dwellings				available by repairs are
* <u>;</u>	family household and having a separat	e ready for	1	- Extension and	destroyed or	Nage - Yang -			also availabl
•	access to a street or to a common	immediate occu-		conversions,	damaged by				Repairs refer
	passage or stairway.	pation.		only if crea- ting additional	war action to an extent of			3	here to
				dwelling units.	more than 75				previously
÷• ••• •				umertrug murpg.	per cent.				uninhabitable
			- 1		Por conv.				dwellings whi
			1						have been
								·	damaged by wa
			4 - 5- 1		Province and a second se	**			action to an
					B				extent of les
		1	5.			1	1	1	than 75 per o

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Comparison Betwsen Standard Definitions of "Dwellings Completed" and National Definitions

	Dwelling	Work completed	In residential and	-	Kind of	activity		Geographical	
-			non-residential buildings	New	Reconstruction- repairs	Extensions	Conversions	coverage	Remarks
ECE Housing Committee	Rooms or suite of rooms and their accessories in <u>permanent</u> buildings or structurally separated parts thereof which by the way they are built, rebuilt, converted, etc. are intended for habitation by private households and are suitable for this purpose. They should have a separate access to a street (direct or via a garden or grounds) or to a common space within the building (staircase, passage, gallery and so on).	Stage when the dwellings are physically ready for occupation.		blocks of flats regardless of whether the sites	Repairs by (a) which at least one dwelling unit is effec- tively safe- guarded in the stock of dwel- lings, and	Enlargement of buildings by which space is added.	changes carried		
<u>Austria</u>	Rooms which, according to the construction plan, form a structurally separated unit which is accessible directly from the common parts of the house.	••	Residential and non- residential	New: erection of a new house. Reconstruction: erection of a house on the site of another house which has been destroyed or has become uninhabitable by war action only.	Repairs of houses in which dwellings have been destroyed or have become uninhabitable by war action.	a building horizontally or vertically by which dwelling space is created even when no addi- tional dwelling	Structural changes carried out within a building by which the distribution of space or the destination of dwelling space are altered even when no additio- nal dwelling unit is created.	Whole country	
Belgium (a) When the	Set of premises used to accommodate one household. Working Party agreed upon these definit	••		New construc- tion. Reconstruction					estimates based on ratio between number of buil- dings authorized and number of dwellings therein located. This ratio has been applied to the number of residen- tial buildings completed.

(a) When the Working Party agreed upon these definitions during its fifth session, it pointed out that: "An important purpose of the statistics on building operations was to provide up-to-date information on the housing stock. This stock could be measured in terms of dwellings or of rooms (as well as in such units as square metres, etc.). When the stock of dwellings was expressed in dwelling units, statistics were required for the following building operations: (i) new building, (ii) reconstruction repairs, (iii) those extensions which lead to an increase in the number of dwellings and (iv) those conversions which lead to an increase or decrease in the number of dwellings. When the stock of dwellings was expressed in rooms, statistics were required for the following building operations: (i) new building, (ii) those extensions which lead to an increase in the number of rooms, and (iv) those conversions which lead to an increase or decrease in the number of statistics which lead to an increase in the number of rooms, and (iv) those conversions which lead to an increase or decrease in the number of statistics which lead to an increase in the number of rooms, and (iv) those conversions which lead to an increase or decrease in the number of rooms." (HOU/WP.3/25, paragraphs 39 to 41).

.. Information not available to the Secretariat.

HOU/WP.3/Working Paper No. 6 page 5

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HOU/WP.3/Working Paper No. 7 25 April 1956 Original: ENGLISH

MAY 8 1956

ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

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Working Party on Housing and Building Statistics

(Sixth Session, from 14 to 16 May 1956)

#### WORK PROGRAMME AND METHOD OF WORK

Note by the Secretariat

#### I. INTRODUCTION

1. In the course of previous sessions the Working Party has decided to take up a number of topics which together constitute a work programme of considerable size. It is, therefore, desirable that the Working Party should review the whole of its programme of work in order to establish an order of priority among the various items and to discuss the most suitable methods of dealing with them. The present note is intended to list these items and to make suggestions concerning priorities and methods of work.

2. Before proceeding to the review of the items in the work programme it is desirable to consider first some general points concerning methods of work. In the past the preparatory work on most of the subjects considered by the Working Party was largely carried out by the Secretariat. Only in two cases was a different procedure followed. To prepare the discussion on "building cost and value of construction", the Working Party invited a rapporteur to draw up a working document and, as regards concepts and definitions, a small group of rapporteurs was set up which met once and prepared draft definitions for consideration by the full Working Party.

3. Experience has shown, not only in this Working Party but also in other bodies of the Housing Committee that reliance on rapporteurs can be effective and may speed up the work considerably. The division of work between rapporteurs and the Secretariat makes it possible to undertake preparatory work on more items in a given time. In addition, the time required for discussions on points of detail, e.g. on concepts and definitions, can be shortened considerably when the meeting of the full Working Party is preceded by a meeting of a few of its members, particularly if the principal diverging views are all represented. For these reasons it is suggested that in future more use be made of rapporteurs for the preparation of working documents and of groups of rapporteurs for the discussion of problems in small meetings before they are taken up by the full Working Party.

#### II. REVIEW OF ITEMS

#### A. Concepts and definitions

4. <u>Standard definitions</u>: An important part of the Working Party's work has consisted of drawing up internationally agreed standard definitions. At its previous sessions the Working Party reached agreement on standard definitions for the following items (see HOU/WP.3/25): Room, dwelling, household, occupant, completion of dwellings, residential and non-residential building, and types of building activity (new construction, reconstruction repairs, extensions and conversions). Drafts of these definitions had been prepared by a group consisting of rapporteurs from the Netherlands; Norway and Poland.

5. The remaining items under this heading for which standard definitions have still to be drawn up by the Working Party are:

- (a) Floor space
- (b) Volume
- (c) Work authorized
- (d) Work begun
- (e) Work under construction
- (f) Rural and urban areas
- (g) Building and civil-engineering sectors

For the first two of these items draft definitions have already been prepared by the group of rapporteurs and will be discussed at the present session. It is suggested that the group of rapporteurs be reconvened or that a new group be set up to review the remaining items and to prepare draft definitions for discussion by the Working Party at later sessions.

### 6. <u>Comparisons between national definitions and the established standard</u> <u>definitions</u>:

The Working Party has at various times expressed the wish that statistics in the Quarterly and Annual Bulletins be published, at least for the main items, on a subject-by-subject basis. As a contribution to the achievement of this aim the Secretariat has started a comparative study of the agreed standard definitions and the corresponding national definitions. The first results of this study relating to the completion of dwellings are submitted to the Working Party at the present session. Although it is believed that a large part of the further work in this field can be carried out by the Secretariat in correspondence with the governments concerned, it may be necessary at a later stage, to set up a group of rapporteurs to discuss a number of matters which cannot be solved by correspondence.

B. Studies in methodology

7. The items mentioned in paragraphs 4 and 5 above do not cover all the subjects included in the Quarterly and Annual Bulletins of Housing and Building Statistics. Although concepts relating to subjects not covered by the list will also have to be defined sooner or later, it is believed that this can be done after further study of methodological problems and of problems of data collection. It is therefore suggested that for the time being emphasis should be laid on the discussion of methodological questions.

8. <u>Index of activity of the construction industry</u>: This subject was discussed by the Working Party at its second session. A further discussion would be desirable since some progress has been made in this field or on related subjects both on the national level and by the Conference of European Statisticians. It would be useful if a paper for discussion could be prepared by one of the countries which has gained experience in compiling indices of this type.

9. <u>Index of building costs</u>: This subject was discussed by the Working Party at its second and fourth sessions. At the fourth session the Working Party concluded that it was desirable that further discussions should first take place on the improvement of the basic statistics used in computing the various types of indices of building costs and building prices. It would seem that further discussions on this subject would also be facilitated if the documentation were prepared by one or more rapporteurs.

10. <u>Value of building</u>: This subject was considered by the Working Party at its fourth session in connexion with building costs. In view of the more general character of this subject it would, however, be preferable to include it in the work programme as a separate item. The work of the Working Party in this field is, of course, closely related to that of the Conference of European Statisticians on fixed capital formation in general. It is therefore desirable that in further discussions on this subject attention be given to the need for proper co-ordination between the work of the two bodies. It is proposed that the documentation for these discussions should be prepared by the Secretariat. This documentation would include a full account of the progress made by the Conference of European Statisticians in the field of capital formation. HOU/WP.3/Working Paper No. 7 page 4

11. <u>Problems of collection of current building statistics</u>: The Working Party will discuss this subject during its present session. In HOU/WP.3/Working Paper No.8, , prepared by the Secretariat, the suggestion is made that a group of rapporteurs be convened to undertake further work in this field.

12. <u>Index of rents</u>: This item has not yet been taken up by the Working Party. It is proposed that at a later stage a rapporteur be invited to prepare a .document for discussion.

13. <u>Manpower statistics</u>: This subject is also one that has not yet been discussed. When it is taken up by the Working Party the International Labour Office might be invited to prepare a paper.

14. <u>Housing finance</u>: The Working Party referred this subject to the Housing Committee for clarification. The Housing Committee requested its Working Party on the Development of Housing Policy to consider the question and that Working Party invited Norway and the Federal Republic of Germany to nominate rapporteurs. When the rapporteurs have submitted their reports the Housing Committee will be able to decide whether further work on this question needs to be done by the Working Party on Housing and Building Statistics.

15. <u>Housing needs and shortages</u>: The Working Party decided at its third session that the possibilities of providing information on housing needs and shortages should be explored further and invited the Secretariat to obtain from countries the fullest possible documentation on the methods of calculation employed, with an indication <u>inter alia</u> of the assumptions on which they were based and the degree of reliability attached to the results.<sup>(1)</sup> When the subject is again taken up by the Working Party, it is proposed that this information be collected and that a rapporteur be nominated who will assist the Secretariat in analysing the material received and in preparing the working document for the discussions of the Working Party.

In this connexion attention is drawn to a study on the formulation of house-building programmes which is being undertaken by the Working Party on Development of Housing Policies. Statistical information on housing needs and shortages is one of the essential elements in such a study. Reference should also be made to The European Housing Situation (E/ECE/221) Geneva, January 1956.

16. <u>Sampling surveys of housing conditions</u>: At its third session the Working Party agreed that sampling surveys of the housing situation constituted a promising method of obtaining up-to-date information and requested the Secretariat to prepare a detailed paper on the subject for discussion at a later session. The Secretariat would like to benefit from the experience gained in countries where such surveys have been made and proposes that a rapporteur be nominated from one of these countries to assist the Secretariat in preparing the study requested by the Working Party.

17. <u>Consumption and prices of building materials</u>: Statistics on consumption and prices of building materials are regularly published in the Statistical Bulletins, and the Working Party may therefore wish to discuss, at some stage of its work, problems relating to these statistics. Since the work programme is already of considerable size, however, it would seem that this item should have a low priority. The Secretariat is therefore making no proposals on the method of work to be adopted.

#### III. PRIORITIES

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18. If the proposals made in the previous paragraphs are acceptable to the Working Party, preparatory work could start on a number of subjects at the same time and progress could simultaneously be made in various fields. It would nevertheless be useful if the Working Party could indicate the priorities which it wishes to attach to the various subjects, in order to give the Secretariat guidance in planning the work. In this connexion the Secretariat wishes to make the following proposals:

- (a) The work on concepts and definitions should have a high priority in the Working Party's work programme.
- (b) The comparative studies of differences between national definitions and agreed standard definitions should also have a high priority, so that the statistics - at least for the most important items - could be published on a subject basis instead of a country basis.
- (c) Among the subjects listed under IL-B, priority should be given to the items on which some work has already been done by the Working Party, i.e. indices of building activity and of building cost, statistics on the value of construction and the calculation of housing needs and shortages.

### IV. CONCLUSIONS

19.	The proposals put forward in	this paper can be summarized	as follows:
	Subject	Preparatory work by:	$\underline{Priority}^{(1)}$
Α.	Concepts and definitions 1. Drafting of standard definitions	Group of rapporteurs	<b>+ +</b>
	2. Comparative study of national and standard definitions	Secretariat and, perhaps later, group of rapporteurs	* * .
В.	Methodology		
	1. Index of activity	Rapporteur	+
	2. Index of building cost	Rapporteur	÷
	3. Value of construction	Secretariat	÷
	4. Problems of collection (current statistics)	Group of rapporteurs	÷
	5. Rent index	Rapporteur	-
	6. Manpower statistics	International Labour Office	<b>e</b>
	7. Housing finance	(Two Rapporteurs already nominated)	To be considered when the reports of the Rapporteurs are available
	8. Calculation of housing needs and shortages	Rapporteur	• •
	9. Sampling surveys of housing conditions	Secretariat and Rapporteur	-
1	10. Building materials	No proposals made	7

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- (1) + + First priority. + Second priority.
  - Third priority.

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ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

MAY 8 1956

Working Party on Housing and Building Statistics

# TECHNICAL PROBLEMS OF COLLECTING CURRENT STATISTICS ON HOUSING AND BUILDING

#### Note by the Secretariat

1. During its fourth session in October 1954 the Working Party expressed the opinion that the methods used in collecting and compiling the figures were no less important than the underlying concepts and definitions in determining the comparability of housing statistics. The Working Party therefore decided to include in its work programme the study of "technical problems of collecting current statistics on housing". (IM/HOU/WP.3/19)

2. In order to enable the Working Party to have a preliminary discussion on this subject at its sixth session, the Secretariat invited countries to prepare a description of the methods used in collecting their current statistics and to indicate the problems which they wished to raise for discussion. These requests related to current statistics both in the field of housing and of other construction, since it was assumed that the Working Party would wish to extend the study to cover all of the series that are published in the Quarterly Bulletin or will be included in the Annual Bulletin.

3. Replies to these requests have been received from the following countries: Austria, Belgium, Czechoslovakia, Denmark, the Federal Republic of Germany, Finland, Italy, the Netherlands, Poland, Portugal, Sweden, Switzerland, the United Kingdom, the United States of America and the Union of Soviet Socialist Republics. The main characteristics of these replies are summarized in the Appendix.

4. From the descriptions received some broad conclusions can be drawn. It appears that the methods used vary to a greater or lesser extent from country to

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country. The differences can often be traced back to differences in existing laws and administrative regulations. On the other hand, it also appears from an examination of the replies that there is a greater similarity in the problems faced by countries than would have been expected and that there is a trend in many countries towards the adoption of more similar methods.

5. The amount of detail provided in the replies varies considerably from one country to another. Although some countries supplied a more or less detailed description of the methods of collection used and the difficulties encountered, the replies of others were confined to the schedules used, accompanied by short comments. Hence additional information will have to be obtained from a number of countries before any definite conclusions on the subject can be reached. 6. It seems desirable, however, to define the purpose and the scope of the study more precisely before countries are asked to supply this additional information. It is therefore proposed that this should be the main point for discussion by the Working Party at its forthcoming session. It is also suggested that the Working Party consider the most suitable method for carrying out the study.

7. With regard to the purpose and scope of the study, the following proposals are put forward for consideration by the Working Party:

- (a) The choice of concepts used in various countries depends to a considerable extent on existing laws and administrative regulations.
   One of the objectives of the study should be to consider to what extent differences in the concepts used are an unavoidable consequence of differences in these laws and regulations.
- (b) Even when the same concepts are used by different countries their statistics may not be comparable because of differences in methods of collection. Some countries, for instance, find it difficult to collect data for rural districts or for construction projects of less than a certain value. A second objective of the study should therefore be to consider to what extent such technical problems of collection affect the international comparability of statistics.

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(c) The exchange of experience on methods used and problems of collection encountered may in itself be of use to members of the Working Party although it is not one of the main purposes of the study. It would be useful if detailed descriptions of these methods and problems of collection were at a later stage circulated to members of the Working Party.

8. When the Working Party has expressed its views on the purpose and scope of the study, additional information can be sought from countries. The Secretariat would find it helpful in analysing the material received to have the assistance of experts from a few countries. The Working Party may, therefore, wish to consider inviting a small group of rapporteurs to assist the Secretariat in carrying out the study and in preparing the discussions on this subject for a later session of the full Working Party.

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#### APPENDIX

#### MAIN CHARACTERISTICS OF COUNTRY REPLIES

1. The following summary is confined to a concise description of the methods of collection generally used and the problems to which they give rise. In some cases these problems have been raised explicitly by countries in their replies; in other cases they were implied in the description of methods.

2. Practically all countries compile some data on current building activity but statistics are often limited to residential construction only.

(a) <u>Statistics of dwelling construction</u>

3. Statistics on dwelling construction may relate to four different stages of construction, the granting of the building permit, the actual start of the work, the stage during which construction is in progress, and the completion of the work. Only a few countries collect four series of statistics, the others being unable to obtain data for all stages.

4. A method frequently used for collecting the data consists of obtaining from the builder through local offices, such as building offices, labour offices, town planning services or local representatives of statistical offices, the information on each building project that he supplies in his application for a building permit. These data are recorded in a register of building projects maintained by the Statistical Office, or other authority in charge of the collection of statistics, and are kept up-to-date on the basis of information on the progress of work done provided by the builder or, sometimes, by the local authorities.

5. It is not always clear from the country replies whether statistics on building permits refer to the application for a permit, to the administrative decision to grant a permit or the actual granting of the permit. It is believed that practices differ from country to country.

6. As regards building starts, it would seem that in many countries the concept of "work begun" is not well defined. Some countries which are unable to determine the exact time when the work starts, use the application for or

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granting of the building permit instead. However, several countries pointed out that data on building permits granted may not be an accurate measure of the volume of work started, since permits may remain unused. One country does not collect data on work begun directly but calculates the figures on the basis of the number of dwellings completed and the number under construction.

7. In many countries data are collected on dwellings under construction. Data on the extent of their completion, which are important for the purpose of measuring the work done during a given period, are, however, usually not available.

8. The completion of work is not measured in a uniform manner in various countries. It may be the time of actual completion of the work (which is sometimes difficult to assess especially when buildings are partially occupied before completion), of the builder's notice of completion, or of the granting of the occupation permit. In some cases completion is only recorded on the basis of periodic enquiries made on the spot by the statistical or other competent authorities.

9. The coverage of monthly or quarterly enquiries into the various stages of dwelling construction is often not complete. The high cost of such enquiries often makes it necessary to restrict their geographical coverage to certain regions, towns or urban areas. Estimates of the corresponding totals for the country as a whole can, in some cases, be made on the basis of the results of less frequent enquiries with fuller coverage. The coverage of the statistics may also be deficient for other reasons. For instance, the building permit which is the basis of the statistics may not be required for projects of less than a certain value, or for particular types of dwellings, or for particular types of operations.

10. Some countries carry out periodic (usually annual) surveys enabling them to make corrections for some or all of the deficiencies in the more frequent statistics. In addition to incomplete geographical coverage and projects for which a building permit is not required, these deficiencies may be due to such factors as unauthorized construction work, delays in reporting and building

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permits remaining unused.

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11. Some countries pointed out that one of the uses of this kind of statistics is to obtain up-to-date information on the housing stock. This implies that, in addition to data on new construction, information is required on other factors affecting the housing stock, e.g. on demolitions, fires, conversion of residential premises into non-residential premises or vice versa, and changes of use without any building operation. In most countries no information or only partial information is collected in this field. It appears from the replies that in some countries demolitions are legally registered, or that the local authorities are given the responsibility of making periodic enquiries into all events affecting the dwelling-stock.

(b) <u>Non-residential building</u>

12. Data on non-residential building are collected only in a few countries. In those countries where such statistics are available, separate figures are usually collected for different types of building (e.g. industrial, commercial, agricultural, etc.) and are all expressed in terms of a common unit such as floor space or volume. The collection of this kind of data is in practically all cases based on building authorizations granted by local authorities, planning commissions or town-planning administrations. With regard to the coverage of the data, it would seem that countries are faced with problems of the same nature as those described above in the case of residential construction.

(c) Other construction

13. Some countries use man-days as the unit for measuring work done, though it is recognized that this measure is not ideal in view of the different types of construction work covered. A more satisfactory unit might be the value of work done, but many countries seem to have difficulties in collecting this type of information. The two main problems are that data on actual and not planned values have to be obtained and that current value figures have to be adjusted for price changes in order to measure the volume of work done. 5

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

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Working Party on Housing and Building Statistics

(Item 2 of the provisional agenda for the seventh session)

#### CONSIDERATION OF HOUSING STATISTICS BY THE CONFERENCE OF EUROPEAN STATISTICIANS

#### Report by the Secretariat

1. At its fourth session, in June 1956, the Conference of European Statisticians considered again reports by the Secretariat on the statistical activities under the programme of the various technical committees of ECE.

2. In the discussion of the statistical activities of the Housing Committee, the following points were made:

- (a) The items "statistics of building costs" and "rent indices" in the Working Party's programme of work raised general problems in the compilation of price indices, and there was a need, therefore, for proper co-ordination of the work in this field and the general work on prices. It was generally felt, however, that at present the co-ordination was satisfactory.
- (b) The question was raised whether the Working Party on Housing and Building Statistics was the proper body to deal with statistics on housing finance, another item in its programme of work. At present the subject of statistics on housing finance is being considered by two rapporteurs. When their report will be available, the Conference would have an opportunity to consider whether any recommendations regarding this subject should be made to the Working Party on Housing and Building Statistics. (Conf.Eur.Stats/61, paragraph 81).

## 3. In conclusion, the Conference

- (a) took note of the report;
- (b) agreed to refer consideration of the draft definitions on floor space and volume which had been developed by the Working Party on Housing and Building Statistics to the Working Group on Population and Housing Censuses of the Conference;

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 (c) requested the Secretariat to draw the attention of the Working Party on Housing and Building Statistics to the work undertaken by the Conference's Working Group on Population and Housing Censuses.
 (Conf.Eur.Stats/61, paragraph 82).

4. During its fourth plenary session, the Conference also further discussed the subject of capital formation. The Conference noted that the Secretariat was preparing and would circulate re-drafts of two sections of the draft programme for the collection of statistics on gross fixed capital formation, and agreed that the programme as a whole should be reviewed by a group of rapporteurs and should be considered by the Conference at its next session (Conf.Eur.Stats/61, paragraph 19). The Group of rapporteurs will meet in March 1957. Further progress will be reported in due course to the Working Party.

5. The Conference's Working Group on Population and Housing Censuses will meet on 19 to 24 November 1956. The Working Group will consider <u>inter alia</u> the subject of housing censuses, including the items of data to be collected, their definitions and their relationship of a housing census to a population census. The documents for consideration on this subject will be (a) a report on "General Principles for a Housing Census" (ST/STAT/P/L.22) prepared by the Statistical Office of the United Nations, copies of which will also be circulated for the information of the Working Party on Housing and Building Statistics; and (b) a report on the definitions of various items in housing statistics developed by the Working Party on Housing and Building Statistics. The Secretariat will report orally on the results of the meeting at the next meeting of the Working Party on Housing and Building Statistics in November.

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ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Item 5 of the provisional agenda for the seventh session)

# FINANCIAL STATISTICS ON HOUSING

Note by the Secretariat

The Working Party on Housing and Building Statistics at its fourth session 1. held in October 1954 "agreed that a decision on whether or not the Annual Bulletin should include data on housing finances as proposed by the experts of the Federal Republic of Germany and the United States should be preceded by a thorough discussion of the problems in which specialists in the field should participate. In the first instance, however, the Working Party decided to refer the matter to the Housing Sub-Committee for general guidance, particularly as to the best way in which the discussion envisaged among specialists in housing finance might take place," (IM/HOU/WP.3/19, page 9, paragraph 34). The Housing Committee itself has referred this request to its Working Party on Development of Housing Policies, which at its session held in October 1955 agreed to appoint Mr. Anonsen (Norway) and Mr. Fey (Federal Republic of Germany) to act as rapportours on this matter. (HOU/WP.1/26, page 5, paragraph 13). Since the Working Party on Development of Housing Policies is being abolished, the proposals of the rapporteurs are being referred directly for consideration by the Working Party on Housing and Building Statistics.

2. The two rapporteurs, in consultation with the Secretariat, agreed that the report should include two parts. Thus a first part analyses the various aspects of financial statistics on housing available in western European countries. This paper, prepared by Mr. Anonsen, is attached as Appendix I to this note. A second part, to be prepared by Mr. Fey, is devoted to a general study on financial statistics in housing, supplemented by a case study for the Federal Republic of Germany. That paper will be distributed shortly as Appendix II.

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#### APPENDIX I

#### FINANCIAL STATISTICS ON HOUSING

1. Introduction.

The following survey is based mainly on official statistical publications from a number of western European countries. Thus the report does not aim at a complete survey of all available financial statistics which are of interest for housing. The purpose has been to illustrate what kinds of credit market statistics are available and discuss the suitability of these statistics for analyses of housing policy on an international level.

Apart from credit market statistics the most important information would be that which could be selected from the state budgets and national accounts on the extent of public saving as well as public credits for housing purposes. Especially for eastern European countries such information would be of main interest, but even in western Europe public saving is an important part of the credit basis for the financing of housing.

However, budget techniques are so different in the various countries and the material so difficult to obtain, that it has been impossible to form a judgement of the possibility of getting the relevant information or in what form the data should be presented.

2. Credit Market Statistics

There are in particular two forms of credit market statistics which are of interest:

- (a) Leans by industries,
- (b) Loans by type of loan,

(a) Loans by industries

Sources: Finland; "Ekonomiska utredninger" - Annual statistics.

Norge: "Aktuell statistikk" -- monthly, and special surveys twice annually.

"Bankstatistikk" - annual.

Sweden: "Ekonomisk revue" - special surveys - twice annually.

United "Monthly Digest of Statics"; Kingdon: "Statistical Year-book". Federal Republic of Germany:

"Monatsberichte der Bank Doutscher Länder" - special surveys each quarter "Statistisches Jahrbuch".

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<u>Scope.</u> The part of the credit market included in these statistics varies greatly for those countries which publish such data. It seems to be most comprehensive for Norway and the Federal Republic of Germany. It is true that for the latter the statistics are based on a representative sample, but this sample includes practically all types of credit institutions. For Norway the statistics are complete and include joint-stock banks, savings banks, insurance companies, State banks and special loan associations, etc.

For the other countries mentioned above these statistics are mainly banking statistics, and therefore information on important parts of the credit market is missing. However, the structure of the credit market is so different in the various countries that it is difficult to put forward norms for what parts of the credit market these statistics should include to illustrate the position of housing credit in the credit market.

<u>Grouping:</u> The classification by industries differs in the various countries. In British statistics, for instance, there is a special group for housing loans, as in several other countries. In some countries, however, loans for housing are grouped under the heading "Real estate" together with loans for other purposes. A special difficulty is that housing loans are spread over several groups in some countries. In Norway, for instance, housing loans are placed both under a heading "Real estate" and "Agriculture and forestry". Both groups include loans for other purposes.

Another difficulty is that the definition of many groupings is not very exact, and that it is the credit institutions themselves who decide under which heading the loans shall be placed. In many cases it is clear that changes in the figures are more due to changes in the comprehensiveness and groupings of the statistics than to real changes on the credit market.

<u>Character:</u> The figures are usually balance-sheet figures which give the net result of new loans and the down-payment of old loans.

The grouping by industries is as a rule not determined by the purpose of the loan but by the character of the security. Loans which are granted as mortgage on a dwelling house but which are spent for business purposes or for buying a car, will as a rule be classified with loans for housebuilding.

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In some cases temporary loans for the building period are placed in a group other than long-term loans, in other cases they are placed in the same group.

(b) Loans by form of loan

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<u>Sources:</u> Most western European countries publish periodical statistics of loans by types of loan. Such data are found in the statistical yearbooks of the respective countries and are as a rule more complete in special publications which are published periodically by the statistical bureaux, central banks or central organizations for the various credit-institutions.

For the Federal Republic of Germany these statistics are collected systematically in "Monatsberichte der Bank Deutscher Länder". For other countries the statistics are usually split among several publications.

<u>Scope:</u> Statistics of this kind are usually available for most types of credit institutions, but they are often found scattered among several publications and given in different ways even within a single country.

<u>Grouping:</u> These statistics give the distribution of loans by type of loan such as current drawing accounts, bills of exchange, mortgage loans etc. The grouping varies considerably even for different kinds of credit institutions within a single country, and is partly bound by tradition and partly by law.

In some countries the splitting into different kinds of loans is so specified that it is possible to pick out loans which wholly or mainly concern housing. For instance the statistics published in Denmark by the co-operative credit associations give separate figures for mortgage loans and those published by the savings banks even for mortgages on dwelling houses. For both data the figures are split into new loans and loans on existing properties. For most countries, however, the statistics are not nearly as specified as in Denmark. Long-term mortgage loans for housing, factories, rural properties etc. are often placed in a single group.

In most countries bousing loans are long-term mortgage loans, but in some countries other forms are used. For this reason loans for housing purposes are not only to be found together with loans for other purposes but also under several headings.

It may also be mentioned that even the splitting up by form of loan does not always make a clear distinction between building credit and long-term mortgages, as these two forms of loan are often put into a single group. <u>Character:</u> Even the statistics of loans by form of loan are for most abuntries based on balance-sheet figures taken from the accounts of credit institutions. Accountancy varies from country to country and even for different kinds of credit institutions within a single country. This makes comparison difficult. On the whole the statistics which concern joint-stock banks and credit associations are more specified than those which concern other credit institutions. Especially the statistics regarding loans made by insurance companies are little specified, which is a great weakness in this connexion, as these companies are important lenders for housing.

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For these statistics it is even truer than for grouping by industries, that the purpose of the loan has little bearing on the classification in groups.

<u>Conclusion:</u> The statistics on credit conditions are in most countries incomplete and heterogeneous. Even within a single country it will often be difficult to systematize the relevant data. Hence it seems to be of rather limited interest to publish such statistics together with other international statistics on housing and building.

The most important objections against publishing international statistics on housing financing seem to be:

1. Data are insufficiently and diversely specified not only between countries but also for different credit institutions within a single country.

2. The groupings which are in use are hardly suitable for this purpose. That is true both of loans by industries and by form of loan. It is especially noteworthy that neither of the two types of statistics gives any direct information regarding the purpose of the loans.

3. The statistics are especially deficient for certain credit institutions which are of great importance in the financing of housing.

It will be of principal interest to develop statistics by form of lCan, but that will probably be difficult to achieve. Statistics of loans by industries would be valuable if the groupings were more uniform than to-day and preferably more suitable for our purposes. Such statistics would be of greater general economic interest and perhaps therefore easier to establish.

Statistics of loans by industries would also be easier to compare with information given in state budgets and national accounts, and therefore easier to compare with data which are available for eastern European countries.

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It may be mentioned that the Northern countries are at present trying to develop uniform statistics of loans by industries.

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Statistics by form of loan are more common but institutional conditions make it exceedingly difficult to achieve uniformity in this field. Furthermore it will be less interesting as there is no direct connexion between the form of loan and the purpose for which it is granted.

It will presumably be most practical for the Housing Committee to contact the Conference of European Statisticians in order to emphasize the importance of developing financial statistics and to put forward specific wishes as regards statistics on the financing of housing.

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics

J. S. S.

(Item 6 of the provisional agenda for the seventh session)

# THE CAPACITY OF DWELLINGS FOR FAMILY OCCUPATION Note by the Secretariat

1. At its sixth session, in May 1956, the Working Party on Housing and Building Statistics invited the Secretariat to collect from countries comments on the methods for measuring the capacity of dwellings for family occupation proposed by the International Union of Family Organisations (IUFO) and to prepare a working document for consideration at a later session (HOU/WP.3/28, paragraph 13). In response to this request, the Secretariat has made an enquiry, to which replies from thirteen countries have been received. These replies are summarized in the appendix to the present note.

It appears from the comments submitted by countries that the importance of 2. the points raised by the IUFO is generally recognised; some countries have in fact accepted the analysis and proposals of the IUFO. Many countries, however, expressed doubt as to the usefulness and practicability of the concept of capacity proposed by that organization. The objections made are analysed below: Some countries object to the proposed concept of capacity because they 3. believe that its statistical measurement will be difficult. They point out that it would not be easy to obtain the necessary basic statistical data, and that in some instances the types of statistical enquiries by which data on housing and building are obtained would not lend themselves to the collection of data required. It has also been suggested that whilst theoretically the necessary questions might be added to census questionnaires, this would unduly complicate the census procedure.

4. The comments made by many other countries are of a more fundamental nature, as they affect the basic principle underlying the proposed concept of capacity. The essential points in these comments are that

- (a) the "capacity" of a dwelling for family occupation does not depend on the sleeping accommodation provided for by the dwelling only, but also on other factors, e.g., living accommodation; and
- (b) there is no unique relationship between the size of a dwelling and the size of the household for which it provides sufficient accommodation.

These two points are, of course, interrelated. They follow from the fact that a dwelling is capable of providing different types of accommodation, and that the proportion in which these types of accommodation are used does not depend on the structure of the dwelling only, but also to a large extent on the composition of the household which is or will be accommodated in it and on the dwelling habits of that household. The same room in a dwelling may be used as a bedroom, as a living-room, or both; and the number of persons for which a given room would provide sufficient sleeping accommodation depends on the age, sex and marital status of these persons.

5. The conclusion from this is that (a) a concept of capacity of dwellings which is based on one type of accommodation is, in principle, not acceptable; and (b) a unique measure of capacity can only be obtained if it is independent of the way in which the dwelling is occupied, and relates only to the structural properties of the dwelling.

6. If these objections are justified, it would imply that the concept of capacity for family occupation proposed by the IUFO would not be appropriate for general studies on the relationship between the supply of dwelling-space and housing needs. It might be of use for more restricted studies, e.g., in connexion with social housing programmes for the construction of dwellings for certain categories of families, the composition and the needs of which are known. It would seem, however, that most countries believe that studies of this nature, though they are likely to be of great importance nationally, are not at present of much interest on an international level.

7. If this is the conclusion of the Working Party, there relatins to be considered the question whether a more general concept of capacity of dwellings should be defined, along the lines indicated in paragraph 4 above, which would be of use in international studies. If such a concept is to be defined, it would be necessary to consider to what extent the conventional housing statistics, i.e., those expressed in terms of numbers, surface or volume of dwellings or rooms would provide a basis for such a concept. Since this point is closely related to another item in the Working Party's programme, the calculation of housing needs and shortages, the Working Party may wish to defer the discussion on this subject until that item is taken up.

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#### APPENDIX

# SUMMARY OF COMMENTS MADE BY COUNTRIES ON THE PROPOSED METHOD FOR MEASURING THE CAPACITY OF DWELLINGS FOR FAMILY OCCUPATION

#### AUSTRIA

There are objections to the exclusive reference to bedrooms for the measurement of the capacity of dwellings.

#### CZECHOSIOVAKIA

Apartments are always allocated to one family with due regard to the number of its members. A law is being prepared in which criteria will be given for the "normal" living-space for households of different sizes. DENMARK

The method proposed would be of interest for special surveys, e.g., local building enquiries, but would not apply to census or current statistics. For international comparison of the housing situation, data on the distribution of available dwellings and their occupants should be sufficient. Moreover, the content of the concept proposed by IUFO varies no less from country to country than the concept of rooms.

# FEDERAL REPUBLIC OF GERMANY

The IUFO has raised an important problem. It is recognized that from the customary cross-classification of dwellings by number of rooms and number of occupants, only a general judgment of dwelling requirements can be obtained. It is questionable, however, whether these requirements could be analysed still further by the IUFO method.

In housing censuses, only data on the actual use of rooms can be obtained. Since this use depends on the customs of the occupants of the individual dwelling. it is doubtful whether from data on the number of rooms used as bedrooms the conclusion could be drawn whether the dwelling accommodation is sufficient or not. The development of modern furniture has also affected the use of rooms (e.g., combined living-bedrooms). Also, the pattern of consumption is changing: there is a tendency to spend a smaller proportion of income on rents, and a larger part on such items as television sets, motor-cars, modern kitchen equipment. For all these reasons, it would seem that the number of rooms used as bedrooms does not provide a reliable criterion for the capacity of a dwelling.

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In current statistics, the distinction between bedrooms and other rooms cannot be made, since the effective use of the room depends on the individual intentions of the future occupant and the composition of his household. It is believed that current statistics give already sufficient information on the large dwellings which are particularly suitable for habitation by large families and on large families which may be assumed to require large dwellings. More refined information on dwelling requirements can only be obtained by more differentiated enquiries, including questions on gainful employment, income, age composition of the family, etc. A sample enquiry of this nature covering 1 per cent of all households is to be carried out in the Federal Republic of Germany in the spring of 1957.

#### FINLAND

The proposed method can be accepted, FRANCE

Quality and size of dwellings may change considerably in time, even in the short run. Current statistics expressed in numbers of dwelling-units do not provide therefore sufficient indications on the volume of work realized and the extent to which dwelling requirements are met. The introduction of the concept of capacity of dwellings would be useful, if an objective and sufficiently accurate measure of this concept could be found. Objections to the proposed method are: the number of bedrooms depends on the effective use made of the dwelling, and the number of persons which could be accommodated in a dwelling depends on the composition of the household and living customs. It is not possible therefore to derive from the structure of a dwelling a unique measure of normal capacity.

Two approaches for the study of dwelling requirements are suggested: In partial (local) enquiries, when the composition of families in need of a dwelling is known, it may be possible to determine the theoretically desirable structure of dwellings to be constructed. Comparison between this theoretical structure and actual building projects would indicate to what extent these projects meet the requirements. In general studies, sample enquiries could be made on the actual occupation of recently constructed dwellings: density of occupation, social category and family composition of occupants. This would provide a guidance for new building programmes. A sample enquiry of this nature may be carried out in France within the next one or two years.

#### IRELAND

Information on the capacity of dwellings is not collected, and no general criteria or methods of measurement applicable to all dwellings have been formulated in Ireland, Local housing authorities are under obligation to rehouse persons of the working classes living under dangerous, unhealthy or overcrowded conditions. Criteria for overcrowding are laid down in the 1952 Housing Act.

#### ITALY

Although knowledge of the capacity of dwellings is of great social importance, it does not seem possible to work out generally applicable methods of measurement. It is difficult to determine a priori how many persons can be accommodated in a room and how each room will be used. The capacity of dwellings can only be determined on the basis of knowledge on the needs of different family households. This is only possible in the rare case of building projects for special social purposes: e.g., dwellings for employees, or for the homeless.

#### **NETHERLANDS**

The proposal merits attention and appreciation because it is an attempt to find a solution for cases in which information is desired on the capacity of dwellings for family occupation. The usual notation of number of rooms provides only part of this information. Practical disadvantages of the proposed method are: it is difficult to obtain the data required; the number of beds to be placed in a room varies from one region to another; and it is difficult to distinguish between bedrooms and other rooms. The usefulness of the notation depends on the following factors:

- (a) Possibility of obtaining the data: In the Netherlands, government subsidies are based on the number of beds per dwelling. The number of beds and of bedrooms has therefore been recorded since 1954. No similar data, however, are available for the housing stock.
- (b) Availability of data on the composition of households. If no such data are available, the notation proposed would be more useful if the distribution of beds over the various bedrooms were also given. In drawing conclusions it should be borne in mind that some households will want more space than calculated on the basis of their composition, and that if the sex distribution of the occupants is taken into account, part of the beds theoretically available may not be used.

As the data required are in many cases lacking, and uniform interpretation of the data is not feasible, an international application of the proposed notation would for the present be useful only under special circumstances. POLAND

For a study of the housing situation, data on surface, volume and number of dwellings or rooms are not sufficient. Comparative studies of the size of dwellings and the size of households should be made. Such studies would be important in Poland where in some districts there exist many one-room dwellings which are overcrowded. The view expressed by the IUFO that the size of the household should be determined irrespective of the age of children is also valid, since in view of the housing shortage it is difficult to move to larger dwellings when children grow up.

The proposed distinction between individual houses and apartments is difficult in Poland because many houses are no longer used in accordance with the original building project. The definition of the size of dwellings in terms of bedrooms would not be practical either, since the majority of rooms are used both as bedrooms and as living-rooms. In census statistics, the capacity of dwellings is characterized by the number of rooms per dwelling. The norms for new building projects are also in terms of rooms, taking into account the composition of the dwellings. They define both the minimum floor space, and limits for useful floor space for each type of dwelling. The number of persons for which such a type of dwelling is destined is also determined. As regards the allocation of already existing dwellings, these norms are adapted to the local housing conditions.

Though in Poland it is only practical to relate the capacity of dwellings to the number of rooms, this method is not necessarily in conflict with the IUFO method. The number of bedrooms could be introduced as an additional notation in countries where the demand for housing is satisfied to a larger extent than in Poland.

#### SWEDEN

The IUFO concept implies that it is necessary to determine a priori which rooms are intended to be used as bedrooms, and how many persons can normally be accommodated in each bedroom. If this concept is to be used in statistics, rules should be fixed for these criteria. Unless these rules are very summary, the data would probably have to be collected by house-to-house

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visitors. The Swedish housing enquiries, in which data are submitted by owners and occupants of houses, are less appropriate for the application of the IUFO method. In Swedish statistics, dwellings are considered as overcrowded if the number of occupants exceeds two persons per room (excluding kitchen) Statistics are available on the number of households cross-classified by size of household and size of dwelling.

Swedish dwellings are generally small. Beds are often distributed amongst all the rooms. Although the size of rooms varies, it can reasonably be assumed that the majority of rooms can take two beds. It is not sufficient, however, to relate the capacity of a dwelling to sleeping space only. The IUFO method underestimates the importance of good equipment in dwellings.

# UNITED KINGDOM

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It is considered that the disadvantages of the method proposed by IUFO do not warrant its introduction in the United Kingdom. These disadvantages are:

- (a) More elaborate census procedures would be necessary; bedroom,
   beds and capacit: would have to be defined; elaboration of questions
   from "actual" to "potential" occupation would irritate the householder.
- (b) The IUFO method would measure maximum capacity, and would over-estimate the available capacity. If only actual bedrooms were taken into account, the existing capacity would be underestimated.
- (c) The method is not applicable to owner-occupied houses, since the owners of such houses generally enjoy adequate housing.
- (d) There is no need to take a census count of bedrooms in houses owned by public authorities as this information is already available as regards the majority of these houses.
- (b) In the better class of privately owned houses let on lease or for rent, a count of bedroom capacity would be irrelevant to the question of the amount of provision that should be made for large families.

It is only in the poorer kind of housing let for rent that families will normally be living which should be accommodated under a social housing programme. Statistics of capacity which do not take into account many other factors (e.g., physical condition of the dwellings, illness and other family difficulties, distance from work), would, however, not provide a true estimate of the housing needs of such families, Such factores are taken into account in the programmes formulated by local housing authorities. The collection of national statistics on this basis could go far beyond the scope of the present proposal.

#### YUGOSLAVIA

The Working Party is not competent to reach decisions on problems of this nature (particularly as regards the "labelling" of apartments according to their capacity). It is neither a question of solving a theoretical statistical problem, nor a problem of statistical technique, but an oconomic, technical and even sociological problem with the settlement of which an appropriate international body should be entrusted.

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#### ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

Working Party on Housing and Building Statistics (Item 4 of the provisional agenda of the eighth session)

#### CONCEPTS AND DEFINITIONS

Note by the Secretariat

1. At its seventh session the Working Party had a preliminary discussion on draft definitions for the concepts "work authorized", "work begun", "work under construction", "gross floor space", "area built on", "urban and rural areas", and "construction industry and its sub-division", drawn up by rapporteurs from Austria, Denmark and Romania (see HOU/94, paragraphs 19 to 21 and Annex II). Since the report of the rapporteurs became available only at the beginning of the seventh session, the Working Party decided to postpone a final decision on the proposed definitions until the eighth session. It invited the Secretariat to collect further comments on the proposals from countries and interested organizations.

2. At the seventh session, the representative of the International Union of Architects (UIA) proposed a number of amendments to the definitions already adopted by the Working Party at its previous sessions (see HOU/94, paragraphs 16 to 18 and Annex I). The Working Party decided that these proposed amendments should also be considered at its next session.

3. The comments received from countries on the proposals of the group of rapporteurs, and on the amendments proposed by the UIA are summarized in the Annex to the present note.

4. In the light of the comments received and the decisions taken by the Working Party at its previous sessions the following points are put forward for consideration:

 (a) The concepts "room" and "residential and non-residential building" have been agreed upon by the Working Party and subsequently approved by the Working Group on Censuses of Population and Housing of the Conference of European Statisticians. At its seventh session the Working Party therefore agreed that it would not be desirable to propose any amendments of substance to these definitions (HOU/94, paragraph 17). Since, mereover, the only comment received on the present definitions relates to a point which has already been thoroughly discussed by the Working Party (namely the question of the minimum size of a room in the definition of a "room") it is proposed that the present definitions of "room" and "residential and non-residential building" should not be altered;

- (b) The amendment to the definition of "household" proposed by the UIA is in fact a drafting change which applies to the French text only. A number of countries expressed their agreement with this amendment. It is therefore suggested that it should be adopted and that consequently in the French text the words "composés d'une personne vivant seule" be substituted for "composés des personnes vivant seules". In this connexion it should be pointed out that the definition of households is still under consideration by the Conference of European Statisticiens and should be regarded as provisional until the Conference (and the Statistical Commission) have reached a conclusion;
- (c) The UIA has proposed amendments to the definitions for "new building", "reconstruction repairs" and "conversions". Divergent views have been expressed by countries as regards these proposals. It would appear that differences of view are more a matter of form than of substance. It is therefore suggested that the definitions drawn up by the Working Party should be maintained in substance, but that the Working Party consider whether some clarification could be given of the definitions along the lines proposed by the UIA, e.g. by adding the term "refitting" to the definition of conversion.
- (d) As regards "floor space and volume" the Working Party has to consider proposals by the UIA for amendments of the definitions for living and useful floor space, and gross volume, which have already been adopted by the Working Party; and a new definition for gross floor space which has been drawn up and amended by two successive groups of rapporteurs.

It would seem that most countries prefer the definition of "living floor space" drawn up by the Working Party to the one proposed by UIA, since it is more suitable for statistical purposes. It is therefore not proposed to change the present definition. 1

As regards "useful floor space", it is suggested that the Working Group discuss whether the term "outer walls" (as suggested by the UIA) should be substituted in the definition for "surrounding walls" (used by the Working Party).

On "gross floor space", a number of questions remain to be discussed. The Working Party may wish to consider the following points:

- (i) the usefulness of the concept;
- (ii) the relationship between this concept and other concepts of floor space and volume;
- (iii) terminology: it has been suggested that the term "external areas" may be preferable;
- (iv) the treatment of terraces and outbuildings;
- (v) the allocation of common spaces;
- (vi) the desirability of making a distinctive definition for "houses" and for "flats and maisonettes".

On gross volume also, different views have been expressed in respect of the amendments proposed by the UIA. This concept is, of course, closely related to the concept of gross floor space and the questions for discussion listed in the previous paragraph therefore largely apply to "gross volume" as well.

(e) "Work authorized", "work begun", "work under construction" and "work completed": The Werking Party has already agreed upon a definition for dwellings completed. The Group of rapporteurs proposed to extend this definition to non-residential building. The Group also drafted definitions for work authorized, begun and under construction which apply both to residential and to non-residential building. On these subjects the Working Party may wish to consider in particular the following questions:

- (i) the desirability of having the same definitions for residential and non-residential building;
- (ii) the possibility of extending these definitions also to civil engineering;
- (iii) the possibility of applying these definitions also to maintenance work.

- (f) As regards "area built on" (or "area covered by a building") it is suggested, in accordance with the proposals by the rapporteurs and the decision of the Working Party at its seventh session (HOU/94, paragraph 20 (g)), to ask the Housing Committee for guidance before further work is done.
- (g) <u>Urban and rural areas</u>: The Group of rapporteurs pointed out that a classification of data on housing and building by urban and rural districts was important, but that the question of the definition of such districts was not a specific housing problem. They therefore considered that the Working Party should not go further in this field than expressing its views on those aspects which were of particular importance in housing. These views could then be transmitted to the Conference of European Statisticians and the Statistical Commission which are discussing this question in a more general way. It is proposed that the procedure suggested by the rapporteurs be adopted and that therefore the Working Party will exchange views on this question but will not attempt drawing up definitions for urban and rural areas.
- (h) The question of the definition of the construction industry and its sub-sections has also more general aspects and should be considered within It is not proposed therefore that the framework of national accounts. the Working Party should try to arrive at definite conclusions in this However, the views of the Working Party in this question would be field. of great use for the general revision of the International Standard Industrial Classification of all Economic Activities (ISIC) of the United The Group of rapporteurs Nations, which is at present being envisaged. has put forward some views on the criteria on which a sub-division of The Working Party may wish to the building industry might be based. The Working Party may also wish express its views on these suggestions. to express its opinion on the question of the border line between the building industry and other industrial sectors.

#### ANNEX

#### COMMENTS RECEIVED FROM COUNTRIES

#### I. ROOM

The following remarks have been received on the proposal formulated by the UIA: - Austria

The definition drawn up by the Working Party is preferred, although it is thought that the minimum size of a room established at  $4 \text{ m}^2$  is quite insufficient. (See also remarks on "living floor space").

- Federal Republic of Germany

See remarks on "living floor space" (V.A., below).

- France

The definition drawn up by the Working Party is preferred.

- Poland

The definition drawn up by the Working Party is more useful for the taking of censuses. It would not seem advisable to introduce limits inferior to those which define the area of bedrooms at  $4 \text{ m}^2$  and of other rooms and kitchens at  $6 \text{ m}^2$ .

<u>General note:</u> Most of the new definitions proposed by the UIA spring from the somewhat special attitude adopted by certain groups of architects towards statistical definitions. The UIA's proposals are intended to add to the precision of the definitions, an aim which is perhaps justified from a technical point of view, but which would not always appear appropriate to the method of organizing censuses, nor in view of the necessity of leaving countries a certain liberty within the framework of definitions of a general character.

II. RESIDENTIAL AND NON-RESIDENTIAL BUILDING

The following remarks have been received on the proposal formulated by the UIA: - Austria

The definition drawn up by the UIA is preferred.

- France

The definition drawn up by the UIA is preferred.

- Italy

The definition drawn up by the Working Party is preferred.

#### - Poland

In accordance with the UIA proposal, it was decided in Poland to consider a building as residential when at least half of its useful floor space is used for dwelling purposes. In the course of the discussion held in 1955, in which the expert from Poland took an active part, the group of rapporteurs who drew up this definition came to the conclusion that it would not be advisable to decide beforehand how the "major part of the building" should be defined. It is felt that this was a "very wise decision.

#### III. HOUSEHOLD

The following remarks have been received on the proposal formulated by the UIA:

#### - Austria

The definition drawn up by the UIA is preferred.

#### - France

The definition drawn up by the UIA is preferred.

#### IV. TYPES OF BUILDING ACTIVITY

The following remarks have been received on the proposal formulated by the UIA:

#### - Austria

The definition of new building and conversions as proposed by the UIA is preferred, but not that for reconstruction repairs.

#### - France

The definitions proposed by the Working Party are preferred. However, as suggested by the UIA, the original text of the definition of conversions could be amended to read: "conversions or <u>refitting</u> of non-residential buildings for use as dwelling space".

#### - Italy

The term "conversion" already covers refitting work.

The definition of "reconstruction repairs" drawn up by the UIA is preferred.

## V. FLOOR SPACE AND VOLUME

The following remarks have been received on the proposals of the Group of Rapporteurs, of the Working Party and of the UIA:

#### A. Living floor space

#### - Austria

The definition of the Working Party is preferred, but as in the case of the definition of a room, it is thought that the minimum size of 4 m<sup>2</sup> is much too small.

#### - Denmark

The definition proposed by the UIA seems rather artificial and impracticable. - Federal Republic of Germany

The suggestion should be rejected to regard a room with not less than  $4 \text{ m}^2$  of floor space, which is used for sleeping, as an adequate bedroom. In "DIN 283" (i.e. the norm supplying descriptions of the various concepts on floor space) the minimum size has been fixed as  $6 \text{ m}^2$ , and all rooms with  $6 \text{ m}^2$  to  $10 \text{ m}^2$  of floor space have been referred to as small rooms (i.e. half rooms). In the statistics of the Federal Republic on building activities the following distinctions are made: rooms with 6 to  $10 \text{ m}^2$  and with more than  $10 \text{ m}^2$  floor space, as well as kitchens with less than  $10 \text{ m}^2$  (used solely for the preparation of meals, etc.) and more than  $10 \text{ m}^2$  (used for cooking and dwelling) of floor space, and cooking alcoves. When global figures are to be recorded, all rooms with more than  $6 \text{ m}^2$  floor space and all kitchens (excluding cooking alcoves) are counted as rooms, and relevant explanations are added.

#### - Netherlands

The suggestion of the UIA to include "any floor space of kitchens in excess of  $6 \text{ m}^2$ " should not be adopted. In this connexion reference may be made to the discussion of the Working Party concerning definitions of rooms and the treatment of kitchens.

#### - Poland

In conformity with the UIA proposal, only a part of the floor area of a kitchen is considered as "living floor space" in Poland. It would appear that this restriction is of primary importance for the analysis of architects' plans. It might, however, prove cumbersome for statistical purposes. For this reason it would appear advisable to introduce, independently of the general statistical definition, the following supplementary clause: "the comparative analysis of building plans and completed buildings should only include as living floor space that part of the kitchen exceeding 6 m<sup>2</sup>."

#### B. <u>Useful floor space</u>

#### - Austria

The definition proposed by the Working Party is preferred, since the surrounding walls of a dwelling are not necessarily identical with its outer walls.

It is noted however that the definition hitherto adopted, applies to gross floor space, since the floor space of the interior walls are not deducted when calculating the useful space. In Austria useful space refers to <u>net</u> space, so that for the sake of international comparison 10 per cent should be added to the Austrian statistical data on useful floor space.

#### - Denmark

The amendment of the UIA is presumably to be regarded only as another formulation of the Working Party's definition.

#### - France

The modification proposed by the UIA would appear advisable.

## C. Gross floor space:

#### - Denmark

It is pointed out that in a sense this concept is dictated by practical reasons and may be of some use in the measurement of the increase in useful area in residential as well as in non-residential building. As mentioned by the group of rapporteurs, the concept of volume is of great interest in connexion with activity and costs; but for measuring living accommodation the concept of useful or living floor space seems preferable. However, "gross floor space" can be used for an approximate estimation of useful floor space. It should also be mentioned that in a comparison of building costs, calculated on the basis of floor space, for residential building it will be most practical to apply "useful floor space". It is pointed out that the expression "designed for some useful purpose" is not clear.

- Federal Republic of Germany

According to the norm "DIN 283", the two concepts covered by "gross floor space" are defined as follows:

- spaces for residential purposes: gross living space is the total area of the spaces of the rooms intended for habitation; of the bedrooms, the kitchens, and the accessory rooms. These spaces are ascertained from the inside measurements and are accounted for as follows: <u>fully</u>: when the head clearance is at least 2 m;

<u>half</u>: when head clearance is more than 1 but less than 2 m, and in the case of closed terraces that cannot be heated adequately; <u>one fourth</u>: in cases of covered balconies (loggias), other balconies, covered terraces; <u>not at all</u>: when head clearance is less than 1 m, and in the case of open terraces.

- spaces for non-residential purposes: - gross useful space is defined and calculated as "gross living space".

- Netherlands

The concept should be defined in addition to the concepts of useful floor space and living floor space. Gross floor space can be calculated easily and is certainly valuable as a rough indication. We agree with the suggestion that in countries where covered terraces have practically the same function as living-rooms, these should be included. As regards (permanent) outbuildings, we would like to support the proposal to include these buildings. We wonder, however, whether these buildings should be included only if "structurally similar to the main building (e.g. made of the same building materials)". From the point of view of building costs, differences in construction could be taken into account, e.g. by counting two-thirds of the space or volume of the outbuildings. Moreover, in connexion with residential building, garages and business premises should, strictly speaking, not be included.

#### - Turkey

The definition of the rapporteurs corresponds to that used in Turkish housing statistics. It is thought that the essential thing is to have a basis, even if simple, for the determination of the value of construction.

- United Kingdom

In the United Kingdom the term "external areas" instead of "gross floor space" is used. It is thought that this is more appropriate since the thickness of the walls and other surfaces not classifiable as floors are included. The measurement is used there for rating valuation under the Local Government Act, 1948. The definitions are as follows:

(a) For houses: "External area" means the aggregate of the area on all floor levels of the house (including loggias, porches or balconies and built-in garages) bounded by the outer faces of the main external walls and the middles of party walls if any. Accommodation provided in an attic or storey formed in the roof is included only in so far as it is habitable and no account is taken of so much of the area as is less than 4 ft (123 cm) in height from the floor to the sloping ceiling. The area of lean-to and detached garages and outer porches is not included. (b) For flats and maisonettes: The aggregate of the areas on all floor levels of the building (including staircase and landing enclosures, lift enclosures (if any) and common access passages) bounded by the outer faces of the main external walls plus the areas of external common access balconies, if any, measured to their extreme boundaries.

It is also pointed out that the definition proposed by the Group of rapporteurs is misleading in suggesting that "common spaces should be proportionately allocated to the individual dwellings". It is suggested that it would be more sensible to divide them equally between the dwellings in the block.

This definition is thought to be much more precise than that proposed by the Group of rapporteurs and has the added advantage of distinguishing between flats and houses.

D. Gross volume

#### - Austria

The proposal made by the UIA could be partially followed. The following formulation is put forward: "Gross volume is the lotal cubic space between the outside surface of the surrounding walls, the level of the lowest floor, at least the level of the surrounding ground surface, and the outside surface of the room. In the case of common walls, the measurement should be made from the central line of these walls."

- Denmark

The amendment of the UIA is presumably to be regarded only as another formulation of the Working Party's definition.

- Federal Republic of Germany

The definition is given in norm "DIN 277" and differs in some points from that of the Working Party.

#### - France

The definition proposed by the Working Party should be adopted. The term "outer walls" could be replaced by "surrounding walls".

#### - Italy

The definition of the UIA is preferred.

- Poland

See comment made under "living floor space" (V.A., above).

VI. WORK AUTHORIZED, WORK BEGUN, WORK COMPLETED AND WORK UNDER CONSTRUCTION

- Denmark

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The Working Party's comments are agreed upon.

- Federal Republic of Germany

Work authorized

The definition proposed by the rapporteurs is agreed upon.

<u>Note</u>: In the Federal Republic of Germany the building permits that expire in the course of a year are covered by statistics on non-completions. In addition, statistics on building permits granted contain data that provide information on the extent of the individual permits: Buildings: number and gross volume; Dwellings: number and (as from 1957) gross living floor space, assessed cost of construction: - In non-residential construction, the following additional distinctions are made: institutions, offices, agricultural building, other non-residential buildings (most of which are destined for industrial purposes).

#### Work begun

Statistics on this item do not exist in the Federal Republic of Germany; - the question which of the following characteristics (a) the supply at the site of equipment and materials; (b) the start of excavation works; (c) the start of work on the foundations, should indicate the point of time to which the start refers, plays an important role in the statistics on non-completions within the framework of which the building projects authorized but not yet begun are recorded separately from the building projects begun but not yet completed. As defined for the purposes of these statistics, a building project is regarded as "not yet begun" so long as excavation works for the foundations have not been started and it cannot be concluded from other activities on the site (e.g. the erection of building booths, etc.) that building operations have been begun. Accordingly, the proposed definition of "work begun" as the stage when the "first actual operations (as contrasted with planning and designing)" are carried out concords with our views.

#### Work under construction

The definition proposed by the Rapporteurs is agreed upon.

#### - France

#### Work authorized

There are no comments on the proposed definition and the relevant explanatory notes. The number of authorizations is of little value in economic analysis.

<u>Note</u>: In the case of residential buildings, the French statistics on authorizations supply, besides the number of dwellings, the living floor space and the breakdown of the dwellings according to certain criteria (inter alia the number of main rooms); authorizations relating to non-residential buildings and expressed in terms of value are thought to be more useful than those expressed in volume  $(m^3)$ for the purpose of, for example, estimating investments.

#### Work begun

There is need for the elaboration of a precise definition for this concept since the level of number of dwellings under construction and, especially, the duration of construction depend on the definition adopted. It is necessary to have a precise standard definition with a view to making international comparisons in these two fields. In the case of countries which have to apply definitions differing from the international recommendation, it would be desirable, as pointed out in a general way by the Group of rapporteurs, that these countries make available additional data which would enable a shift to be made from one concept to another.

The following definitions are proposed:

(a) For new building work (residential and non-residential building): "Are considered as 'begun', the buildings the foundations of which have been started"; "Are considered as 'begun' all dwellings which, according to the building project, are to be built in the building the foundations of which have been started". In French the term "mis en chantier" would appear preferable to that of "commencé"; it is undoubtedly better to maintain the concept of "foundations which have been started" rather than that of organizing the site or of the arrival at the site of equipment and materials. Indeed there is a growing tendency for plans to cover the erection of several buildings; work on the various buildings can commence at different times (extending over a number of years) and it may even happen that a project relating to one or more particular buildings is abandoned.

If the concepts of preparing the site and of supplying equipment and materials to the site are taken into account the risk arises of considerably distorting statistics on the number of buildings (and dwellings) begun and under construction as well as those on the duration of construction of each building.

 (b) <u>For maintenance work</u> (residential and non-residential buildings) The proposed definition would appear to be acceptable for maintenance work if, however, the words "start of the excavation or of the foundations" could be suppressed.

#### Work under construction

No comment on the definition proposed.

#### Work completed

If the definition for completion of dwellings is extended to all residential and non-residential buildings, it should be noted that it cannot be applied to maintenance work.

#### - Italy

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If the concept of completion of dwellings were applied also to non-residential buildings, it would be desirable to replace the definition of "completion of dwellings" by "completion of buildings" and the term "ready to be occupied" by "ready to be utilized".

It would be desirable to have a single definition for work authorized, work begun and work under construction, applicable to both the building sector and to civil engineering. It is thought that the definitions proposed by the Group of rapporteurs could also as a rule be applied to civil engineering.

#### - Netherlands

#### Work authorized

It is not clear to us why the problems relating to statistics on authorization for residential building are so different from those relating to non-residential building and why the two series should be considered separately.

Work begun, work completed, work under construction

We wonder whether it is necessary to draw up separate definitions relating to civil engineering. The definition of "work begun" already relates to civil engineering, while the definition of "work completed" could be adopted for example in the following way: "work is completed when physically ready to be occupied or to be used".

#### - United Kingdom

#### Work authorized

This would only cover, now that licensing is not in force, the work for which Government approval is required at the tender stage, for example, local authority, housing, schools, roads, etc. l

#### - United States

<u>General remarks</u>: As we understand it, the definitions and concepts have been prepared by professional statisticians. It should be kept in mind that the statistical data and the definitions will have to be such as to lend themselves to understanding and use on the part of non-statisticians as well as statisticians. We doubt whether a group should concern itself with national statistics on construction progress. We refer to such items as work authorized, work begun, and work completed. Data of this type are more valuable to a contractor than to anyone else and we think they have little significance on an international basis. For this reason each country should be allowed to work out its own concept to cover these activities.

# VII. URBAN AND RURAL AREAS (1)

#### - Denmark

The Working Party's comments are agreed upon.

#### - Federal Republic of Germany

The grouping of communes according to rural and urban characteristics can be based on two principles:

- (a) On the <u>administrative breakdown</u>, namely into towns not connected with a "Landkreis" (i.e. "Stadtkreis") and communes situated in "Landkreise". This grouping does not take into account the economic character of the communes. In practice, there are small towns not connected with a "Landkreis" with a number of inhabitants just exceeding 10,000, but also large communes with more than 60,000 inhabitants, which are not independent "Stadtkreise".
- (b) On the <u>number of inhabitants</u>, which is a more adequate criterion, and by which the disadvantages of the administrative division are evaded. This is the reason why this breakdown is applied to the statistics on building activities, in other words communes with less than 50,000 inhabitants are regarded as rural and those with 50,000 and more inhabitants, as urban.

<sup>(1)</sup> The definitions of "urban areas" adopted in selected European countries for the purpose of recent population and housing censuses are given on the following page.

# Definition of Urban Areas

Country	Census year	Definition
Austria	1951	Communes of more than 5,000 inhabitants
Belgium	1947	Communes of 5,000 or more inhabitants
Bulgaria	1946	Towns, i.e., places legally established as urban
Czochoslovakia	1947	Communes of 2,000 or more inhabitants
Denmark	1950	Agglomerations of 250 or more inhabitants
Eastern Zone of		
Germany	1946	Communes of 2,000 or more inhabitants
Federal Republic of		
Germany	1950	Communes of 2,000 or more inhabitants
Finland	1950	
France	1954	Communes of more than 2,000 inhabitants in the administrative
		centro
Greece	1951	Municipalities and communes with agglomerations of 10,000 or more inhabitants
Hungary	1949	The capital, 13 autonomous cities and 46 country towns
Ireland	1951	
Luxembourg	1947	Communes of 2,000 or more inhabitants in the administrative
		centre
Netherlands	1947	Administrative municipalities of 20,000 or more inhabitants
Norway	1950	
Poland	1946	Communities having an urban administrative organization,
		i.e., with a mayor or president
Portugal	1950	Communities of 2,000 or more inhabitants
Romania	1948	Cities and towns established by law
Spain	1950	Communities of more than 10,000 inhabitants
Sweden	1950	Administrative towns, not including market towns and
		"Municipalsamhällen"
Switzerland	1950	Communes of more than 10,000 inhabitants
Turkey	1950	Places with a municipal organization, i.e., administrative
		centres of provinces and districts regardless of size and
		other agglomerations of 5,000 or more inhabitants
United Kingdom	1951	Boroughs and urban districts classified as such for local
	101	government purposes.
- England and Wales		Citios, municipal boroughs and urban districts
- Northern Ireland		ter and the set of the
and Scotland		Cities, burghs and villages of 1,000 or more inhabitants
Yugoslavia	1948	Administrative units governed by City People's Committees
		Transmission of the state of th
Source: Demographic Yearbook 1955, United Nations, New York 1955, pages 193 to 197.		

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VIII. DEFINITION AND SUBDIVISION OF THE CONSTRUCTION INDUSTRY

#### - Denmark

The Working Party's comments are agreed upon.

#### - Federal Republic of Germany

Statistics on building activities in the Federal Republic of Germany cover only those above-ground structures which are subject to authorization, namely all buildings designated for permanent habitation or use. Performances in civil engineering are <u>not</u> included. In addition, statistics on building activities take into account only buildings, dwellings, etc., and not the work necessary for their erection. Ì

The sub-section "by activity" cannot be employed in statistics on building activities. Whether it is possible to include this sub-section in the building report has still to be examined.

The sub-sections "by residential building" and by "non-residential building" are already employed in statistics on building activities.

- France

The competence of the Working Party on Housing and Building Statistics of the <u>Housing</u> Committee, to exemine definitions on civil engineering may be questioned. The proposed sub-division of the sub-sector "building, by kind of activity", would appear difficult to achieve in practice.

· - United Kingdom

The United Kingdom could not provide statistics by the kind of activity, but only by destination of output.

#### IX. AREA BUILT ON

#### - Denmark

The Working Party's comments are agreed upon.

- Federal Republic of Germany

Within the framework of the statistics on building activities, the area built on is not ascertained. But these data will be obtainable from the records of the building offices as soon as the Ordinance on the Execution of Statistics on Building Activities has been modified accordingly. However, this will not be possible before the end of 1958. But apart from that it is felt that the knowledge provided by this criterion is only of minor importance.

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# ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

# Working Party on Housing and Building Statistics

(Item 5 of the provisional agenda of the eighth session)

# STATISTICS ON THE VALUE OF CONSTRUCTION, BUILDING COST AND BUILDING ACTIVITY

# Note by the Secretariat

At the request made by the Working Party at its seventh session (HOU/94, paragraph 24), Mr. P.T. Deneffe (Federal Republic of Germany) and Mr. J. Hirdes (the Netherlands) have prepared revised drafts of Sections II (Value of construction) and III (Index of building costs) of the report which they submitted at the meeting (HOU/Conf.Room Doc. No. 21). The new text of these two sections is annexed hereto. These rapporteurs have also completed a new Section IV on indices of building activity, which is being circulated separately as HOU/WP.3/Working Paper No. 15/Add.1.

The rapporteurs point out that in redrafting Sections II and III of their paper they have taken into account in so far as possible comments received from countries. On two points, however, they felt that these suggestions should not be followed:

- (a) A number of countries proposed additional methods of collecting data on the value of construction. The rapporteurs consider that these methods are not adequate. The expenditure method, mentioned in the Programme for the Collection of Statistics on Gross Fixed Capital Formation (ME/452/56) cannot be applied to all categories of investors (e.g. private persons). The indirect methods proposed by Sweden would only yield very rough indications of the value of construction.
- (b) It has also been suggested that the sector of use should be defined. The rapporteurs are of the opinion, however, that this is a question which should be solved within the framework of national accounts, and would therefore be beyond the competence of the Working Party.

#### MNEX

#### MEMORANDUM PREPARED AND REVISED BY Mr. P.J. DENEFTE AND Mr. J. HIRDES

I. INTRODUCTION

(See HOU/Conf.Room Doc. No. 21).

#### II. VALUE OF CONSTRUCTION

#### A. Purposes

Statistics on value of construction are required for the following main purposes:

- 1. Preparation of national accounts, i.e., the output of the building industry.
- 2. Determination of the (total) construction activity and calculation of an index of building activity,
- 3. Calculation of the share of the different sectors of construction, e.g. residential building, in the value of total construction.
- B. <u>Concepts and definitions</u>

# 1. <u>Construction</u>

The concept of construction should agree with the definition in the International Standard Industrial Classification of all Economic Activities (ISIC) of the United Nations, namely: construction, repair and demolition of buildings, highways, streets, and culverts; heavy construction of such projects as sewers and water mains, railway roadbods, railroads, piers, tunnels, subways, elevated highways, bridges, viaducts, dams, drainage projects, sanitation projects, aqueducts, irrigation and flood-control projects, hydro-electric plants, waterpower projects, gas mains, pipelines and all other types of heavy construction; marine construction such as dredging, under-water rock removal, pile driving, lond reclamation, construction of harbours and waterways; water wells; airports; athletic fields; golf courses; swimming pools; tennis courts; parking areas; communication systems such as telephone and telegraph lines; and all other construction, whether undertaken by private bodies or governmental authorities. Special trade contractors in the field of construction, such as carpenters, plumbers, plasterers and electricians are also included in this group.

The above concept comprises all building activity. For the purposes of national accounts, however, construction, repair and demolition work undertaken as an ancillary activity by the staff and for the use of an enterprise classified in any other division of the classification are not included. From the above it would seem worthwhile baving separate data on building as an ancillary activity. However, in practice it will be difficult to ascertain this data.

2. Value

Total output consists of the following elements:

(a) value of building materials used,

(b) wages and salaries,

(c) taxes, allowances for the use of machines and other equipment, general operation costs, contractor's profits, etc.

<u>Note</u>: Value of durable consumer goods which form part of the permanent fixtures of buildings, such as plumbing, stoves, heating, washing facilities and refrigerators should be included.

3. Value of construction should include work done at all stages of production, including work done on products not yet completed.

4. The acquisition of land should be excluded from the value of construction, but the costs of preparing the site should be included. (1)

5. Architects' fees, the cost of obtaining building permits, or the cost of interim financing and similar expenses should not be included.

6. In determining the cutput of the building industry, value of construction should not include the cost of materials bought by future owners and work and services provided by the owners not constituting an activity of building industry.

On this point the recommendations differ from those contained in the Programme for the Collection of Statistics on Gross Fixed Capital Formation, hereinafter called "the Programme".

<sup>(1)</sup> It should be pointed out that the question of the treatment of land in statistics on fixed capital formation is still under consideration by the Conference of European Statisticians. The parts in the Programme for the Collection of Statistics on Gross Fixed Capital Formation relating to this subject should therefore be considered as provisional.

#### 7. <u>Subdivisions</u>

#### (a) Minimum programme

It is proposed that data on value of construction be classified by type of capital goods and by sector of use.<sup>(1)</sup>

# (i) Type of capital goods

- Residential buildings (excluding repairs and maintenance)
- non-residential buildings (excluding repairs and maintenance)
- repairs and maintenance (buildings)
- civil engineering (including maintenance).<sup>(2)</sup>

It should be noted that in the Programme the simplified classification distinguishes only two categories: dwellings; and other construction and works. The detailed subdivision of value of construction by type of capital goods is preferred for the following reasons:

- it is important to measure the share of residential building in the total of building activity and to be able to indicate the trend,
- civil engineering should be distinguished from the other sectors of construction as the former is mostly carried out by special firms, while the kind and the use of the works is different.

(ii) <u>Sector of use</u><sup>(3)</sup>

In accordance with the Programme it is recommended that the following sectors be distinguished:

- private enterprises,
- public enterprises,
- general government,

It should be noted that the classification proposed is based on the criterion of the <u>users</u> of the buildings and not of the <u>owners</u>; in some instances, however, it may be possible to obtain information only on sector of ownership. (iii) It is recommended that the data for the types of building and construction listed under (i) be cross-classified by the sectors of use listed under (ii).

- (1) In the Programme also a classification by industry of use is proposed. This proposal is not included in the "minimum" programme suggested in the following paragraphs.
- (2) A sub-division distinguishing new construction repairs and maintenance work might be envisaged should countries be interested.
- (3) It should be noted that in many cases the classifications by industry and sector of use will raise serious problems (see the Programme).

#### (b) Additional subdivisions

It is proposed that countries which are able to provide greater detail in their statistics should be encouraged to adopt the following more detailed classifications:

#### (i) Type of capital goods

<u>Residential buildings</u>: a distinction between one-dwelling houses and multidwelling houses is to be considered in view of its interest for the formulation of housing policy.

Non-residential buildings: if possible a further sub-division should be considered (e.g. factory buildings, schools, hospitals etc.).

<u>Repairs and maintenance</u>: countries should aim at collecting separate data on residential buildings and non-residential buildings.

Civil engineering: here the following distinction could be made:

- streets, roads etc.,
- permanent way or other means of transport,
- land improvement,
- others.

As regards civil engineering the question arises whether site-preparation for residential and non-residential building should or should not be included in the value of residential and non-residential building. The rapporteurs propose that all work relating to site preparation and directly involved in the construction of residential and non-residential buildings be added to the value of the building itself. The development of the site by means of roads, sewerage, etc., not undertaken by the communal authorities shall come under civil engineering.

Moreover, the Working Party may wish to discuss the inclusion of land improvement, clearing of forests etc.

(ii) Sector of use

The classification proposed in the Programme should be followed here, namely:

- Private enterprises
  - incorporated
  - unincorporated

- Public enterprises

- incorporated (public corporations)
- unincorporated (government enterprises)

- General government

# (iii) <u>Industry of use</u><sup>(1)</sup>

Here also, the recommendations made in the above Programme should be followed. Likewise, the classification by industry of use is based on the criterion of the user of the buildings, but it may in some instances also in this case be possible to obtain only information on industry of ownership.

It should also be noted that dwellings, whether owner-occupied or otherwise, should be classified under a special heading "Ownership of dwellings".

#### 8. <u>Periodicity</u>

It would seem that the detailed data listed above could only be collected -annually. The Working Party may, however, wish to consider whether more frequent data of a simpler type could be obtained.

#### C. Methods of collection

The data concerned can be obtained by:

- Method 1. Directly from the firms which carry out the construction work, or by
- Method 2. Through the authorities concerned with the regulation of building on the basis of data furnished by the future owner, combined with periodic progress checks.

<u>Method 1</u> offers the opportunity to collect more complete data than can be obtained by means of Method 2. On the other hand, in most countries there are many rather small firms which make it difficult to collect the data concerned. As, however, data on repairs and maintenance are required it is necessary to have also data from the small firms (see Method 2).

In practice it would seem possible to collect data from all firms at most only once a year.

If between these benchmarks, monthly or quarterly data are to be collected, reliable results can be obtained on the basis of a representative sample of the firms. In this connexion it should, however, be noted that it is almost impossible to have monthly or even quarterly data on value of construction in the above sense (work done); the figures made available will mostly refer to the turnover in the period concerned,

<sup>(1)</sup> It should be noted that in many cases the classifications by industry and sector of use will raise serious problems (see the Programme).

<u>Method 2</u> (a) Application of this method presupposes that some kind of building regulation exists and that, at least, data are supplied on the value and type of construction. It would not seem that by this method data could be collected on repairs and maintenance, since in most countries no building permit is required for small repairs and normal maintenance.

(b) Since this method does not provide data on actual building activity, it is necessary to collect additional information on progress made on work under construction, e.g. by periodic progress checks.

However, the following difficulties arise:

(1) the data on value refer to the estimated value at the moment the licence is issued. From a statistical point of view it is very difficult to ascertain the final value. Consequently, there may be a difference between the final value of construction and the calculated value. It is possible to check the differences by means of sampling enquiries;

(ii) as in practice most countries will not be able to follow the progress of each work at frequent intervals, it should be mentioned that it is also possible to collect yearly data on work under construction distinguished by phase (at the beginning and at the end of the year) but in this case, of course, it is necessary to have figures on work completed during the year.

On comparing the two methods the following conclusions can be drawn:

1. Method 1 offers the possibility of covering all construction work carried out by the building and construction industry. Method 2 has the disadvantage that in many countries building permits are not required for all construction work and that the coverage varies considerably from country to country.

2. The different sub-divisions required are more difficult to realize by the first than by the second method.

3. Method 1 provides more correct data on the final value of work than method 2.

4. As regards the calculation of the value of work done in the given period, more correct data are to be expected from Method 2, since under Method 1 it might be difficult to allocate the data to a specific period.

#### D. Other data to be collected

In addition to the data on the value of construction mentioned above, it would seem desirable to collect data on the volume of construction in physical terms, e.g. cubic metres, and; as regards residential buildings, the number of dwelling-units, so as to be able to calculate the average value per cubic metre or per dwelling. Regarding the use of these data reference can be made to IM/HOU/WP.3/9, Report on Building Cost Statistics.

# III. <u>INDEX OF BUILDING COSTS</u> (price index numbers for construction) Introduction

During its fourth session the Working Party agreed that there were various indicators relating to building cost, prices and value of construction:

- (a) "Euilding cost" in the sense implied in IM/HOU/WP.3/9, i.e. expenditure by future proprietors of buildings for the erection of the buildings.
- (b) An "index of building cost" in the conventional sense, i.e. an index of the prices of building materials, labour and other input elements (index of building input-prices). Such an index was not affected by changes in productivity or building techniques.
- (c) A "building price index", i.e. an index of building output prices.

Building costs in the sense conveyed in IM/HOU/WP.3/9 is dealt with under Section II above, Value of construction.

Concerning the indices relating to building cost see "building prices". It should be pointed out that the outstanding need is for an output price index as described under (c) above. As an approximation of this index, most countries calculate an index of the kind specified under (b).

A. Purpose

An indicator of changes in prices for construction work is necessary for setting economic policy in general, for the preparation of national accounts, for use in connexion with real-estate insurance etc.

B. Concepts and definitions

1. Changes in the value of construction are determined by different factors,
i.e. changes in (a) prices; (b) quality of the work; (c) kind of equipment used.
The term "price" is used here in the sense of the amount paid per unit of work of a defined category. This unit may be, for example, m<sup>3</sup> of masonry work, m<sup>2</sup> of

timber work, m<sup>2</sup> of roofing, m<sup>2</sup> of painting, etc., or m<sup>3</sup> of gross volume or even a whole dwelling, all of equal quality. The object is to measure only changes in prices and to eliminate <u>changes</u> in quality of execution, changes in kind of equipment used etc. In view of their scope, such indices should not be limited to one sector of construction, e.g. residential buildings, but cover also the other sectors (non-residential buildings and civil engineering). The price itself should include the same elements as mentioned above under Section II, Value of construction.

2. Since prices can only be established for building work carried out on behalf of a third party, the building price index cannot include work for one's own account. Therefore, ancillary activities are excluded.

3. <u>Indices for different sectors and categories of work</u>: In general, changes of price should be recorded for at least the same types of capital goods mentioned under Section II, above, Value of construction. Furthermore, it is useful to have data on price changes of categories of work (timber work, painting etc.).

C. Methods of calculation

Contrary to what is outlined in IM/HOU/WP.3/5, two methods should be distinguished:

<u>Method 1</u>, based on the prices of a work unit as a whole, without subdivision into the different cost components: material, wages, etc., and <u>Method 2</u>, based on the prices of the different components: materials, wages, etc.

<u>Method 1</u> covers both procedures referred to in IM/HOU/WP.3/5 as "calculation of actual costs" and "actual costs applied to a standard house", because the "work unit" may be a category of work (timber work, roofing etc.) but may also be the building as a whole.

Starting from the price of a whole building presupposes that the buildings which are being compared are comparatively uniform and are representative of all residential buildings. However, this condition will generally not be met. Document IM/HOU/WP.3/5 suggests the possibility of eliminating differences in quality of work. Closer examination of this possibility in the Netherlands, for dwellings built according to the Housing Act, has, however, shown that this would

require an extremely detailed study and application would consequently encounter practical difficulties.

It may be better, therefore, to use the prices for the units of the different work categories. In this case it is necessary to define clearly these work categories and to refer to them when calculating the index. Although by this method it is not possible to eliminate the effects of all changes in kind of equipment used and in quality of work, at least an important part of these features can be allowed for. The reporting firms must be instructed on this point.

The choice of work categories should not be limited to residential buildings but should also be extended to non-residential buildings and even to civil engineering.

Of course, some difficulties may arise with regard to the reporting firms, i.e. the contractors, because of the close attention which they have to pay to the data supplied. Moreover, if an index is compiled with a frequency of less than one year, e.g. quarterly, the number of reporting firms has to be rather large in order to keep the margin of error in the results acceptably small. On the other hand it may be expected that reliable reporting will be ensured by the fact that the data are also used by the investor concerned. The reporting firms should receive precise descriptions of the work categories, for which they should supply prices. These firms must be equally informed on how they should proceed in cases where work planned does not reach the contract stage. Such cases would necessitate recalculations.

There is need for:

- (a) an index for the output of the construction industry as a whole;
- (b) an index for certain types of residential buildings, non-residential buildings and civil engineering.

The index under (a), i.e. the index for the total output of the construction industry should be subdivided as follows:

- Indexes for the three main sectors, e.g. residential buildings, nonresidential buildings and civil engineering.

- Indexes for the chief work categories.

The most appropriate source for the weighting coefficients in these various indexes would be production censuses or similar enquiries. As regards the work categories it should be noted that within each of these categories different subcategories should be distinguished corresponding to different methods of execution. This implies that for each of these sub-categories separate weights should be obtained and separate data should be collected from the contractors.

In calculating indexes as under (b) above, i.e. indexes for certain types of construction, the sub-categories mentioned under (a) should be weighted according to their share in <u>standard</u> forms of construction. As regards residential buildings, indexes could be calculated, e.g., for one-dwelling houses and multi-dwelling houses and also for buildings with, e.g., mainly timber construction; mainly brick construction, etc.

<u>Method 2</u>: In many countries the conditions are not suitable for making the above calculations and Method 2 is used as a substitute for Method 1; in most of these cases the "building price index" relates only to the prices of materials and wages, weighted on the basis of a standard house. Indexes of this sort can only give an approximation to the price-index of output, because price changes of other input elements, changes in profits and changes in productivity are not taken into account. Therefore, countries using this method should always be aware that there is a margin of error involved which may vary from sector to sector and also from period to period.

This method can also be applied to sectors other than residential building, but the calculation of the weighting coefficients involves additional difficulties because of the more heterogeneous character of these sectors,

Concerning the weighting coefficients, it should be noted that, here again, instead of standard forms of construction, use could be made of the input data derived from production censuses. It should be borne in mind that the term "standard" and the term "representative" are not always synonymous for the sector concerned.

Although the method mentioned here has many drawbacks it seems that it may be recommended for the compilation not only of index numbers of construction as a whole but also for certain categories of work (masonry work, timber work, etc.)

It should be once more emphasized that both methods are intended to indicate changes in the price of <u>output</u>. When indices are published which only relate to materials and labour input, this should be properly explained.

As regards the calculation of the index numbers, it may be noted that vsually the Laspeyres formula is used. However, for some purposes it may be necessary to calculate a Paasche index as well.

# D. Frequency

Concerning the frequency of the above index numbers, it does not seem sufficient to have only yearly figures. Quarterly data should be available and monthly data may be desirable.

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#### ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

2

#### Working Party on Housing and Building Statistics

(Item 5 of the provisional agenda of the eighth session)

#### STATISTICS ON THE VALUE OF CONSTRUCTION, BUILDING COSTS AND BUILDING ACTIVITIES

Addendum

# IV. Indices of building activities

# A. <u>Purposes</u>

The object of production indices for the building industry should be to permit:

- 1. Calculation of the trend of economic activity in the building industry;
- 2. Calculation of the trend of investments in the form of buildings.
- These data are used for the dual purpose of economic analysis and formulation

of economic policy, and are also useful for the preparation of national accounts.

#### B. <u>Concepts and definitions</u>

#### 1. Product of building activity

The production indices for the building sector should show the trend of building activity within an economy in terms of real units.

A distinction should be made between:

- (a) gross production,
- (b) net production, and
- (c) value added.

Building activity proper is expressed by the value added, but that concept is rather difficult to express in statistical terms, while net production value is usually worked out from the production figures. In practice, it is the gross production figures which are usually used.

To measure the trend of investments in the form of buildings, it is the figures for gross production which have to be taken as a basis. To calculate the trend of economic activity, the changes have to be shown in terms of value added, or, failing that, in terms of net production.

## 2. Construction

The concept of construction should agree with the definition in the International Standard Industrial Classification of all Economic Activity (ISIC), and the explanations given in section II, Value of construction, paragraph B (HOU/WP.3/Working Paper No.15) should be taken into account.

#### 3. Subdivisions

It is proposed that the data on building production be classified by type of capital goods. This subdivision should show the development of construction in the case of:

(i) residential buildings (excluding repairs and maintenance),

(ii) non-residential buildings (excluding repairs and maintenance),

(iii) repairs and maintenance (buildings),

(iv) civil engineering (including maintenance).

As far as repair and maintenance work is concerned, countries should calculate the figures for residential and non-residential buildings separately (see section II, B.7(b)(i).

These indices should always be calculated for the building industry as a whole. It is also recommended, in order to meet national accounting requirements, that a subdivision be made between building activity (including activity in the public sector) and construction work undertaken as an ancillary activity by the staff of an enterprise in another sector (see section II, B.1).

4. Periodicity

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Production indices for the building industry should be prepared at least once a year, annual figures providing the most reliable basis for following the temporal trend. For following the short-term trend, quarterly or monthly data may be used.

C. Methods of collecting the basic data

Measurement of work in the building sector is an extremely tricky problem. In view of the fairly considerable time needed to produce one unit, the method generally used in other industrial sectors - that of expressing activity in terms of physical units (finished products) - is inapplicable in this case.

1. The following data can be used for finding the production index for the building sector:

- (a) Data for completed work (expressed in physical units), including uncompleted work at the end of the datum period.
- (b) Data for the value of completed work (see section II, Value of construction).

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These data must be corrected by means of a suitable series of price indices in order to eliminate the effect of prices and enable the series to be expressed in terms of volume.

- (c) Where necessary, substitute series may be used to express building production:
  - (i) Data on hours worked. A correction factor should be applied to this series to eliminate productivity variations.
  - (ii) Data on materials consumption by the building industry. The use of these data presupposes a close parallelism between production and materials consumption.

2. The data referred to in (a), (b) and (c)(i) are obtainable from building undertakings. Other data under (a) and (b) are also available in certain instances (such as data derived from statistics of building permits or completed buildings). The data referred to in (c)(ii) are obtainable both from concerns engaged in actual building work (in their capacity as materials consumers) and from those in the building materials industry which participate in the work as suppliers.

3. The various categories of statistics may be combined in certain cases. Statistical data on completed work expressed in physical units could be used in the residential buildings sector, whereas the other branches of the building industry would confine themselves to data on value of construction or to substitute series.

4. The various statistics mentioned are not all of equal value for expressing the production trend in the building industry.

- (a) The method referred to in C.1(a) does not permit figures to be compiled in terms of physical units for all types of construction work without exception (e.g., repairs or improvements). Expression in physical units seems possible for other types of work, but in practice this method requires the compilation of detailed statistical series (for public works, for example: m<sup>2</sup> of road construction, km of railway etc.). The same difficulty arises for all types of method work. This method would not be generally applicable, therefore, except for housing construction.
- (b) It should be noted, as regards method C.l(b), that the price index needed for correcting series (b) (see section III) being non-existent in certain countries, no correction is possible.

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- (c) The correction of series to eliminate the effect of productivity variations is particularly difficult with method C.l(c)(i). The correction factor can only be accurately calculated where statistical data are available on the production trend in the building industry expressed in real values in accordance with series (a) or (b). In that case, however, the substitute series referred to in (c)(i) does not have to be calculated in advance (see paragraph B.3 above concerning the use of substitute series). This method is particularly difficult to use for long-term calculations. For a short-term index, the series for hours worked may be used - if necessary without applying the correction factor for eliminating the effect of productivity.
- (d) It is difficult to limit the data in time and apply them to the datum period in the case of method C.l(c)(ii). It should be noted, moreover, that changes in building techniques affect the use of materials and that the pattern of consumption as between the various building sectors free to use different types of materials is not constant with this substitute series, furthermore, no subdivision is possible (see B.3 above).

#### D. <u>Methods of calculating the index</u>

1. The aim is to calculate a volume index according to the basic Laspeyres formula:

$$J_{i} = \frac{\Sigma q_{i} p_{o}}{\Sigma q_{o} p_{o}}$$

where q<sub>0</sub>, q<sub>1</sub>, q<sub>2</sub> ... q<sub>i</sub> are the figures, in physical units, for completed buildings during the production periods 0, 1, 2 ... i, and p<sub>0</sub>, p<sub>1</sub>, p<sub>2</sub> ... p<sub>i</sub> the prices per physical unit for the same periods.

This index can be directly calculated if figures are available for completed buildings in terms of <u>physical units</u>. The sum given in the formula is extended to the data for the various subdivisions (see paragraph B.3).

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2. The following formula can be used where data are available on the <u>value</u> of production:

$$J_{i} = \frac{V_{i}}{V_{o}} \cdot \frac{1}{\sum_{i=1}^{q_{i}} P_{i}}$$

where  $V_0$ ,  $V_1$ ,  $V_2$  ...  $V_i$  represent the value of construction during the production periods 0, 1, 2 ... i.

The factor V is given by:

5

The price index used to correct the series for value of construction is a Paasche index and could be replaced for short-term periods by a Laspeyres index. The price index is usually based on a limited choice of data for prices and weights but is regarded as representative for all values of q and p.

3. Where the only statistics available are for <u>hours worked</u> in the building industry, the index should be calculated according to the following formula:

$$J_{i} = \frac{H_{i}}{H_{o}} \cdot \frac{P_{i}}{P_{o}}$$

where  $H_0$ ,  $H_1$ ,  $H_2$  ...  $H_i$  are the total hours worked during production periods 0, 1, 2 ... i, and

 $P_0, P_1, P_2 \cdots P_i$  are the productivity figures for the building industry during the same periods.

The productivity figures are given by

$$P_{i} = \frac{V_{i}}{H_{i}} \cdot \frac{1}{\sum p_{i} q_{i}}$$

$$\sum p_{o} q_{i}$$

The considerations set forth in paragraph D.2 regarding the price index apply equally in this case.

This expression of productivity is probably not available in most countries, seeing that methods C.1(a) and C.1(b) could also be applied in such cases, and it would therefore be necessary to consider applying substitute series for productivity in other sectors of the economy, such as industry. The use of a substitute series obviously depends on the trend in the building sector and that chosen for calculation being the same. The Rapporteurs question the value of this procedure. HOU/WP.3/Working Paper No.15/Add.1 page 6

4. Where the only statistics available are for <u>materials consumption</u> in the building industry, the index should be calculated according to the following formula:

2

$$\sum_{i=1}^{m_{i}} R_{o}$$

where m<sub>o</sub>, m<sub>1</sub>, m<sub>2</sub> ... m<sub>i</sub> represent building materials consumption by the building industry during production periods 0, 1, 2 ... i, and

R<sub>o</sub> represents the value of the materials consumed during the datum period. The weighting of the consumption figures for the various materials by their respective values, as provided for here, is necessary to permit summation of the various materials (bricks, cement, lime, structural steel etc.).

5. Different formulae could be used, where the available statistics make it necessary to do so, for calculating indices for individual building sectors, the general index being calculated as a weighted mean of the group indices. The weights used should be the figures for production values in the various sectors. Failing this type of weighting, production expressed in physical units may be used if necessary.

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## ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

# Working Party on Housing and Building Statistics

(Item 6 of the provisional agenda for the eighth session)

#### BULLETINS OF HOUSING AND BUILDING STATISTICS

Note by the Secretariat

The purpose of this note is to submit to the Working Party on Housing and Building Statistics the Secretariat's proposals regarding the Quarterly and Annual Bulletins of Housing and Building Statistics for Europe. It should be recalled that the Quarterly Bulletin first came out in August 1953 and has since been issued regularly each quarter. In accordance with the decisions taken by the Working Party, the Secretariat is now preparing an annual bulletin.

#### Quarterly Bulletin

Hitherto this bulletin has been published on a country-by-country basis. The reasons for this were the incomplete coverage of the statistical information and the lack of comparability between national statistics. Since statistical information has of late become more amply available, and in view of the progress made by the Working Party on concepts and definitions, the time is now thought to be ripe for a change to a subject basis. At its seventh session the Working Party invited the the Secretariat to prepare a draft outline of such a bulletin, including detailed table headings (HOU/94, paragraph 25). The Secretariat believes, however, that this matter could be more usefully discussed on the basis of a document containing not only dummy tables but also statistics. It is therefore proposed that the October issue of the Bulletin (i.e. Volume V, No.2, covering the second quarter of 1957) be issued by way of experiment on a subject basis. This issue, the form of which would of course be provisional, could then be submitted for discussion to the Working Party's ninth session, to be held in the course of November 1957.

It is suggested that a transitional period should be foreseen during which the new presentation of the Bulletin could be constantly improved so far as layout and readability are concerned and that a definitive version should be issued in the course of July 1958 (i.e. Volume VI, No.1, covering the first quarter of 1958). By that HOU/WP.3/Working Paper No.16 page 2

time it will be necessary to have established a layout which it would not be necessary to change for some considerable period since it is also envisaged to adopt a different method of reproduction which would not be practicable if subject to alteration.

It should be recalled that the publication of statistics on non-residential building, which formed part of the early numbers of the bulletin, has, in accordance with the decision of the Working Party, been discontinued, owing to the divergencies in definitions which were found in the field of floor space and volume. Since the Secretariat is now better informed concerning the real scope of the various national concepts in this field and considerable progress has been made by the Working Party with regard to the relevant definitions, it will be possible to include in the new version of the bulletin data on non-residential building.

The presentation of the data on a subject basis will increase the possibility of inter-country comparison and will reduce the volume of the bulletin. Moreover, the notes could also be considerably reduced by showing for each subject the definitions established by the Working Party and by referring to national definitions only when they differ from the standard definitions.

#### Annual Bulletin

The Secretariat has collected a considerable amount of statistical material for the Annual Bulletin. It has not yet been possible to publish the first issue of this paper for two reasons: the absence until very recently of information on a number of countries and the pressure of Secretariat work on other subjects. Moreover, it was thought advisable to await the conclusions on the papers relating to value of construction, building cost and index of building activity, a subject which will be dealt with at the present session.

As in the case of the Quarterly Bulletin, this document could be issued on a subject basis and the explanatory notes could be dealt with in the same way as for the former.

It will be recalled that the Working Party has already outlined the contents of both the Quarterly and Annual Bulletins. It would seem desirable, however, to review at the November meeting the earlier decisions in this connexion in order to determine the final contents of both Bulletins, taking into account the experience gained when drawing up the Quarterly Bulletin. An outline of the Annual Bulletin could be

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submitted to the spring 1958 meeting of the Working Party and the first issue, it is hoped in printed form, of the Annual Bulletin could be published in about August 1958. <u>Conclusions</u>

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> The Secretariat would like to suggest therefore that the ninth session of the Working Party, to be held in November this year, should be exclusively devoted to the discussion of the two Bulletins; that it should give special consideration to the Quarterly Bulletin in its new form and should establish the contents of the two Bulletins. The tenth session, to be held in the spring of 1958, could discuss the Annual Bulletin in detail.

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

#### Working Party on Housing and Building Statistics

(Item 3 of the provisional agenda of the ninth session)

### REVISED VERSION OF THE QUARTERLY BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE

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Note by the Secretariat

1. At its eighth session in May 1957 the Working Party "thought that the time was ripe for a change in the Quarterly Bulletin from a country-by-country basis to The Secretariat would prepare the October 1957 issue of the a subject basis. Bulletin in this form and would submit it for discussion to the Working Party's It was expected that the definitive version of the Bulletin, ninth session. covering the first quarter of 1958 could be issued in the course of July 1958" (HOU/96, paragraph 20).

2. Accordingly, the Secretariat has prepared a new version of the Quarterly Bulletin on a subject basis covering the second quarter of 1957 (Volume V, No.2) for discussion by the Working Party. It should be stressed that, in accordance with the recommendations of the Working Party, this issue is still experimental and that there is room for further improvements in content and presentation. It should also be recalled that this quarterly issue is designed to follow current trends in various fields related to housing and construction; an annual bulletin, which will contain, inter alia, fuller details of the series shown in the Quarterly Bulletin, is in the course of preparation.

3. The general arrangement adopted in the new version of the Quarterly Bulletin is as follows:

(a) The statistical information is grouped in eleven tables covering:

- Demographic trends: Table 1: Estimated population and population increase rates

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- Output factors:	Table 2:	Dwellings completed
	Table 3:	Dwelling construction: work authorized, begun, under construction, and completed
	Table 4:	Construction activity
- Input factors:	Table 5:	Production of cement
	Table 6:	Production of bricks
Ň	Table 7:	Production of roofing tiles
	Table 8:	Employment
•	Table 9:	Unemployment
- Costs and prices:	Table 10	House-building prices and costs
	Table 11	: Wholesale prices of building materials

- (b) The definitions and explanatory notes to the tables are given in Annex I, also grouped on a subject basis. Wherever applicable the definitions agreed upon by the Working Party are shown, and the exceptions in national data mentioned.
- (c) The sources of the statistics are shown in Annex II.

The new arrangement of the Quarterly Bulletin has made it possible to reduce the size of the bulletin to about half of that of previous issues.

4. In addition to the introduction of subject tables, the following changes have been made, on which the views of the Working Party are sought:

- (a) A table showing statistics of activity in the whole of the construction industry has been included (Table 4): it should be recalled that information relating to this activity was published for some time in the Bulletin but in the absence of definitions and of a classification of the various concepts used, the Working Party agreed to discontinue its publication; it is now considered that sufficient progress has been made by the Working Party in this field to include such information again in the Bulletin.
- (b) Annual figures are shown from 1952 onwards and quarterly figures from 1955 onwards: as stated above, the quarterly issue is designed to follow up current developments and therefore information previous to 1952 has been dropped.

- (c) The series expressed in indices are based on the year 1953 (instead of 1948): this change takes into account the practice adopted in other United Nations statistical publications, such as the Monthly Bulletin of Statistics.
- (d) The data on employment which previously were expressed in absolute figures will from now on be shown in the form of indices. Since such statistics are highly heterogeneous between countries, indices appear to be preferable to absolute figures.
- (e) The series on the production of certain building materials, which were available for a small number of countries only, have been deleted; moreover, for the sake of comparability, statistics on production only (instead of on consumption or home deliveries) are shown.
- (f) Some sub-divisions for a few series, such as dwelling construction and labour, have been deleted; the breakdown of data on building cost is limited to wages and materials.
- (g) The series on wages and earnings has been discontinued, given the important divergencies in the concepts which are at the basis of such data.

5. It should be stressed that the introduction of subject tables does not necessarily mean that the statistics shown under each heading are comparable from one country to another. It is believed, however, that in many cases deviations from the standard definitions agreed upon by the Working Party can be sufficiently assessed in the explanatory notes.

- 6. Points for discussion and further action
  - (a) It is suggested that the Working Party should examine the new version of the Bulletin, table by table (including the explanatory notes), and comment in particular on the various points raised in paragraph 4 above.
  - (b) Since there are still a number of gaps in the information and notes (e.g. the percentage coverage of some of the series and the exact meaning of the figures relating to the value of construction), it is suggested that countries should be invited to supply the missing data to the Secretariat before the end of December 1957.

- (c) It is also proposed that data for the Quarterly Bulletin should henceforth be collected on the basis of a standard questionnaire, a draft of which has been prepared by the Secretariat for consideration by the Working Party (see Annex I).
- (d) The Working Party may wish to consider the possibility of the publication of the explanatory notes and the notes on sources in the first issue only of each year, it being understood that current changes in the series would continue to be shown as and when they arose.
- (e) It is suggested that a number of points of detail relating to some of the national statistics be taken up directly with delegates from the countries concerned.

<sup>(1)</sup> Since Table 8 (Employment) and Table 11 (Prices) are shown in the form of indices, the Secretariat has thought it desirable to reproduce in Annexes II and III to this note, the original series so that the countries concerned may know which series to report.

HOU/WP.3/Working Paper No.18 Annex I

### ANNEX I

### DRAFT QUESTIONNAIRE

Quarterly statistical return to be rendered <u>two months</u> after the end of the quarter under review to the Palais des Nations, at Geneva

COUNTRY	
QUARTER and YEAR	
DATE sent	

TABLE No.	ITEM	UNIT	Quarter under review	Possible revision of fig- ures for previous quarters
2	DWELLINGS COMPLETED (yearly)			
3	DWELLINGS <u>authorized</u> <u>begun</u> <u>under construction</u> completed			
4	CONSTRUCTION ACTIVITY Work authorized or begun Total Residential Non-residential Other Work completed Total Residential Non-residential Other Cutput Total Hesidential Non-residential Other			
5	CEMENT Production			ана анализи и на селото селото на проти селото селото селото на селото се на селото с нашел. С на селото на с
6	BRICK Production			
7	TILE Production			
8	EMPLOYMENT Index			
9	INFROLOYMENT			
10	PRICES AND COSTS <u>Total</u> <u>Materials</u> Wages			
11	WHOLESALE PRICES <u>Total</u> <u>Cement</u> <u>Bricks</u> <u>Tiles</u> <u>Girders</u> <u>Sawnwood</u> <u>Glass</u>			

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### ANNEX II

				1957				
Country	Unit	1953 (a)	1956	Jan.	Feb.	March	lst Qtr.	
Austria	March 1934 = 100	112.3	119.6	139,6	126.7	125.8	130.7	
Belgium	1953 = 100	100	104.1	106.2	105.4	109.3	106.0	
Czehcoslovakia	1,000 workers and employees	366	367 <b>.</b> 5 ·	••	••	••	357.0	
Eastern Germany	1,000 workers	237	212.1	217.4	216.4	21.6.5	216.8	
Finlend	1948 = 100	104	106	••	••	••	104	
France	1954 = 100	••	106.5	••	••	••	105.7	
Hungary	1,000 workers	229	227	••	••	••	••	
Netherlands (b)	1,000 workers	99,9	115.1	••	••.	••	119.5	
Norway	1,000 workers	101.5	92.9	85.5	85.9	86.9	86.1	
Switzerland	3rd Qtr. 1949=100	102.8	119.4	••	••	••	120.0	
United Kingdom	1,000 persons	1426	1514	1502	1494	1502	1499	
Western Germany	1,000 workers	1298.7	1652.7	••	1670.3	••	1670.3	
Yugoalavia	1,000 employed	233	205	1,54	169	204	175.7	

### National Statistical Series Used for the Computation of the Indices of Employment (Table 8)

Sources: Quarterly Bulletin of Housing and Building Statistics for Europe, ECE, Geneva, October 1957, Volume V, No. 2.

(a) Year adopted as basis in the Quarterly Bulletin.

(b) Annual figures are based on the first three quarters of each year.

<u>ANNEX III</u> <u>National Statistical Series Used for the Computation</u> of Indices of Wholesale Prices (Table 11)

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Country and	material	Unit	1953 <sup>(a)</sup>	1956	January	February	57 Ma <b>rc</b> h	lst Qtr.
AUSTRIA:	Cement Bricks Tiles Girders	) ) ) Schilling )	43.5 45.0 117.0 295.5	46.0 49.7 126.8 325.0	46.8 51.3 130.0 325.0	46.8 51.3 130.0 325.0	46.8 51.3 130.0 325.0	46.8 51.3 130.0 325.0
	Sawnwood Totol	) 1936 to 19 <b>38=</b> 100	618.3 447	880.0 478	<b>880.</b> 0	880.0 484	880.0 490	880.0 484
DELGIUM:	Total Total	1938 to 1938 - 100 1953 = 100	100		116	118	121	118
DENMARK:	Cement Bricks Bars Sawnwocd	) ) Krone Øre Krone	100 18.79(b 147.96(b 81.8(b 12.11(b	20.25 164.91 93.1 13.68	••	••	••	21.37 172.73 98.2 13.58
FINL <b>AND:</b>	Total Cement Bricks Bars Sawnwc <b>e</b> d Glass	) ) 1951 = 100 )	101 113 105 113 96 114	102 117 114 105 81 133	103 121 119 112 81 133	103 121 119 112 81 133	103 121 119 112 81 133	103 121 119 112 81 133
FRANCE :	Total Cement Bricks Girders Sawnwc <b>c</b> d Glass	1949 = 100 ) ) ) Franc )	149.6 5506 6673 36226 14020 242	153.6 5532 6841 38690 17709 252	154.1 5532 6841 39626 17560 252	154.1 5532 6841 39626 17560 252	154.1 5532 6841 39626 17560 252	154.1 5532 6841 39626 17560 252
GREECE :	Cement Stomes Bars Glass	) ) ) Drachma )	391.8 28.5 5. <b>C</b> 4 21.4	485.7 31.0 6.87 28.0	487.5 31.5 6.95 28.0	487.5 31.5 6.95 28.0	487.5 31.0 6.95 28.0	487.5 31.3 6.95 28.0
IRELAND:	Total	Aug Dec. 1953 = 100	•	106	• •	••	• •	• •
ITA <b>LY:</b>	Cement Bricks Sawnwcod Glass Girders	) ) 1938 = 1 <b>0</b> 0 ) Lira	70.69 77.67 83.97 45.49 9218	68.99 78.58 97.79 41.94 8785	68.99 78.70 98.79 41.71 99 <b>5</b> 0	68.96 80.35 98.79 41.71 9900	69.18 80.46 98.71 41.71 9900	79.84 98.76
ILTHERLANDS:	Cement Bricks Girders Sawnwood Glass	) Aug. 1939 = 100	420 417 416 659 302	, 431 493 506 767 298	454 493 506 772 298	454 493 506 756 298	454 495 506 756 298	454 494 506 761 298
HORWAY:	Tctal Cement Girders	Dec. 1938 = 100 1952 = 100 Dec. 1938 = 100	258 102 377	263 103 431	272 111 451	272 111 459	272 111 464	272 111 458
PORTUGAL: SPAIN:	Total Tctal Cement Bricks Tiles Girders Sawnwood	1948 = 100 ) 1913 = 100 )	96 1582.3 565.91 44.25 165.42 284.9 27.0	98 1918.0 609.75 62.15 219.92 388.17 37.25	98 2272.5 717.0 69.0 305.0 549.65 40.0	98 2255.5 717.0 70.0 317.0 549.65 40.0	98 2344•3 717•0 74•0 295•0 549•65 45•0	98 2290.8 717.0 71.0 305.67 549.65 41.7
SWITZERLAND:	Tctal Cement Bricks Tiles Iron Sawnwcod	) ) ) 1939 = 100 )	205.0 153 167 176 251 223	251.7 176 169 178 276 309	260.8 174 185 193 297 314	259•2 174 185 193 297 310	259.2 174 185 193 297 310	259•7 174 185 193 297 311
TURKEY:	Tctal Cement Bricks Tiles Sawnwood	1948 = 100 Piastre	98 6200 7604 31.54 2228	158 7200 6790 34.96 53719	50000	144 7200 7000 32.0 50000	142	143  32.17
UNITED MINGDOM:	Total House- building	) 30 June 1939=100 )	130.4 128.7	142•4 142•3	146.6 146.5	146.5 146.3	146.6 146.5	146.6 146.4
UESTERN GERMANY:	Cement Bricks Tiles Sawnwood	) ) ) 1949 = 100	138 105 111 135	134 121 127 152	••	••	••	138 122 129 150
YUGOSLAVIA:	Total	1956 = 100	84	100	98	98	98	98

Source: Quarterly Bulletin of Housing and Building Statistics for Europe, ECE, Geneva, October 1957, Vol.V, No.2 (a) Year adopted as basis in the Quarterly Bulletin.

(b) 1 July 1953.

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### ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

Working Party on Housing and Building Statistics

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(Item 4 of the provisional agenda of the minth session)

## STATISTICS OF THE VALUE OF CONSTRUCTION, INDICES OF BUILDING COSTS AND INDICES OF BUILDING ACTIVITY

Note by the Secretariat

- 1. At its eighth session the Working Party invited Mr. P. J. Deneffe (Federal Republic of Germany) and Mr. Hirdes (the Netherlands) to prepare for the next session a revised version of their paper on Statistics of the Value of Construction, Indices of Building Costs and Indices of Building Activity, taking into account the Working Party's conclusions on the first two subjects and the comments to be submitted by countries on the third subject (HOU/96, paras. 8 to 19).
- 2. The rapporteurs have now submitted a revised draft of the sections of their paper relating to statistics of the value of construction and indices of building costs (see Annex). Since certain comments on the third section (Indices of Building Activity) of the paper reached the Secretariat fairly late the rapporteurs have not yet been able to prepare a revised draft of that section for the present meeting. It is their intention to inform the Working Party orally of the nature of these comments and to prepare a relevant draft for the next session of the Working Party, taking into account the comments received from particular countries and any further comments which the Working Party may wish to make at its present session.
- 3. It should also be recalled that the Working Party at its eighth session recommended that the relevant parts of the Programme for the Collection of Statistics on Gross Fixed Capital Formation of the Conference of European Statisticians, such as those dealing with the definitions of the sectors of purchase and types of capital goods etc., should be quoted in full in the

paper on statistics of the value of construction etc. Since the Conference of European Statisticians has not yet reached agreement on the final text of the Programme it has not been possible in the present paper to carry out the Working Party's recommendation on this point. As soon as the Conference has adopted its Programme in this respect the Secretariat will issue an addendum to the paper prepared by the rapporteurs in which the points requested by the Working Party will be reflected.

#### ANNEX

### STATISTICS OF THE VALUE OF CONSTRUCTION, INDICES OF BUILDING COST AND INDICES OF BUILDING ACTIVITY

Memorandum prepared by Mr. P.J. Deneffe and Mr. J. Hirdes

### I. INTRODUCTION

- 1. The present memorandum has been prepared at the request made by the Working Party on Housing and Building Statistics at its sixth session. It contains three major sections, dealing respectively with statistics of the value of construction, indices of building costs (price-index numbers for construction) and indices of building activity.
- 2. The paper has been written in the form of a statistical programme, setting out under each heading the items of data to be collected; their definitions; and the general methods by which the data might be collected. An attempt has been made to make the proposals consistent with existing international recommendations. In particular, as regards statistics of the value of construction consistency has been sought with the Programme for the Collection of Statistics on Gross Fixed Capital Formation (hereinafter called the "Programme"), drawn up by the Conference of European Statisticians<sup>(1)</sup>.
- 3. In making the various recommendations the discussions of the Working Party (on building costs and building activity at previous sessions) have been taken into account.

#### II. VALUE OF CONSTRUCTION

#### A. Purposes

Statistics on value of construction are required for the following main purposes:

- 1. Determination of the (total) construction activity and calculation of an index of building activity;
- 2. Preparation of national accounts, i.e. the output of the building industry
- (1) The final version of this Programme has not yet been adopted by the Conference of European Statistics. Though at a later stage some amendments of the text of the present paper may be necessary, it is not likely that such changes would affect the substance of it significantly.

and the formation of capital goods;

- 3. Calculation of the share of the different sectors of construction, e.g. residential building, in the value of total construction.
- B. Concepts and definitions

#### 1. Construction

The concept of construction should agree with the definition in the International Standard Industrial Classification of all Economic Activities (ISIC) of the United Nations, namely: construction, repair and demolition of buildings, highways, streets, and culverts; heavy construction of such projects as sewers and water mains, railway roadbeds, railroads, piers, tunnels, subways, elevated highways, bridges, viaducts, dams, drainage projects, sanitation projects, aqueducts, irrigation and flood-control projects, hydro-electric plants, waterpower projects, gas mains, pipelines and all other types of heavy construction; marine construction such as dredging, under-water rock removal, pile driving, land reclamation, construction of harbours and waterways; water wells, airports; athletic fields; golf courses; swimming pools; tennis courts; parking areas; communication systems such as telephone and telegraph lines; and all other construction, whether undertaken by private bodies or governmental authorities. Special trade contractors in the field of construction, such as carpenters, plumbers, plasterers and electricians are also included in this greup.

The above concept comprises all building activity, including ancillary activity by the staff and for the use of an enterprise classified in any other division of the classification. In view of the different purposes for which the statistics on the value of construction are required, it is desirable to have separate data on building as an ancillary activity. However, in practice it will be difficult to ascertain this data.

#### 2. <u>Value</u>

Total value consists of the following elements:

- (a) value of building materials used;
- (b) wages and salaries;
- (c) taxes, allowances for the use of machines and other equipment, general operation costs, contractor's profits, etc.

With regard to the concept of value the following recommendations are made:

- (1) Value of durable consumer goods which form part of the permanent fixtures of buildings, such as plumbing, stoves, heating, washing facilities and refrigerators should be included.
- (ii) Value of construction should include work done at all stages of production, including work done on products net yet completed.
- (111) The acquisition of land should be excluded from the value of construction, but the costs of preparing the site should be included. (1)
  - (iv) Architects' fees, the cost of obtaining building permits, or the cost of interim financing and similar expenses should not be included.
  - In determining the output of the building industry, value of construction (▼) should not include the cost of materials bought by future owners and work and services provided by the owners not constituting an activity of building industry.

It should be emphasized that the recommendations under (111) (as regards the acquisition of land), (iv) and (v) differ from those contained in the Programme.

Subdivisions 3.

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(a) Minimum programme

In this minimum programme it is proposed that data on value of construction be classified by type of capital goods and by sector of purchase (2).

(i) Type of capital goods

It is recommended that data be collected for the following types of capital goods:

- Residential buildings (excluding repairs and maintenance)
- Non-residential buildings (excluding repairs and maintenance)
- Repairs and maintonance (buildings) (3)

- Civil engineering (including maintenance)<sup>(4)</sup>.

It should be noted that in the "Programme" the simplified classification distinguishes only two categories: dwellings; and other construction and works.

- (1) It should be pointed out that the question of the treatment of land in statistics on fixed capital formation is still under consideration by the Cenference of European Statisticians. The parts in the "Programme" relating to this subject should therefore be considered as provisional.
- (2) In the "Programme" also a classification by industry of use is proposed. This proposal is not included in the "minimum" programme suggested in the following paragraphs.
- (3) It should be pointed out that the "Programme" is drafted in terms of the "gross" con-(c) to block out only only the frequence is dialocd in terms of the group occurs and maintenance, other than major repairs and alterations which materially extend the normal life of the assets, is treated as current expenditure.
   (4) A sub-division distinguishing new construction and repairs and maintenance work
- might be envisaged should countries be interested.

The detailed subdivision of value of construction by type of capital goods is preferred for the following reasons:  $\langle \hat{Q} \rangle$ 

- it is important to measure the share of residential building in the total of new building (excluding civil engineering) and to be able to indicate the trend,
- civil engineering should be distinguished from the other sectors of construction, as the former is mostly carried out by special firms, while the kind and the use of the works is different.

# (ii) Sector of purchase (1)

- In accordance with the "Programme" it is recommended that the following sectors be distinguished:
- As agreed, to be redrafted by the Secretariat (in this connexion see report of the last session, HOU/96, para. 14 (b) ).
- (b) Additional subdivisions

It is proposed that countries which are able to provide greater detail in their statistics should be encouraged to adopt the following more detailed classifications:

(i) Type of capital goods

<u>Residential buildings</u>: a distinction between one-dwelling houses and multidwelling houses is to be considered in view of its interest for the formulation of housing policy. The alternative is a distinction between small houses (i.e. one- and two-dwelling houses and terrace houses) and blocks of flats.

<u>Non-residential buildings</u>: if possible a further sub-division should be considered (e.g. factory buildings, schools, hospitals, etc.). <u>Repairs and maintenance</u>: countries should aim at collecting separate data on residential buildings and non-residential buildings.

Civil engineering: here the following distinction could be made:

- streets, roads, etc.,
- permanent way or other means of transport,
- land improvement,
- others.

As regards civil engineering the question arises whether site-preparation for residential and non-residential building should or should not be

(1) It should be noted that in many cases the classifications by sector of purchase will raise serious problems (see the "Programme").

included in the value of residential and non-residential building. The rapporteurs propose that all work relating to site preparation and directly involved in the construction of residential and non-residential buildings be added to the value of the building itself. The development of the site by means of roads, sewerage, etc., shall come under civil engineering.

(ii) Sector of purchase

The classification proposed in the "Programme" should be followed here, namely:

- Private enterprises
  - incorporated
  - unincorporated
- Public enterprises
  - incorporated (public corporations)
  - unincorporated (government enterprises)
- General government
- (iii) Industry of use<sup>(1)</sup>

Here also, the recommendations made in the "Programme" mentioned above should be followed. Likewise, the classification by industry of use is based on the criterion of the user of the buildings, but it may in some instances also in this case be possible to obtain only information on industry of ownership.

It should also be noted that dwellings, whether owner-occupied or otherwise, should be classified under a special heading "Ownership of dwellings".

#### 4. Periodicity

It would seem that the detailed data listed above could only be collected annually. If possible, data of a simple type (see minimum programme) should be collected more frequently (monthly, quarterly or at least half-yearly).

#### C. <u>Methods of collection</u>

It is difficult to make international recommendations as regards the methods of collections, because the appropriate methods will depend on national and administrative

<sup>(1)</sup> It should be noted that in many cases the classifications by industry of use will raise serious problems (see the "Programme").

systems. However, it seems useful to mention in this paragraph two more or less direct methods which are frequently used and to indicate certain advantages and disadvantages of the methods.

By <u>Method 1</u> the data are obtained directly from the firms which carry out the construction work.

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<u>By Method 2</u> the data are obtained through the authorities concerned with the regulation of building on the basis of data furnished by the future owners, combined with periodic progress checks.

<u>Method 1</u> offers the epportunity to collect more complete data than can be obtained by means of Method 2. On the other hand, in most countries there are many rather small firms which make it difficult to collect the data concerned. As, however, data on repairs and maintenance are required, it is necessary to have also data from the small firms (see Method 2).

In practice it would seem possible to collect data from all firms at most once a year.

If between these benchmarks, monthly or quarterly data are to be collected, reliable results can be obtained on the basis of a representative sample of the firms. In this connexion it should, however, be noted that it is almost impossible to have monthly or even quarterly data on value of construction in the aforementioned sense (work done), as the figures made available will mostly refer to the turnover in the period concorned.

<u>Method 2</u> (a) Application of this method presupposes that some kind of building regulation exists and that, at least, data are supplied on the value and type of construction. It would not seem that by this method data could be collected on repairs and maintenance, since in most countries no building permit is required for small repairs and normal maintenance.

(b) Since this method does not provide data on actual building activity, it is necessary to collect additional information on progress made on work under construction, e.g. by periodic progress checks.

However, the following difficulties arise:

 (i) The data on value refer to the estimated value at the moment the licence is issued. From a statistical point of view it is very difficult to ascertain the final value. Consequently, there may be a difference between the final value of construction and the calculated value. It is possible to check the differences by means of sampling enquiries;

(ii) As in practice most countries will not be able to follow the progress of each construction work at frequent intervals, it should be mentioned that it is also possible to collect yearly data on work under construction distinguished by phase (at the beginning and at the end of the year) but in this case, of course, it is necessary to have figures on work completed during the year.

On comparing the two methods the following conclusions can be drawn:

- 1. Method 1 offers the possibility of covering all construction work carried out by the building and construction industry. Method 2 has the disadvantage that in many countries building permits are not required for all construction work and that the coverage varies considerably from country to country.
- 2. The different sub-divisions required are more difficult to realize by the first than by the second method,
- 3. Method 1 provides more correct data on the final value of work then Method 2.
- 4. As regards the calculation of the value of work done in the given period, more correct data are to be expected from Method 2, since under Method 1 it might be difficult to allocate the data to a specific period.
- D. Other data to be collected

In addition to the data on the value of construction mentioned above, it would seem desirable to collect data on the volume of construction in physical terms, e.g. cubic metres, and, as regards residential buildings, the number of dwellingunits, so as to be able to calculate the average value per cubic metre or per dwelling. Regarding the use of these data reference can be made to IM/HOU/WP.3/9, Report on Building Cost Statistics.

III. INDEX OF BUILDING COSTS (price index numbers for construction)

#### Introduction

During its fourth session the Working Party agreed that there were various indicators relating to building cost, prices and value of construction:

- (a) "Building cost" in the sense implied in IM/HOU/WP.3/9, i.e. expenditure by future proprietors of buildings for the erection of the buildings,
- (b) An "index of building cost" in the conventional sense, i.e. an index of the prices of building materials, labour and other input elements (index of building input-prices). Such an index was not affected by changes in productivity or building techniques.

(c) A "building price index", i.e. an index of building output-prices. This section deals with indexes as described under (b) and (c), while "building cost" (a) belongs to Section II above, Value of Construction.

#### A. Purpose

An indicator of changes in prices for construction work is necessary for setting economic policy in general, for the preparation of national accounts, for use in connexion with real-estate insurance, etc. In this connexion it should be pointed out that the outstanding need is for an output index as described under (c) above. As an approximation of this index, most countries calculate an index of the kind specified under (b).

#### B. Concepts and definitions

1. Changes in the value of construction are determined by different factors, i.e. changes in (a) prices; (b) changes in quantities, i.e., the size of buildings, the number of buildings, etc.; (c) quality of the work; (d) kind of equipment used. The term "price" is used here in the sense of the amount paid per unit of work of a defined category. This unit may be, for example, a cubic metre of masonry-work, a square metre of timber work, of roofing, of painting, etc., or a cubic metre of gross volume or even a whole dwelling, all of equal quality. The object is to measure only changes in prices and to pliminate changes in quantity and quality of execution, changes in kind of equipment used, etc.. In view of their scope, such indices should not be limited to one sector of construction, e.g. residential buildings, but cover also the other sectors (non-residential buildings and civil engineering). The price itself should include the same elements as mentioned above, under Section II, Value of Construction.

2. Since prices can only be established for building work carried out on behalf of a third party, the building price index cannot include work for one's own account. Therefore, ancillary activities are exaluded.

3. <u>Indices for different sectors and categories of work</u>: in view of the different purposes for which the indices are required there is need for:

(a) an index for the output of the construction industry as a whole and separate indexes for the main sectors as mentioned under Section II, above, Value of Construction, e.g.;

(i) residential buildings

(ii) non-residential buildings

(iii) repairs and maintenance, and

(iv) civil engineering

(b) an index for certain types of residential buildings, non-residential buildings and civil engineering;

(c) indexes for the chief work sategories (timber-work, masonry-work, painting, etc.).

C. Methods of calculation

1. Contrary to what is outlined in IM/HOU/WP.3/5, two methods should be distinguished:

<u>Method 1</u>, based on the actual prices of a work unit as a whole, without subdivision into the different cost components: material, wages, etc., and <u>Method 2</u>, based on the prices of the different components: materials, wages, etc.

<u>Method 1</u> covers both procedures referred to in IM/HOU/WP.3/5 as "calculation of actual costs" and "actual costs applied to a standard house", because the "work unit" may be a category of work (timber-work, roofing, etc.) but may also be the building as a whole. The great advantage of this method is that it takes account of actual costs.

2. Starting from the price of a whole building presupposes that the buildings which are being compared are comparatively uniform and are representative of all residential buildings. However, this condition will generally not be met. In this connexion IM/HOU/WP.3/5 suggests the possibility of eliminating differences in quality of work. Closer examination of this possibility in the Netherlands, for dwellings built according to the Housing Act, has, however, shown that this would require an extremely detailed study and application would consequently encounter practical difficulties.

3. The solution to the above difficulties is to ask a number of building firms to supply prices (per unit) of the different work categories. Naturally it is necessary to define clearly these work categories and to refer to them when calculating the index. Although by this method it is not possible to eliminate the effects of all changes in kind of equipment used and in quality of work, at least an important part of these features can be allowed for if the reporting firms are instructed correctly on this point. This method is not limited to residential

buildings but should also be extended to non-residential buildings and even to civil engineering.

Of course, some difficulties may arise with regard to the reporting firms, i.e. the contractors, because of the close attention which they have to pay to the data supplied. Moreover, if an index is compiled with a frequency of less than one year, e.g. quarterly, the number of reporting firms has to be rather large in order to keep the margin of error in the results acceptably small. On the other hand it may be expected that reliable reporting will be ensured by the fact that the data are also used by the investor concerned. The firms concerned must be equally informed on how they should proceed in cases where work planned does not reach the contract stage. Such cases would necessitate recalculations. L

4. The indexes mentioned under B. 3 above, are calculated by means of different weighting co-efficients.

The most appropriate source for the weighting co-efficients in these various indexes would be production censuses or similar enquiries. As regards the work categories it should be noted that within each of these categories different sub-categories should be distinguished corresponding to different methods of execution. This implies that for each of these sub-categories separate weights should be obtained, and separate data should be collected from the contractors.

In calculating indexes as under B. 3 (b) above, i.e. indexes for certain types of construction, the sub-categories mentioned under (c) should be weighted according to their share in <u>standard</u> forms of construction. As regards residential buildings, indexes could be calculated, e.g., for one-dwelling houses and multi-dwelling houses and also for buildings with, e.g., mainly timber construction; mainly brick construction, etc.

<u>Method 2</u>: In many countries the conditions are not suitable for making the above calculations and Method 2 is used as a substitute for Method 1; in most of these cases the "building price index" relates only to the prices of materials and wages, weighted on the basis of a standard house. Indexes of this sort can only give an approximation to the price-index of output, because price changes of other input elements, changes in profits and changes in productivity are not taken into account. Therefore, countries using this method should always be aware that there is a margin of error involved which may vary from sector to sector and also from period to period.

This method can also be applied to sectors other than residential building, but the calculation of the weighting co-efficients involves additional difficulties because of the more heterogeneous character of these sectors.

Concerning the weighting co-efficients, it should be noted that, here again, instead of standard forms of construction, use could be made of the input data derived from production censuses. Furthermore it should be borne in mind that the term "standard" and the term "representative" are not always synonymous for the sector concerned.

Although the method mentioned here has many drawbacks it seems that it may be recommended for the compilation not only of index numbers of construction as a whole but also for certain categories of work (masonry-work, timber-work, etc.).

It should be once more emphasized that both methods are intended to indicate changes in the price of <u>output</u>. When indices are published which only relate to materials and labour input, this should be properly explained.

As regards the calculation of the index numbers, it may be noted that usually the Laspeyres formula is used. However, for some purposes it may be necessary to calculate a Paasche index as well.

#### D. Frequency

Concerning the frequency of the above index numbers, it does not seem sufficient to have only yearly figures. Quarterly data should be available and monthly data may be desirable. 

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#### ECONOMIC COMMISSION FOR EUROPE

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#### HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Item 3 of the provisional agenda of the ninth session)

### ANNUAL BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE Statement of Financial Implications by the Executive Secretary

1. The Housing Committee, at its session in May 1956: "....expressed the wish that the Annual Bulletin of Housing and Building Statistics in the shortened form now envisaged by the Working Party should be printed and requested that their views be brought to the attention of the United Nations Publications Board." (E/ECE/HOU/59, paragraph 5).

2. In considering this proposal the Publications Board pointed out that the printing programme of the Economic Commission for Europe already included a high proportion of recurrent publications and that the addition of the Annual Bulletin would further increase the rigidity of the programme, both as to recurring expense and scope for publishing special studies. However, the Board approved the printing of this item as a non-recurrent publication (special study) in the 1958 programme under the title of Housing and Euilding Statistics for Europe, leaving the question of its printing in subsequent years to the decision of the Member Governments after they had been made aware, successively in the organs concerned, of the financial implications of this undertaking.

3. Accordingly, the Executive Secretary wishes to inform the Working Party that the yearly cost of printing a recurrent bilingual edition of the Annual Bulletin of Housing and Building Statistics is estimated at \$2,000, commencing in 1959.
4. It is normal United Nations practice to include in statements of financial implications an estimate of revenue to be derived from the project under review. In the present case, as the initial issue of the Bulletin has not yet been published, there is no firm basis for estimating revenue from sales. Experience with analogous publications in the past would indicate a sales revenue of from \$800 to \$1,200 annually.

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

HOUSING CONTRACTOR HOUSING and Building Statistics  $U_N^{m_{A_c}}$ 

(Item 4 of the provisional agenda of the tenth session)

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### DRAFT ANNUAL BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE Note by the Secretariat

At its last session held in November 1957 "the Working Party confirmed its 1. view, expressed at previous sessions, that the publication of an Annual Bulletin of Housing and Building Statistics was highly desirable, and expressed the hope that the Bulletin would be issued each year in a printed form" (HOU/WP.3/37, paragraph 26). This recommendation by the Working Party was endorsed by the Housing Committee. (E/ECE/HOU/71, paragraph 19).

The Secretariat has prepared a draft annual bulletin which has been issued 2. as addenda to the present document. (1)

The list of items to be shown in the annual bulletin, drawn up by the Working з. Party at its previous sessions, is appended hereto. The Secretariat has taken into account this list as far as possible. However, it has not, in all instances been feasible to follow the Working Party's recommendations for the various reasons explained in the discussion of the relevant tables shown in the bulletin (see paragraph 4 below).

The Working Party may wish to consider each table separately. 4.

(a) Table 1 shows figures for the latest post-war census year on total population, households, dwellings and rooms and as far as these data are available It has not been possible to show similar data for a pre-war to the Secretariat. year for such reasons as changes in definitions of a dwelling and a household and owing to the fact that in many countries the territories have since changed.

Tables 1 to 12 (addendum 1); Annexes I and II, Notes and Sources (addendum 2); (1)Tables 13 and 14 (addendum 3), and Table 15 (addendum 4).

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The post-war year for which data are shown differs between countries, since the information included in this table is available only for the year in which a census has been taken and the nature of the data is such that as a rule they cannot be brought up to date by means of current statistics. The Working Party may wish to consider the variety existing between countries, particularly as regards the concepts of household and dwelling, and the date of reference. It may also wish to consider whether Table 1 of the Quarterly Bulletin could not be more usefully transferred to the annual bulletin. This table shows population figures for the last five years, together with the increase (or decrease) rate over this period.

(b) <u>Table 2</u> shows, for the latest census year, some characteristics of the housing stock, i.e. the size of the dwellings (expressed in number of rooms) and their equipment. The Working Party may wish to consider whether it would not be useful from the point of view of rent policy, for example, to include a breakdown of the housing stock by tenure status. The headings for such a breakdown have been included in the draft table. Another breakdown which could perhaps be of some use for the study of such problems as slum clearance and maintenance of the existing housing stock would be one of age class of dwellings. It may be however that the national breakdowns are rather difficult to reconcile for publication in a table covering all countries. This table shows figures broken down by urban and rural areas. Although definitions of these areas vary between countries, the Working Party may find it useful to show this breakdown, since it gives a rough indication of the existing difference between the two areas.

(c) <u>Table 3</u> shows the density of occupation of the existing housing stock at the latest census year. The Secretariat suggests that a table of this kind would be more useful than detailed country tables showing the number of existing dwellings cross-classified by the number of occupants and the number of rooms (or, for countries for which such information is not available, the number of family households cross-classified by the number of rooms and persons per family household). This table shows the results obtainable from such a cross-classification of dwellings (or family households).

(d) <u>Tables 4 to 8</u> show current dwelling construction broken down in various ways:

(i) <u>Table 4</u>: the number of dwellings completed and under construction. The Working Party may wish to consider whether it would not be useful to include in this table figures on dwellings begun (or authorized), in order to obtain a more complete picture of current house-building activity.
(ii) <u>Table 5</u>: the total number of dwellings completed, by kind of activity. The Working Party may wish to consider whether the definitions of the concepts used here are sufficiently comparable between countries to warrant this breakdown and the publication of this table.

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(iii) <u>Table 6</u>: the number of dwellings completed, by size (expressed in number of rooms). In most countries the definition of a room in current statistics complies with that drawn up by the Working Party, which means that the kitchen is considered as a room; in others, however, this does not appear to be the case. The Secretariat would like to ascertain whether where the kitchen is not considered as a room, dwellings in practice dispose of a kitchen, as is apparently the case in Denmark; if such were the case it would be possible to increase by one unit the number of rooms shown in the breakdown thus making the figures comparable with those for other countries. (iv) <u>Table 7</u>: the number of dwellings completed by type of house. The Working Party may wish to express its views on the terminology used, for example, "one-dwelling house", etc.

(v) <u>Table 8</u>: the number of dwellings completed by builder. At the same time, the Secretariat has attempted to show, as far as possible, how far dwellings receive public financial aid. It has not been found possible to present the statistics in a uniform manner since data of this kind reflect institutional differences between countries. The Working Party may wish to consider the usefulness of these statistics and whether they can be easily understood.

(e) <u>Tables 9 and 10</u> show figures on the manpower situation (employment and unemployment). Generally speaking the coverage of these series is broader than that of the corresponding tables of the Quarterly Bulletin. Since a detailed breakdown of employment figures by building sectors, e.g. residential building, non-residential building, public works, is available in a very few countries only, and where available, varies widely, only figures for total employment are shown. The percentage of unemployment has been shown whenever data are available. (f) <u>Tables 11 and 12</u> supply figures on the wholesale prices of building materials and on building input and output prices. Since a detailed breakdown of total building input prices by components is only available for very few countries, the subdivision has been limited to wages and materials. Building input or output prices for other than residential construction is virtually non-existent. ٩.

(g) <u>Table 13</u> shows, country by country, figures on the supply of building materials, as far as these are available to the Secretariat. The Working Party will note that there are relatively few figures on consumption and may wish to consider, on the basis of the material shown, which figures should be retained for publication and how best to present them.

(h) <u>Table 14</u> supplies indices on consumer prices and rents. Since in many countries the controlled rent level is based on a pre-war year, the year 1938 is shown in this table. The Working Party may wish to consider whether the indices of rents shown, which as a rule are derived from cost-of-living surveys applying to low income groups only, are sufficiently representative. Moreover, it might be useful to examine whether rents of new dwellings, which in most countries are considerably higher than those of old dwellings, are sufficiently reflected in these indices.<sup>(1)</sup>

(1) <u>Table 15</u>. At the time of the preparation of this note the Secretariat has not been able to draw up a table on investment. It is hoped to issue a separate note on this subject before the meeting of the Working Party.

(j) The Working Party suggested, in its list of items for inclusion in the annual bulletin, that figures on building activity, both residential and nonresidential, should be shown. At its previous session the Working Party, when considering the same kind of table for inclusion in the Quarterly Bulletin, was of the opinion that "in view of the great differences in units used, coverage, etc., between the various countries, ... this table should be deleted". (HOU/WP.3/37, paragraph 22, table 4). For this reason the Secretariat has not drawn up such a table.

<sup>(1)</sup> It might be recalled that the problems relating to rent indices appear in the Working Party's Work Programme as an item on which further work is necessary; since this subject forms part of a broader statistical problem, it is, however, proposed to refer it to another statistical body (HOU/WP.3/Working Paper No.27, paragraph II).

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#### 5. Further points for discussion

(a) The Working Party may wish to consider whether the inclusion of additional statistics would be useful. For example, it may be of some interest to show current dwelling construction broken down (i) by size; not expressed in number of rooms but in square metres; (ii) by the equipment supplied; and (iii) by the tenure status (e.g. dwellings built on account of owner occupiers, dwellings for sale and dwellings to be let). It is, however, suggested that these major changes should not be included in this first issue of the annual bulletin in view of the need to publish the first printed issue as quickly as possible. The additional material could be included in next year's issue.

(b) It is suggested that in the final version of the annual bulletin, the tables would be presented in the following way:

- (i) housing situation: Tables 1 to 3;
- (ii) output factors: Tables 4 to 8 and Table 15 (investment);
- (iii) input factors: Tables 9, 10 and 13; and
- (iv) prices, costs and rents: Tables 11, 12 and 14.

(c) Countries are invited to check the draft bulletin in the light of the conclusions reached by the Working Party and to complete the gaps; replies are requested not later than 15 August, in order to ensure timely publication of the first issue of the printed annual bulletin.

(d) When agreement has been reached on the contents of the annual bulletin, the Secretariat will draw up a questionnaire as a base for supplying data for future issues.

#### APPENDIX

### STATISTICAL SERIES PROPOSED BY THE WORKING PARTY FOR INCLUSION IN THE ANNUAL BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE

Notes

- I. Occupation of Dwellings
  - 1. Pre-war:

number of existing dwellings and of family households (a)

- 2. Post-war:
  - (a) number of dwellings cross-classified
     by the number of occupants and the number of rooms (b)
  - (b) number of inhabitants and number of family households
  - (c) number of existing dwellings and rooms
- 3. Population data (pre-war and post-war years)

#### II. Activity in the Housing Sector

- 1. Dwelling construction expressed quantitatively:
  - (a) dwellings completed (total), classified according to:
    - (i) class of builders (public authorities, housing associations, private persons)
    - (ii) size (number of rooms, floor-space, volume)
    - (iii) structure (dwellings in houses and dwellings in flat-buildings)
    - (iv) character of building activity (new construction, repairs, etc.)

addition to dwelling stock only

- (b) dwellings under construction
- 2. Rent (index)
- III. Activity in the Building Sector
  - 1. Volume of building:
    - (a) residential buildings (and dwellings therein)
    - (b) non-residential buildings

completions

<sup>(</sup>a) For a year as near to 1939 as possible, but not earlier than 1930.

<sup>(</sup>b) Or for countries for which such information is not available, the number of family households cross-classified by number of rooms and persons per family households.

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2. Value of building, etc. work done
 (investments):

- (a) residential buildings
- (b) non-residential buildings
- (c) civil engineering
- 3. Production index

### IV. Manpower and Wages

- 1. Employment and hours worked:
  - (a) in housing
  - (b) in non-residential building
  - (c) in civil engineering
- 2. Unemployment
- 3. Wages (a)
- V. Building Materials
  - 1. Consumption
    - (a) cement
    - (b) bricks
    - (c) roofing materials
    - (d) glass
    - (e) wood for building
    - (f) steel for building
  - 2. Prices (index of consumer prices or wholesale prices) for the same materials as under 1

#### VI. Index of building cost

- (a) residential building
- (b) non-residential building
- (c) civil engineering work

with details on qualification

Notes

supplemented by data on other materials or on different qualities of the materials listed

same details as for consumption

with detailed breakdown by components

(a) Indices of earnings, or if not available, of wage rates.

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#### ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Item 4 of the provisional agenda of the tenth session)

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#### ANNUAL BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE

#### Addendum

#### ANNEX I: NOTES TO THE TABLES

#### Tables 1 to 3

- Population 1.
  - (a) de jure: includes persons who usually reside in the area irrespective of where they might be at the time of the census.
  - (b) de facto: includes all persons present in the country, nationals or aliens, at the time of the census.

#### 2. Private households

(a) "Housekeeping unit" concept: refers to multi-person and single-person households.

(i) Multi-person households are groups of two or more persons living together, that is, sharing their meals or sharing a common budget. Other persons sharing the rooms occupied by a family, or persons having separate rooms (including resident servants), should be counted as members of the household under the same conditions. Two families sharing a dwelling should not for that reason be counted as one unit unless they also share meals or a budget,

(ii) Single-person households ("persons living alone") consist of a person living alone in a dwelling, or of a lodger occupying separate rooms and sharing neither meals nor budget with other occupants.

(b) "Household - dwelling" concept: rofers to the total number of the inhabitants of a dwelling. (This concept therefore pre-supposes a prior adoption of a dwelling definition).

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#### 3. Dwelling

(a) Structurally separate dwelling concept

Dwellings are rooms or a suite of rooms and their accessories in permanent buildings or structurally separated parts thereof which by the way they are built, rebuilt, converted, etc., are intended for habitation by private households and are suitable for this purpose. They should have a separate access to a street (direct or via a garden or grounds) or to a common space within the building (staircase, passage, gallery and so on). Detached rooms for habitation which are clearly built, rebuilt, converted, etc. to be used as a part of the dwelling should be counted as part of the dwelling. Normal rooms used for business or professional purposes should be included in calculating the number of rooms per dwelling.

(b) Household accommodation concept

This concept does not involve the requirement of structural separation. Its use pre-supposes the prior definition of the household which is the basic unit of investigation rather than the structurally definition of a dwelling.

#### 4. Room

Rooms are normal bedrooms, dining-rooms, living-rooms, habitable attics, servants' rooms, kitchens and other spaces designed for dwelling purposes in dwellings, separated from one another by walls reaching from the floor to the ceiling and of a size large enough to hold a bed for an adult  $(4 \text{ m}^2 \text{ at least})$ , and of at least 2 m high over the major area of ceiling. Kitchenettes, corridors, verandahs, lobbies, etc., not falling under the above definition, as well as bathrooms and toilets, should not be counted as rooms. Rooms used for business purposes only are, as a rule, excluded.

5. Urban and rural areas

The distinction between urban and rural areas varies from country to country.

#### Tables 4 to 8

1. Dwelling (structurally separate dwelling concept)

Dwellings are rooms or a suite of rooms and their accessories in permanent buildings or structurally separated parts thereof which by the way they are built, rebuilt, converted, etc. are intended for habitation by private households and are suitable for this purpose. They should have a separate access to a street (direct or via a garden or grounds) or to a common space within the building (staircase, passage, gallery and so on). 2. Room

Rooms are normal bedrooms, dining-rooms, living rooms, habitable attics, servants' rooms, kitchens, and other spaces designed for dwelling purposes in dwellings, separated from one another by walls reaching from the floor to the ceiling and of a size large enough to hold a bed for an adult  $(4 \text{ m}^2 \text{ at least})$ , and of at least 2 m high over the major area of ceiling. Kitchenettes, corridors, verandahs, lobbies, etc., not falling under the above definition, as well as bathrooms and toilets, are not counted as rooms.

3. Stages of building work

Work completed: Work is completed when the building is physically ready to be occupied.

Work under construction: Work begun but not yet completed.

- 4. Kind of activity
  - (a) New building: means erection of an entirely new structure, whether the site on which it is built has before been occupied or not.
  - (b) Reconstruction repairs: means repairs by which at least one dwelling or other structure is effectively reinstated and where substantial parts of the existing structure are used.
  - (c) Extensions: relate to the enlargement of buildings by which space is added.
  - (d) Conversions: relate to structural changes carried out within a building.
- 5. Coverage

Data refer in the main to dwellings created: (a) in the whole country; (b) by new construction, reconstruction repairs, extensions and conversions (the latter two only if creating additional dwelling units); (c) and residential and non-residential buildings.

6. Remarks on coverage Table 4

Belgium: Figures are obtained by the application of the average ratio between the number of residential buildings and the number of dwellings therein (as shown in the statistics on authorizations) to the number of residential buildings completed; dwellings located in non-residential buildings are thus not included.

Ireland: Original figures have been adjusted by the Secretariat in order to take into account only those extensions which lead to the creation of additional dwelling units and to cover dwellings built both with and without State aid. HOU/WP3/Working Paper No.24/Add.2 page 4

Poland:	Figures are estimates by the Housing Institute, Warsaw,
	on the basis of data collected by the Central Statistical
	Office.

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- Portugal: Data are estimates for the whole country based on figures relating to urban areas only (dwelling construction in other areas being estimated at 30 per cent of that achieved in urban regions).
- Switzerland: The figures on dwellings completed are estimates made by the Secretariat on the basis of statistics relating to dwelling construction in communes with over 1,000 inhabitants. The figures on dwellings under construction refer to communes with 1,000 or more inhabitants.

Turkey: Data refer to urban areas only.

Western Germany: About 1.5 per cent of the number of dwellings completed, amounting to some 8,000 dwellings per year, do not represent the creation of additional dwelling units. They relate mainly to divisions and extensions of existing dwellings.

Yugoslavia: Data relate to new construction and extensions representing about 98 per cent of the total number of dwellings made available.

### 7. Remarks on Table 6

Austria: Rooms refer to "room-units", that means, rooms of at least 15 m<sup>2</sup> floor space, rooms of less than 15 m<sup>2</sup> being considered as half "room-units".

- For the sake of simplification the following changes have been made to the original statistics: One room = 1 room or kitchen; or 1 room and kitchenette. Two rooms = 1 room and kitchen, or 2 rooms and kitchenette. Three rooms = 2 rooms and kitchen, or 3 rooms and kitchenette (the figures for these series are insignificant). Four rooms = 3 rooms and kitchen, etc.
  - Sweden: For the sake of simplification the following changes have been made in the original statistics: One room = 1 room with or without cooking facilities; or 1 room with kitchenette. Two rooms = 2 or more rooms without kitchenette (figures are insignificant), or 1 room and kitchen. Three rooms = 2 rooms and kitchen, etc.

Labour force included

United Kingdom:

The figures refer to dwellings built by local authorities in England and Wales only. The original information was expressed in number of bedrooms. To these figures two rooms, that is, one living room and a kitchen, have been added to the one-bedroom dwellings, and three rooms, that is, two living rooms and a kitchen, have been added to the larger dwellings, for the sake of comparison with other countries. Houses built by private owners are estimated to be somewhat larger on the average than local authority dwellings.

#### Table 9

The scope of the series varies from one country to another and international comparability is consequently subject to reservations. These differences are due to: varying definitions of what is considered as "construction industry", the methods of collecting statistics, the labour force considered (i.e. total labour force, or wage earners including salaried employees or not), the section of the construction industry. Unless otherwise stated, all data are averages.

#### Type of Statistics

Austria: Social insurance statistics Wage-carners and salaried employees Bolgium: Compulsory social insurance Wage-earners statistics Bulgaria: Wage-earners and salaried employees Czechoslovakia: Statistics of establishments Wage-earners and salaried (all establishments of a employees given importance) Donmark: Social insurance statistics Wage-earners and salaried employees Eastern Germany: Statistics of establishments Wage-carners and salaried omployees Finland: Statistics of establishment . . (sample) France: Statistics of establishments Wage-carners and salaried (all ostablishments of a employees given importance) Hungary: Statistics of establishments Wage-earners and salaried (State industry) employees Ireland: Statistics of establishments Wage-earners and salaried (all establishments of a given employees importance)

Type of Statistics

#### Labour force included

Netherlands:	Compulsory social insurance statistics	Wage-earners and salaried employees
Norwa <b>y:</b>	Compulsory social insurance statistics	Wage-earners and salaried employees
Poland:	Statistics of establishments (State industry)	Wage-carners and salaried employces
Romania:	Statistics of establishments (State industry)	Wage-carners and salaried employees
Switzerland:	Statistics of establishments (sample of establishments)	Wage-carners
Turkey:	Compulsory social insurance statistics	Wage-carners and salaried employees
USSR:	• •	Wage carners and salaried employees
United Kingdom (excluding Northern Ireland):	Compulsory social insurance statistics and enquiries from contractors	Wage-earners, salaried employues, workers on own account
Western Germany:	Labour registration statistics (average situation at the end of March and September)	Wage-earners and salaried cmployees
Yugoslavia:	Labour registration statistics	Wage-earners and salaried employees

#### Table 10

Unless otherwise stated, statistics relate to the wholly unemployed, i.e. to persons out of work and seeking employment. A few series cover partial unemployment but may do so imperfectly. Loss of working time through sickness, accident and industrial disputes is generally excluded. International comparisons of these data are subject to reservations: the series vary greatly in completeness and reliability, depending upon their economic scope or coverage (e.g. definition of the construction industry or of the occupations falling under this heading), the source of the data, the methods of compilation employed, and the definition of "unemployed" adopted. In the main the statistics are limited to wage-earners and are, unless otherwise specified, annual averages.

Remarks	
Austria:	Employment Office statistics. Unemployed persons registered.
Belgium:	Compulsory unemployment insurance statistics. Unemployed persons registered. Partially and temporarily unemployed are included. Scope of the series at 30.VI.1956: 228,000.

Denmark: Trade Unions Fund Statistics. Scope of the series in 1957: 123,000. Employment Office statistics. Finland: Unemployed persons registered. Employment Office statistics. France: Applicants for work. Ireland: Employment Office statistics. Applicants for work. Scope of the series in 1956: building: 47,000 and public works: 40,000. Employment Office statistics. Italy: Applicants for work. Employment Office statistics. Netherlands: Unemployed persons registered. Persons employed on emergency public works are excluded up to July 1954. As from the beginning of 1956 the group "partially handicapped workers" is no longer included. Employment Office statistics. Norway: Unemployed persons registered. Employment Office statistics. Spain: Unemployed persons registered. Employment Office statistics. Sweden: Unemployed persons registered. Employment Office statistics. Switzerland: Unemployed persons registered. National Insurance Scheme statistics. United Kingdom: Unemployed persons registered. Temporarily unemployed are included. Scope of the series at VI.1956: 1,457,000. Employment Office statistics. Western Germany: Scope of the series in 1954: 1,799,000. Employment Office Statistics. Yugoslavia: Situation at the end of each year.

#### Table 11

The series are, as a rule, part of the general wholesale-price index, except for Finland (where the figures are taken from the index of house-building costs) and for Poland (where the figures refer to retail prices in the socialised sector and are applicable to private purchasers). In the main the wholesale-price indices shown under the heading "Total", refer to a representative list of building materials, weighted by the gross value of domestic consumption or of sales. The indices for individual materials are, as a rule, based on unweighted prices.

#### Table 12

The indices relate to the cost for residential construction, except for the United Kingdom where they refer to all new building work; they do not include the price of land.

- (a) <u>Input-price indices</u>: relate to the prices of materials, wages, and possibly to some other input factors such as taxes, architects' fee, interest charges, weighted on the basis of a standard house. These indices, therefore, only give an approximation of the price-index of output, because price changes for certain other input factors, and for changes in profits and productivity are not taken into account.
- (b) <u>Output-price indices</u>: relate to the actual cost based on either (i) the prices for the various units of the different work categories (such as m<sup>3</sup> masonry work, m<sup>2</sup> roofing, m<sup>2</sup> painting), weighted on the basis of a standard house (Belgium, Switzerland); or (ii) the price (per m<sup>3</sup> or other unit) of such currently built houses which are more or less the same in size, concept and quality (Czechoslovakia, France, Netherlands); or (ii) the combination of the following factors: prices for materials and labour, overheads, profits and output per man (United Kingdom).

#### ANNEX II: SOURCES TO THE TABLES

ANNEXE II: SOURCES RELATIVES AUX TABLEAUX

#### Table 1 Tableau 1

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1. Population and Households Population et menages

> -Demographic Yearbook 1935, United Nations, New York, except fer the following countries for which information has been supplied directly by Governments: Annuaire démographique 1955, Nations Unies, New York, à l'exception des pays suivants pour lesquels l'information a été directement fournie par les Gouvernements:

-Bulgaria, Czechoslovakia, France, Hungary, Greece, Italy, Poland, Switzerland (households), USSR, United Kingdom, Yugoslavia. Bulgarie, Tchécoslovaquie, France, Hongrie, Grèce, Italie, Pologne, Suisse (ménages) URSS, Royaume-Uni, Yougoslavie.

2. Dwellings and Rooms Logements et pièces

> -Directly supplied by Governments Renseignements directement fournis par les Gouvernements.

#### Tables 2 and 3 Tableaux 2 et 3

-Statistical Yearbook 1957, United Nations, New York Annuaire Statistique 1957, Nations Unies, New York

#### Tables 4 to 8 Tableaux 4 à 8

- -National official statistical publications Data supplied by governments
- -Publications officielles nationales de statistiques Données fournies par les gouvernements

Table 9 Tableau 9 -Yearbook of labour statistics, International Labour Office, except for the following countries: -Annuaire des statistiques du travail, Bureau international du Travail, à l'exception des pays suivants: Data supplied by the Government Austria: Données fournies par le Gouvernement Autriche: Belgium: Bulletin de statistique, Bruxelles Belgique: Bulgaria: Statistitchesky Godishnik, Sofia Bulgarie: Czechoslovakia: Statistické Zprávy, Praha Tchécoslovaquie: Denmark: Statistisk Arbog, København Danemark: Eastern Germany: Statistisches Jahrbuch, Berlin Allemagne orientale: Finland: Kansallis-Osake-Pankki, Helsinki Finlande: Hungary: Statisztikai Havi Közlemények, Budapest Hongrie: Directly supplied by the Government Poland: Fourni directement par le Gouvernement Pologne: Romania: Anuarul Statistic, Bucuresti Roumanie: Economic survey of Europe in 1957, ECE, Geneva, 1957 USSR: Etude sur la situation économique de l'Europe en 1957, URSS: CEE, Genève United Kingdom: Monthly Digest of Statistics, London Royaume-Uni:

Western Germany: Allemagne occidentale:

Wirtschaft und Statistik, Wiesbaden

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Table 10 Tableau 10	
except for the following	s du travail, Bureau international du
Denmark: Danemark:	Statistiske Efterretninger, København
Finland: Finlande:	Sosiaalinen Aikakauskirja, Helsinki
Ireland: Irlande:	Irish Trade Journal and Statistical Bulletin, Dublin
Italy: Italie:	Statistiche del Lavoro, Roma
Sweden: Suède:	Arbetsmarknadsstyrelsen, Stockholm
Table 11 Tableau 11	
Austria: Autriche:	Statistische Nachrichten, Oesterreichisches Statistisches Zentralamt, Wien.
Belgium: Belgique:	Bulletin de Statistique, Institut national de Statistique Bruxelles, Ministère des Affaires économiques, Bruxelles
Denmark: Danemark:	Statistiske Department, København
Finland: Finlande:	Bank of Finland, Helsinki Banque de Finlande, Helsinki
France:	Bulletin mensuel de Statistique, Institut national de le Statistique et des Etudes économiques, Paris Data directly supplied by the Government Données directement fournies par le Gouvernement
Greece: Grèce:	Bulletin of Wholesale Prices, Chamber of Commerce, Athene Bulletin des prix de gros, Chambre de commerce, Athènes
Ireland: Irlande:	Monthly Bulletin of Statistics, United Nations, New York Bulletin mensuel de Statistique, Nations Unics, New York Data directly supplied by the Government Données directement fournies par le Gouvernement
Italy: Italie:	Bollottino mensile di Statistica, Istituto centrale di Statistica, Roma
Netherlands: Pays-Bas:	Maandstatistiek van de Binnenlandse handel, hetverbruik en de prijzen, Centraal Bureau voor de Statistiek, den H <b>aag</b>

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llorway: Norvège:	Statistiske Meldinger, Statistisk Sentralbyrä, Oslo
Poland: Pologno:	Glóvny Urzad Statystyczny, Warszawa
Portugal:	Boletim mensal, Instituto nacional de E <b>st</b> atistica, Lisboa
Spain: Espagno:	Boletin de Estadística, Instituto nacional de Estadística, Madrid
Switzorland: Suisse:	La Vie économique, Département fédéral de l'Economie publique, Berne
Turkey: Turquio:	Istatistik Bülteni, Istatistik Umum Müdürlügü, Ankara
United Kingdom: Royaume Uni:	Monthly Digest of Statistics, Central Statistical Office,London Ministry of Works, London
Western Germany: Allemagne occidentale:	Statistisches Jahrbuch, Statistisches Bundesamt, Wicsbaden Data directly supplied by the Government Données directement fournies par le Gouvernement
Yugoslavia: Yougoslavie:	Index, Savezni zavod za statistiku i evidenciju, Beograd Data directly supplied by the Government Données directement fournies par le Gouvernement
<u>Table 12</u> Tableau 12	
	Statistische Uebersichten zu den Monatsberichten des Oester- reichischen Institutes für Wirtschaftsforschung, Wien
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Tableau 12 Austria: Autriche: Belgium:	reichischen Institutes für Wirtschaftsforschung, Wien Institut national du logement, Bruxelles Data supplied by the Government Données fournies par le Gouvernement
Tableau 12 Austria: Autriche: Belgium: Belgique: Czechoslovakia:	reichischen Institutes für Wirtschaftsforschung, Wien Institut national du logement, Bruxelles Data supplied by the Government
Tableau 12 Austria: Autriche: Belgium: Belgique: Czechoslovakia: Tchécoslovaquie: Denmark:	reichischen Institutes für Wirtschaftsforschung, Wien Institut national du logement, Bruxelles Data supplied by the Government Données fournies par le Gouvernement

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Ircland: Irlande:	Data supplied by the Government Données fournies par le Gouvernement
Italy: Italie:	Index, Centro por la Statistica aziondale, Firenze
Netherlands: Pays-Bas:	Wederopbouw en Volkshuisvesting, Ministerie voor Wederopbouw en Volkshuisvesting, den Haag
Norway: Norvège:	Statistiske Meldinger, Statistisk Sentralbyrä, Oslo
Portugal:	Boletim Mensal, Instituto nacional de Estatistics, Lisboa
Sweden: Suède:	Konjunkturjournalen, Konjunkturinstitutet, Stockholm
Switzerland: Suisse:	Zürcher statistische Nachrichten, Statistisches Amt, Zürich
United Kingdom: Royaume-Uni:	Board of Trade Journal, London: Ministry of Works, London
Western Germany: Allemagne occidentale:	Wirtschaft und Statistik, Statistisches Eundesemt, Wiesbader

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Item 4 of the provisional agenda of the tenth session)

### DRAFT

#### ANNUAL BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE

This document contains twelve tables for inclusion in the final version of the Annual Bulletin after consideration by the Working Party.

The general explanatory notes and the sources to these tables are being published separately in document HOU/WP.3/Working Paper No. 24/Add.2.

A few additional tables will be issued later as document HOU/WP.3/Working Paper No. 24/Add.3.

A separate note introducing the problems involved in the publication of the Annual Bulletin for discussion by the Working Party is in the course of preparation and will be issued as document HOU/WP.3/Working Paper No. 24.

#### COMMISSION THEONOMIQUE POUR L'EUROPE

#### COMITE DE DE LITAT

Groupe de l'évell des statistiques du logement et de la construction

(Point 4 de l'Ordre du jour provisoire de la dixième session)

#### PROJET DE

#### MULETIN ANNUEL DE STATISTIQUES DU

Ce document comprend douze tableaux qui après avoir été examinés par le Groupe de travail pourreient être inclus dans la version définitive du Bulletin Annuel.

Les notes explicatives d'un caractère général et les sources relatives à ces tableaux seront publiées séparément dans le document HOU/WP.3/Decument de travail No. 24/Add.2. Quelqués tableaux supplémentaires seront publiés plus tard dans le document HOU/WP.3/ Document de travail No. 24/Add.3.

Une nette introductive aux problèmes relatifs à la publication du Bulletin Annuel et qui sera course au Groupe de travail pour discussion est en voie de préparation et sera publiée course document HOU/WP.3/Document de travail No. 24.

Distr. RESTREINTE

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DE STATISTIQUES DU LOGENENT ET DE LA CONSTRUCTION

# HOU/WP.3/Working Paper No. 24/Add.1 page no. ii

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## Symbols used

- Nil (or less than half the appropriate unit)
- .. Not available
- \* Secretariat estimate

### Explication des signes

- .. Chiffre non disponible
- \* Estimation du Secrétariat

### TABLE DES MATIERES

- Néant (ou chiffre inférieur à la moitié de l'unité indiquée)

### able 1 : Population, Households, Dwellings and Rooms

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		······································		• • • • • • • • • • • • • • • • • • •					
				nd households t ménages		Dwellings Logements	Rooms		
Country	Date	Total Population		Private households Ménages privés			Pièces	Pays	
		totale	Population	Percentage (a)	Number				
		10	000	Percentage (a) Pourcentage (a)	1000	100	0		
Austria	195 <b>1</b>	6 934	6 857	99	2 205	2 138	••	Autriche	
Belgium	1947	8 512	••	••	••	2 868	11 271	Belgique	
Bulgaria	1954	7 500	÷ ↓ ∳	••	••	1 719	••	Bulgarie:	
Czechoslovakia	1950	12 338		• •	••	3 613	8 018	Tchécoslovaquie	
Denmark	1950	4 281	4 179	96	1 327	1 291	••	Danemark	
Eastern Germany	1946	17 314	• •	••	5 820	••	• •	Allemagne Orientale	
Finland	1950	4 030	4 000	99	1 121	999	2 612	Finland	
France	1954	42 844	41 148	96	13 418	13 402	<b>3</b> 9 268	France	
Greece	1955	8 366	8 030*	96		1 800	3 725	Grèce	
Hungary	1954	9 693	• •	••	••	2.540	5 080	Hongrie	
Ireland	1946	2 955	2 755	<sup>~</sup> 93	663	<sup>(b)</sup>	, <b></b>	Irlande	
Italy	1951	47 516		••	11 814	11 411	37 342	Italie	
Netherlands	1947	9 625	9 342	97	2 486	2 117	10 130	Pays-Bas	
Norway	1950	3 235	3 144	97	967 .	883	3 424	Norvège	
Poland	1950	24 977	••	••	••	••	13 651	Pologne	
Portugal	1950	8 510	8:351	98	2 047	2 274	• •	Portugal	
Romania	1956	17 490	• ¥	••	● ●	••	• •	Roumanie	
Spain	1950	27 978	• •	••	••	6 292	(c)	Espagne	
Sweden	1950	7 042	6-921	98	2 385	2 340 <del>*</del>	• •	Suède	
Switzerland	1950	4 694	• •	••	1 306	1 286 <sup>(d)</sup>	• •	Suisse	
Turkey	1950	20 940	· · ·	••	••	3 500 <b>*-</b> 4 000*	••	Turquie	
USSR (urban)	1954	. 85 000 <sup>(e)</sup>	••	••	• •	16 500	50 000	URSS (régions urbaines)	
United Kingdom	1951	50 302	48 031	96	14 891	14 129 <sup>(f)</sup>	64 646 <sup>(f)</sup>	Royaume-Uni	
Western Germany	1950	47 696	46 789	98	15 371	9 438 <sup>(g)</sup>	40 943	Allemagne Occidentale	
Yugoslavia	1953	16 990	• •	••	3 984	3 563	••	Yougoslavie	

(a) Of total population.

For the general note and footnotes (b) to (g), see end of table, and for further notes and sources, Annexes I and II.

•

(a) De la population totale.

Pour la note générale et les références (b) à (g), voir la fin du tableau et pour les notes supplémentaires et les sources voir Annexes I et II.

Tableau 1 : Population, ménages, logements et pièces

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Note <b>s to</b> Tabl	<u>e 1</u> ·		Notes rel
Notes on concepts used in censuses:		Notions employées dans le	recensement:
- Total Population		- Population totale	
(i) <u>de jure</u> population:		(i) population légal	.e <b>:</b>
Austria, Belgium, Denmark, France, East Norway, Portugal, Sweden, Switzerland,	ern Germany, Italy, Netherlands, Western Germany, Yugoslavia.	Autriche, Belg Norvège, Portu	
(ii) <u>de facto</u> population:		(ii) population prése	nte:
Finland, Greece, Ireland, Poland, Spair	, Turkey, United Kingdom.	Finlande, Grèc	e, Irlande, Po
(iii) unknown:		(iii) inconnu:	
Bulgaria, Czechoslovakia, Hungary, Roma	nia, USSR.	Bulgarie, Tché	coslovaquie, H
- Households		- Ménages	
(i) housekeeping unit:		(i) ménage-foyer	
Austria, Belgium, Finland, Greece, Irel Switzerland, United Kingdom.	and, Italy, Netherlands, Norway,	Autriche, Belg Suisse, Royaum	
(ii) household-dwelling:		(ii) ménage-logement:	
Denmark, France, Portugal, Sweden, Jest	ern Germany.	Danomark, Fran	nce, <sup>P</sup> ortugal,
- Dwelling		- Logement	
(i) structurally separate dwelling specifical	lly mentioned:	(i) expressément log	gement distinc
Finland, Italy, Netherlands, Norway (fo United Kingdom, Mestern Germany, Yugos)	or urban areas), Sweden, Spain,	Finlande, Ital Royaume-Uni, J	
(ii) structurally separate dwelling apparently		(ii) logement vraiser	nblablement di
Austria, Denmark, France.		Autriche, Dane	emark, France.
(iii) other, or concept not determined:		(iii) autre notion ou	une notion no
Belgium, Greece, Norway (for rural area	as), Portugal, Switzerland.	Belgique, Gr	èce, Norvège,
(iv) unknown:		(iv) inconnu:	• •
Bulgaria, Czechoslovakia, Hungary, Turl	key, USSR.	Bulgarie, Tc	hécoslovaquie,
- Rooms		- Pièces	· •
main rooms including kitchen (for Czecho is included if it has 12 m <sup>2</sup> or more).	slovakia and France, kitchen	pièces principa la cuisine n'es	
(b) number of "houses" inhabited by one or more h 655 thousands.	ouseholds amounts to	(b) le nombre des "maiso 655 mille unités.	ns", occupées
(c) the average number of rooms per dwelling is 4	•15.	(c) le nombre moyen de p	ièces par loge
(d) dwellings with kitchen; the number of dwelli is about 1.3 million.	ngs with and without kitchen	(d) logements pourvus d' s'élève à environ l,	3 million.
(e) total population is about 217 millions.		(e) la population totale	s'élève à env
(f) estimated on the basis of occupied dwellings	and rooms.	(f) estimations basées s	ur les logemer
(g) in 1955: 12.0 million dwellings and about 48	.2 million rooms.	(g) en 1955: 12,0 milli	ons de logemer

#### Notes relatives au Tableau 1

```
le, Danemark, France, Allemagne orientale, Italie, Pays-Bas,
, Suède, Suisse, Allemagne occidentale, Yougoslavie.
Irlande, Pologne, Espagne, Turquie, Royaume-Uni.
slovaquie, Hongrie, Roumanie, URSS.
ue, Finlande, Grèce, Irlande, Italie, Pays-Bas, Norvège,
 Portugal, Suède, Allemagne occidentale.
ent distinct du point de vue structural:
 Pays-Bas, Ncrvège (pour régions urbaines), Suède, Espagne,
emagne occidentale, Yougoslavie.
ablement distinct du point de vue structural:
e notion non déterminée:
 Norvège, (pour régions rurales), Portugal, Suisse.
oslovaquie, Hongrie, Turquie, URSS.
y compris la cuisine (pour la Tchécoslovaquie et la France,
ncluse que si elle a 12 m<sup>2</sup> ou plus).
, occupées par un ou plusiers ménages, s'élève à
es par logement est de 4,15.
cuisine; le nombre des logements avec et sans cuisine
élève à environ 217 millions.
les logements et pièces occupés.
de logements et environ 48,2 millions de pièces.
```

#### Table 2 : Some Characteristics of the Housing Stock

<u>Tableau 2</u>
------------------

	concept(a) 1 logement(a)				Size -	Grander	ır			Equipment	- Equipement			Tenure status - tère de la posse:	ssion		
Country	concel u logen	Date	Total number of dwellings Nombre total	Dwel Loge	lings w ments a	ith vec	rooms piè <b>c</b> es	Runn wate	r(b)	$G_{as}(c)$ Gaz(c)	Electricity	$Bath \begin{pmatrix} d \\ d \end{pmatrix}$ Bain	Let	Owner-occupied Occupé par le	Other	Pays	
	Dwelling c Notion du		de logements	1 - 2	3 - 4	5 ~ 6	7 or more 7 et plus	Ea ¢ouran	ute(b)	Gaz	Electricité		Loué	propriétaire	Autres		
	Dwe Not		1000							percentages	(e) pource	ntages <sup>(e)</sup>					
Austria		1951								**************************************						Autriche	
Lotal		1	2 138 001	(f)	(f)	(f)	(f)	(34.2)	63.3	30.6	90.7	10.6				Total	
Urban Rural			1 173 007 964 994					(44.9) (21.2)	86.9 34.5	55.4 0.5	97.2 82.7	15.2 4.9				Urbains Ruraux	
Belgium	III	1.947												· ·		Belgique	
Total			2 815 956 <sup>(g)</sup>	25.5	44.7	22.0	7.9	(48.5)	56.1	1.2	95.4	8.4				Total	
Czechoslovakia		1946		1		Ì	•									Tchécoslovaquie <sup>(h)</sup>	
Total			3 129 630	68.9	26.6	3.3	1.3	••	35.5	9.1	85.0				. •	Total	
Urban Rurıl			1 034 279 1 895 351	66.2 70.6	28,0. 25,7	4.2 2.7	1.7 1.0	• • ·	55.8 22.3	22.3 0.5	94.1 79.1	••				Urbains Ruraux	
Denmark	. II	1950		1					(	:		•				Danenark	
Urban			844 410	6.9	65.3	22.1	5.3	••	••	88.8	99.2	38.4	;	, ,	•	Urbains	
Finland	·I	1950			:						n 3					Finlande	
Total			<u>98</u> 839	57.3	53.2	7.1	2.4	• •	25.2	7.0	77.2	43.1				Total	
Urban Rural			<b>3</b> 73 <b>35</b> 5 625 484	67.7 51.0	26, 2 37, 4	4.9 8.5	1.3 3.1		53.3 8.4	18.7	<b>98.4</b> 64.6	<b>24.8</b> 53.9				Urbains Ruraux	
France <sup>(1)</sup>	II	1954														France <sup>(i)</sup>	
Total			13 401 500	28.9	50.0	16.7	4.4	(58.4)	94.3	66.2	93.0	10.4				Total	
Urban Rural			7 846 000 5 555 500	29.5 27.9	50.7 49.0	15.9 17.7	3.8 5.4	( <b>75.4)</b> (34 <b>.</b> 3)	95.6 92.6	77.8 49.8	95.4 89.5	14.9 4.0				Urbains Ruraux	

(a) Dwelling concept used in census:

I = structurally separate dwelling specifically mentioned. II = structurally separate dwelling apparently applied. III = other, or concept not determined.

For footnotes (b) to (u) see end of table and for further notes and sources, Annexes I and II.

(a) Notion du logement employée dans le recensement:

I = expressément un logement distinct du point de vue structural. II = un logement vraisemblablement distinct du point de vue structural. III = autre notion ou une notion non déterminée.

Pour les références (b) et (u) voir à la fin du tableau et pour les notes supplémentaires et les sources voir Annexes I et II.

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: Quelques caractéristiques du stock de logement

Table 2 :	Some Characteristics	of the Housing Stock (	continued)
-----------	----------------------	------------------------	------------

	$t^{(a)}_{ent}$			<b>1</b>	Size -	Grande	ur		Equipment	- Equipement		Cara	Tenure status - ctère de la posses	sion	
Country	Dwelling concept $\binom{a}{a}$ . Notion du logement $\binom{a}{a}$	Date	Total number of dwellings Nombre total de logements	Loge	lings w ments a 3 - 4-	ved	pièces	Running water (b) Eau (b) courante	$\mathbf{G}_{as} \begin{pmatrix} c \\ c \\ c \end{pmatrix}$	Electricity Electricité	$\operatorname{Bath}_{\operatorname{Bain}}^{\operatorname{(d)}}$	Let Loué	Owner-occupied Occupé par le propriétaire	Other Autres	Pays
	Dwe. Not		1000				ar en - <del>Tanker de s</del> en <del>de rusk d</del> ânder der	£	perventage	s <sup>(e)</sup> pour en	ntages <sup>(e)</sup>				
Greece		1940			<u>.</u>						,				Grèce
Total			1 740 087	67.6	24.6	5.9	1.9	•• ••	1.4	14.2	4.0				Total
Urban Rural			630 800 1 109 287	60.3 71.7	26.4 23.7	9.6 3.8	3.7 0.8	•• ••	3.8	32.7 3.7	10.5 0.3				Urbains Ruraux
Iceland	I	1950									·				Islande
Total.			30 141	6.6	54.0	29.8	9.6	(92.7)	••	89.2	49.8				Total
Urban Rural	•		22 900 7 241	6.8 6.1	57.1 44.3	28.4 34.3	7.8 15.3	(95.7) (83.1)	••	99.2 57.7	57.4 25.7				Urbains Ruraux
Ireland (j)	III	1946					•	(k)			(m)				Irlande <sup>(j)</sup>
Total			662 654	15.7	52.9	21.2	10.2	(29.3) 38.7	••	••	15.4				Total
Urban Rural			239 465 423 189	25.2 10.4	41.8 59.2	20.5 21.5	12.4 8. <b>)</b>	(67.3) 91.8 (7.9) 8.6	••	••	35.5 3.9				Urbains Ruraux
Italy	I	1951					•	•							Italie
Total Netherlands $(g)$	I	1947	11 410 685	42.2	38.4	13.3	6.1	(34.0) 42.7	15.0	82.7	10.7				Total Pays-Bas <sup>(g)</sup>
Total			2 056 271	10.4	29.2	44.1	16.3	(80.2)	67.3	92.4	••				Total
Urban Rural(n) Total	L I	1956	1 837 159 219 112 2 499 630	9,5 17.3 5,3	27.7 42.5 28.5	45.7 30.9 49.6	17.1 9.3	(86.6) (38.8) (90.4)	74.4 7.5 71.9	94.8 72.2 98.1	•• 26.8	× .			Urbains Ruraux Total(n)
Norway	I	1					* • *				· · · ·				Norvège
Total			963 552	27.6	49.0	17.3	6.1	<b>* * *</b> 11	0 •	••					Total
$\frac{\text{Urban}}{\text{Rural}}(j)$			353 970 609 582	36.4 22.5	52.4 47.1	9.5 21.8	1.7 8.6	۰۰ ۰۰ ۲۰	••	• «	••			· · ·	Urbains Rur <b>a</b> ux(j)

(a) Dwelling concept used in census:

I = structurally separate dwelling specifically mentioned.

II = structurally separate dwelling apparently applied.

III = other, or concept not determined.

For footnote (b) to (u) see end of table and for further notes and sources, Annexes I and II.

(a) Notion du logement employée dans le recensement:

I = expressément un logement distinct du point de vue structural. II = un logement vraisemblablement distinct du point de vue structural. III = autre notion ou une notion non déterminée.

Pour les références (b) à (u) voir à la fin du tableau, et pour les notes supplémentaires et les sources voir Annexes I et II.

- 2 -

Tableau 2 : Quelques caractéristiques du stock de logement (suite)

Table 2 :	Some Characteristics of the Housing Stock (	continued	)

Tableau 2 : Quelques caractéristiques du stock de logement (suite)

	$t^{(a)}_{ent}$		Total number		Size -	Grandeu	r		Equipment	- Equipement		Carac	Tenure status - tère de la posse:	ssion	
Country	Dwelling concept(a) Notion du logement $(a)$	Date	of dwellings Nombre total de logements			ith vec		Running water (b)	$\frac{Gas}{Gaz} \begin{pmatrix} c \\ c \end{pmatrix}$	Electricity	$\operatorname{Bath}_{\operatorname{Bain}}^{\operatorname{(d)}}$	Let	Owner-occupied Occupé par le	Other	Pays
	lling ion du			1 <b>- 2</b>	3 <b>-</b> 4	5 – 6	7 or more 7 of plus	Eau courante <sup>(b)</sup>		Electricité		Loué	propriétaire	Autres	
	Dwe. Not:		1000					]	percentages	(e) pourse	ntages <sup>(e)</sup>				
Poland	•	1950							an de la constante de la const						Pologne
Urban			2 445	58.6	36.3	5.1	• •		• •	••	••				Urbains
Portugal	III	1950-		(c)	(0)	(0)	( <sub>0</sub> )								Portugal
Total			2 274 499	32.9	43.5	15.4	8.2	(14.5)	• •	19.5	7.8				Total
Urban Rural			655 319 1 619 180	# 19 ₽ 15		ў а • л	••	(42.5) (3.1)	••	46.9 8.5	22.1 2.0				Urbains Ruraux
Spain	I	1950													Espagne
Total			6 291 590	20.7	42.3	26.1	10.9	(34.2)	5.3	80.5	9.2				Total
Urban Rural		1	2 816 610 3 474 980	18.5 22.5	38.8 45.1	30.5 22.5	12.2 9.8	••••	••	••	••				Urbains Ruraux
Sweden	I	1945		j I		1									Suède
Total			2 101 800	37.6	47.1	11.6	3.7	(67.0) 68.7£	22.1	93.7	27.6 <sup>(g)</sup>				Total
Urb <b>a</b> n Rural			1 180 300 921 000	45.1 28.0	43.6 51.6	8.7 15.3	2.6 5.1	(88.5) 90.5 <sup>(f)</sup> (39.3) 40.8 <sup>(f)</sup>	39.4 0.0	99.6 8 <b>6,2</b>	$43.4 \begin{pmatrix} g \\ g \end{pmatrix}$ 7.2		•		Urbains Ruraux
Switzerland	III	1950													Suisse
Urban(r) Rural			681 871 25 814(s)	22.50 15.10	55.46 41.1	16.1 30.0	5.9(c) 13.8	(98.9)100.0 (77.7)100.0	62.7 3.0	100.0 95.1	69.6 17.3				Urbains Ruraux(r)
Turkey	••	1950													Turquie
Urban			171 025	36.6	33.2	16.1	14.1	(33.6)	9.8	54.3	• •				Urbains

(a) Dwelling concept used in census;

I = structurally separate dwelling specifically mentioned.

II = structurally separate dwelling apparently applied. III = other, or concept not determined.

Fer footnotes (b) to (u) see end of table and for further notes and sources, Annexes I and II.

(a) Notion du logement employée dans le recensement:

I = expressément un logement distinct du point de vue structural. II = un logement vraisemblablement distinct du point de vue structural. III = autre notion ou une notion non déterminée.

Pour les références (b) à (u) voir à la fin du tableau et pour les notes supplémentaires et les sources voir Annexes I et II.

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#### Table 2 : Some Characteristics of the Housing Stock (continued)

Tableau 2 : Quelques caractéristiques du stock de logement (suite)

	cept(a) cerent(a)	Total number		Size -	Grande	ır		Equipment	- Equipement		Cara	Tenure status - actère de la posses	ssion	
Country	Date	of dwellings	Loco		ith vec		Running water (b)	$G_{as} \begin{pmatrix} c \\ c \end{pmatrix}$	Electricity	$_{{ m Bath}(d)}^{{ m Bath}(d)}$	Let	Owner-occupied Occupé par le	Other	Pays
	ling Lon du		1 2	3 ~ 4	5 - 6	7 or more 7 et plus	Eau courante(b)	Gaz <sup>(C)</sup>	Electricité	Bain <sup>(a)</sup>	Loué	propriétaire	Autres	
· · · · · ·	Dwellir Notion	1.000	· · · ·				•	percentages	(e) pourcen	tages <sup>(e)</sup>				
United Kingdom	I 1951													Royaume Uni
Total		14 093 581	7.4	40.9	43.9	7.8	(81.4) <sup>k)</sup> 94.5	(t)	•	$62.4^{(t)}$				Total
Urban Ruraï		11 133 397 2 960 184	7.4 7.4	40.4 42.9	44.9 40.0	7.3 9.7	(83.3) (73.2) 79.9	(t) (t)	••	64.5(t) 53.6				Urbains Ruraux
Jestern Germany	£ 1955		1											Allemagne Ocsidental
. Total		12 018 940	13.4	58.8	20.5	7.3	79.4	45.8	98.8	31.6				Total
Urban Runal		5 024 925 6 994 015	17.2 10.7	65.4 54.1	14.4 24.8	3.0 10.4			99.4 98.3	47.5 20.2				Urbains Ruraux
Ingoslavia	I 1954					, .				• •				Yougoslavie
Urban Rural		929 553 2 667 370	80.2 <sup>(0)</sup>	19.8 <sup>0</sup>		• •	(28.8)	••	87.3	17.0				Urbains Ruraux

(a) Dwelling concept used in census:

I = structurally separate dwelling specifically mentioned.

- II = structurally separate dwelling apparently applied.
- III = other, or concept not determined.

For footnotes (b) to (u) see end of table and for further notes and sources, Annexes I and II.

(a) Notion du logement employée dans le recensement:

I = expressément un logement distinct du point de vue structural. II = un logement vraisemblablement distinct du point de vue structural. III = autre notion ou une notion non déterminée.

Pour les références (b) à (u) voir à la fin du tableau, et pour les notes supplémentaires et les sources voir Annexes I et II.

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#### Notes to Table 2

- (b) Unless otherwise stated, figures in parentheses relate to piped water supply within dwellings, whereas the others relate to piped water supply inside or outside dwellings.
- (c) "Gas" is believed to mean in most cases cooking gas laid on from main or tank, as a permanent feature of the structure.
- (d) Unless otherwise stated, "bath" means private bathroom or bathing accommodation shared with other dwellings.
- (e) For rooms: percentages computed on the basis of dwellings with a known number of rooms. (e) Pour les pièces: pourcentage calculé par rapport aux logements dont le nombre de For equipment: percentages computed on the basis of the total number of dwellings.
- (f) Dwellings by number of rooms (counting rooms with less than 15 m<sup>2</sup> floor space as half-rooms): 1/2 and 1, 44.2%; 1 1/2 and 2, 34.5%; 2 1/2 and 3, 13.1%; 3 1/2 or more, 8.2%.
- (g) Occupied dwellings only.
- (h) Bohemia, Moravia and Silesia only.
- Data are from a 5% sample. (i)
- (j) Data refer to households.
- (k)Figures in parentheses refer to households with the exclusive use of piped supply laid on to the dwelling; the figures on the right refer to all households with access to water supply, whether exclusive or shared with other households.
- (n) Installed bathtub or shower, exclusive use or shared.
- (n) Figures are estimates based on a sample of 1/30.
- (0)Kitchens not counted as rooms.
- (p)Inside building.
- (q) Excluding shower rooms and Finnish baths.
- $(\mathbf{r})$ Sample including 253 rural communes.
- (s)Units in sample.
- (t)Figures are for Great Britain and relate to households.
- $(\mathbf{u})$ Three or more rooms.

#### Notes relatives au Tableau 2

- qui ont accès à une conduite d'eau soit à l'intérieur, soit à l'extérieur.
- avec d'autres ménages.
- pièces est connu. Pour l'équipement: pourcentage calculé par rapport au nombre total des logements.
- plus, 8.2%.
- (g) Logements occupés seulement.
- Bohème. Moravie et Silésie seulement. (h)
- Dornées sur la base d'un sondage de 5%. (i)
- (j) Données se rapportant aux ménages.
- ménages.
- (m) Installation de bain ou douche privé ou partagée.
- Données estimées sur la base d'un échantillon de 1/30e. (n)
- Cuisines exclues. (0)
- A l'intérieur. (ŋ)
- Non compris salles de douches ou bains finncis. ( a )
- $(\mathbf{r})$ 253 communes rurales où fut effectuée une enquête par sondage.
- Logements faisant partie de l'échantillon. (s)
- Grande-Bretagne seulement; les données se rapportent aux ménages.
- $(\mathbf{u})$ Trois pièces ou plus.

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(b) Sauf indication contraire, les chiffres entre parenthèses se rapportent aux logements pourvus d'une conduite d'eau à l'intérieur, tandis que les autres visent les logements

(c) Par "gaz" on entend, en général, le gaz de cuisine fourni au moyen d'une installation permanente alimentée soit par un système de conduites, soit par des réservoirs. (d) Sauf indication contraire "bain" désigne une salle de bains ou une installation partagée

(f) Classification des logements selon le nombre de pièces (espace de moins de 15 m<sup>2</sup> compté conne denie-pièce): 1/2 et 1, 44.2%; 1 1/2 et 2, 34.5% 2 1/2 et 3, 13.1%; 3 1/2 ou

(k) Les données entre parenthèses se rapportent aux ménages jouissant d'une installation privée d'eau courante à l'intérieur de leur logement; celles indiquées à droite visent les ménages qui ont accès à une conduite d'eau soit privée ou partagée avec d'autres

Table 3 : Occupation of the Housing Stock
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T	S,	b.	Le	au	
**	-	_		Statistics, Statis	

	Dwelling carapt <sup>(c)</sup> Notion du <sup>(a)</sup> logement		Total number(b) of dwellings	r		s with following n avec le nombre sui		par pièce		
Country	ling of on du ment	Date :	Nombre total (b) de logoments (b)	l.5 or less ou moins	over plus de 1.5	2.0 and over stplus	3.0 and over et plus	4.0 and over $4.0$ et plus	5.0 and over 5.0 et plus	Pays
	Dwel Noti logo		1000	nga ang kanang diapang dan pang ang kanang dan kanang kanang kanang kanang kanang kanang kanang kanang kanang k		percentages (c)	pourcentages (c)		· .	
Austria Total <sup>(d)</sup>	II II	1951	2 138 001	TI		13.4	4.9	1.8	0.7	Autriche Total <sup>(d)</sup>
Belgium Total	III	1947	2 815 956 <sup>(e)</sup>	87.0	1 <b>3.</b> 0	5.9	1.3	0.4	0.1	Belgique Total
Czechoslovakia Urban	п	1946	1 234 279		81.2 <sup>(f) (g)</sup>	30.2 <sup>(g)</sup>	11.4 <sup>(g)</sup>	4.9	II	Tchécoslovaquie Urbains
Denmark Urben	II	1950	844 410	35.6	4.4	0.7	0.1	11	· 11	Danemark <b>Urbains</b>
Finland	I	1950			- <b>1</b> .6					F.nl.ande
Urban Rural (h)			373 355 ° 625 454	44 <b>.9</b> 45 <b>.</b> 2	55.l 54.8	39 <b>.</b> 7 39 <b>.</b> 4	14.3 16.3	5•3 7•2	1.7 3.4	Urbains Rura <b>ux</b> France <sup>(h)</sup>
France <sup>(h)</sup> Urban Rural	II	1954	7 846 000 5 555 500	72,4 87,9	27.6 12.1	8.1 9.4	2.6 3.0	0.9	0.3 0.4	Urbains Ruraux
Greece	III	1940	, ,,, ,,,		, ,				:	Grèce
Urban Rural Iceland <sup>(i)</sup>			630 800	44.8 30.4	55,2 69.6	29.4 49.9	17.2 26.5	9.8 14.5	5.3 8.1	Urbains Ruraux Islande <sup>(i)</sup>
Urban Rural	I	1950	22 900 7 241	85.2 80.4	14.8 19.6	2.8 5.2	0.4 0.9	11	11 11 11 .	Urbeins Ruraux
Ireland <sup>(j)</sup> Urban	III	1946	239 465	73.3	26.7	13.6	4.8	2.1	1.0	Irlande <sup>(j)</sup> Urbains
Rural			423 109	80.2	19.8	7.6	1.4	0.4	1.0 0.1	Ruraux

(a): Dwelling concept used in census:

I = structurally separate dwelling specifically mentioned.

II = structurally separate dwelling apparently applied.

III = other, or concept not determined.

For footnotes (b) to (o) see end of table, and for further notes and sources, Annexes I and II.

(a): Notion du logement employée dans le recensement.

I = expressément un logement distinct du point de vue structural.

II = un logement vraisemblablement distinct du point de vue structural. III = notion ou une notion non déterminée.

Pour les références (b) à (o) voir à la fin du tableau, et pour les notes supplémentaires et les sources voir Annexes I et II.

## 1 3 : Occupation du stock de logements

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	(a) 1(a)		Total number(b) of dwellings				umber of persons p vant de personnes			
Country	Dwelling(a) concept Nation du(a) logement	Date	Nombre total(b) de logements	l.5 or less ou moins	over plus de l.5	2.0 and over et plus	3.0 and over et plus	4.0 and over et plus	5.0 and over et plus	Pays
	Dw Co Na		1000			ercentages <sup>(c)</sup>	pourcentagos (c)	1	<u></u>	
Italy	I				R= 2*9=44 + + + + + + + + + + = + + + + + + +					Italie
Total		1951	ll 410 685	TT	11	11	ji i	11	n	Total
Netherlands	I.	1947								Pays-Bas
Urban Rural			1 837 159 <sup>(e)</sup> 219 <u>112</u> (ث)	88.2 67.4	11.8 32.6	5.4 15.8	1.9 4.6	0.8 1.7	0.5 1.0	Urbains Ruraux
Total <sup>(k)</sup>		1956	2 499 630	89.9	10,1	4.8	1.1	0.4	0.2	Total
Norway (i)	I	1950							5 	Norvàgo (i.)
Urban			311 024	89.0	11.0	2.8	0.5	0.1	17	Urbaius
Portugal <sup>(m)</sup>	III	1950								Portugan
Total			2 274 499	66.9	33.1	18.1	7.7	3.7	1.9	lotal.
Sweden	I	1945								<b>೨</b> ಬರಿದೆಂ
Urban Rural			1 180 800	84.5	15.5	4.1	11	11	п	Urbaille Ruraice
Switzerland <sup>(m)</sup>	III	1950	921 000	82.9	17.1	6.1	11	11	"	Suisse <sup>(n)</sup>
Urban		_,,,,,	681 871	91.1	8.9	1.6	11	ii	11	Urbains
Rural			25 814	83.5	16.5	5.9	il	il	il	Ruraux
United Kingdom <sup>(i)</sup>	I	195 <b>1</b>								Royaume-Uni
Urban Rural			11 133 397 2 960 184	92 <b>.9</b> 92 <b>.</b> 8	7.1 7.2	2.0 2.3	i) 11	11	11 11	Urbains Rure <b>ux</b>
Western Germany(o)	III	1950								Allemagne
Urben Rura <b>l</b>			5 858 632 8 775 241	11 11	n	8.8 11.7	2.5 3.6	0.7 1.2	11	Allemagne occidentale Urbains Ruraux

Table 3 : Occupation of the Housing Stock (continued)

(a) : Dwelling concept used in census:

I = structurally separate dwelling specifically mentioned.

II = structurally separate dwelling apparently applied.

III = other, or concept not determined.

For footnotes (b) to (o) see end of table, and for further notes and sources, Annexes I and II.

(a) : Notion du logement employée dans le recensement.

I = expressément un logement distinct du point de vue structural. II = un logement vraisemblablement distinct du point de vue structural. III = notion ou une notion non déterminée.

Tableau 3 : Occupation du stock de logements (suite)

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Pour les références (b) à (o) voir à la fin du tableau, et pour les notes supplémentaires et les sources voir Annexes I et II.

#### Notes to Table 3

- (b) Totals include unoccupied dwellings (with the exclusion of Belgium and The Netherlands) and/or dwellings with unknown density of occupation, unless otherwise indicated.
- (c) Percentage computed in relation to the number of occupied dwellings.
- (d) Rooms smaller than 15 square meters are counted as half-rooms for the purpose of these computations.
- (e) Occupied dwellings only.
- (f) Over 1.0.
- (g) Bohemia, Moravia and Silesia, excluding Prague.
- (h) Data are from a 5% sample.
- (i) The breakdown refers to data for households.
- (j) Data are for households.
- (k) Figures are estimates based on a sample of 1/30.
- (m) Kitchens are not counted as rooms.
- (n) Units in sample covering 253 rural communes.
- (o) Data are for "housing parties" (owners, tenants and sub-tenants, together with family members).

- Notes relativos au Tableau 3
- de la Belgique et des Pays-Bas) ou à une densité d'occupation inconnue.
- (c) Pourcentage calculé par rapport au nombre des logements occupés.
- (d) Ispace de moins de 15 m<sup>2</sup> comptés comme demi-pièces.
- (e) Logements occupés seulement.
- (f) Plus de 1.0.
- (g) Bohême, Moravie et Silésie, excepté Prague.
- (h) Données sur la base d'un sondage de 5%.
- (i) Les chiffres relatifs à la répartition sont basés sur des données se rapportant aux ménages.
- (j) Les données se rapportent aux ménages.
- (k) Estimations sur la base d'un échantillon de 1/30c.
- (m) Les cuisines ne sont pas comptées.
- (n) Logements faisant partie de l'échantillon pour 253 communes rurales.
- (o) Propriétaires, locataires et sous-locataires, chacun avec les membres de sa famille, pris comme unités. ("Wohnungsparteien").

(b) Sauf avis contraire, les totaix comprennent les logements inoccupés (à l'exception

						(	a)
Table 4 : Dwelling	Construction	- Work	Completed	and	<u>Work Under</u>	Construction	<b>~</b> )
						· .	

Tableau / : Construction de loge

Country	Stage of work	Unit(b)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité <sup>(b)</sup>	Etape des travaux	Fays
Austria	completed	I II	26.1 3.8	29.0 4.2	46.2 6.7	70. 5.	.3 .0	38.2 5.5	40.5 5.8	41.6 6.0	42.0* 6.0*		I II	achevés	Autriche
Belgium	completed	I II	24.4 2.9	36.2 4.2	44.7 5.2	35.5 4.1	33 <b>.</b> 3 3 <b>.</b> 8	39.2 4.5	44.9 5.1	44.6 5.0	44.1 4.9	42.5	I II	ache <b>vés</b>	Belgique
Czechoslovakia	completed	I II	21.7 1.8	29.1 2:4	38.2 3.1	30.9 2.5	39.3 3.1	39.0 3.0	38.2 2.9	50.6 3.9	63 <b>.</b> 7 4.8	63.1 4.7	I II	achevés	Tchécoslovaquie
	under construction	I										70.2	I	en cours	
Denmark	completed	I II	19.6 4.7	24.8 5.9	20 <b>.4</b> 4 <b>.</b> 8	21.5 5.0	19.0 4.4	21.3 4.9	23.3 5.3	24.0 5.4	19.ି 4.4	26.5 5.9	I II	achevés	Danemark
	under •onstruction	I	23.8	21.1	22 <b>.3</b> -	17.5	21.6	24.1	25.1	21.1	23.0	18.7	I	en cours	
Eastern Germany	completed	I II						32.3 1.9	34.7 2.1	32.8 2.0	32.8 2.0	61.1 3.5	I II	achevés	Allemagne Orientale
Finland	completed	I II	23.0 5.9	29.0 7.3	26.0 6.5	28.5 7.0	31.2 7.6	28.9 7.0	31.0 7.4	33.2 7.8	31.9 7.4	32.2 7.4	I II	achevés	Finlande
France	completed	I II	40.2 1.0	55.6 1.3	70.6 1.7	76.7 1.8	83.9 2.0	115.5	162.0. 3.8	210.1 4.9	236.5 5.4	273.7 6.2	I II	achevés	France
	under construction	I							394.7	467.0	510.0	••	I	en cours	
Greece	completed	I II	18.8 2.5	21.7 2.9	48 <b>.</b> 7 6 <b>.4</b>	<b>43.</b> 9 5.7	59.9 7.7	51.5 6.6	46.3 5.9	53.3 6.7	55.4 6.9	••	I II	achevés	Grèce
Hungary	completed	I II .			24.7 2.6	17.7 1.9	16.7 1.8	16.8 1.8	27.2 2.8	31.5 3.2	25.5 2.6	48.0 4.9	I II	achevés	Hongrie
Iceland	completed	II	1.0 7.3	0.9 6.4	0.9 6.3	0.7 4.8	0.8 5.4	0.9	0.9 5.8	1.2 7.6	1.4 8.7		I II	achevés	Islande
Ireland	completed	I II	2.5 0.8	7.0 2.3	- 12.8 4.3	13.1 4.4	14.5 4.9	13.1 4.4	11.7 4.0	10.3 3.5	11.6* 4.0*	9.2* 3.1*	I II	achevés	Irlande
Italy	completed	I II	37.0 0.8	46.1 1.0	74.1 1.6	93.5 2.0	117.2 2.5	150.4 3.2	177.4	215.9 4.5	230.6 4.8	255.0 5.3	I II	achevés	Italie
Netherlands	completed	II	38.8 4.0	48.7 4.9	54.8 5.4	64.8 6.3	57.4 5.5	62.6 6.0	70.5	61.9 5.8	69.2 6.4	89.3 8.1	I II	achevés	Pays-Bays
	under construction	I	40.8	39.2	52.7	36.6	51.3	68.5	60.7	76.1	94.0	90.1	I	en cours	
Norway	completed	I II	16.6 5.2	18.3 5.7	22.4 6.9	20.9 6.3	32.7 9.8	35.1 10.4	<b>35.</b> 4 10 <b>.</b> 4	32.1 9.4	27.3 7.9	26.5 7.6	I 117.6	achevés	Norvège
	under construction	I	14•3	17.4	1413	25.5	26.7	29.8	30.0	26.9	21.9	••	I	en cours	

(a) At end of year.

(b) I = 1,000 dwellings II = dwellings per 1,000 inhabitants

For further notes and sources see Annexes I and II

(a) A la fin de l'année

(b) I <u>-</u> 1.000 logements II <u>-</u> logements par 1.000 habitants

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				1			2)
ements -	Travaux	acheves	et	travaux	en.	cours	
CINCITOD	1 1 CO 1 CO CO CO		Statute reason	Statement of the local division of the local	-		

Pour les notes supplémentaires et les sources voir Annexes I et II.

Table 4: Dwelling Construction - Work Completed and Work Under Construction (a) (continued)

Tableau 4 : Construction de legements - Travaux achevés et travaux en cours (a) suite)

Country	Stage of work	Unit <sup>(b)</sup>	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité <sup>(b)</sup>	Etape des Travaux	Pays
Poland	completed	I II				. 2.6	65.0 2.5	79.0	79.0 3.0	94.0 3.4	94.5 3.4	120.0 4.2	I II	achevés	Pologne
Portugal	completed	I II			17.6	17.8 2.1	15.2 1.8	21.7	22.1	24.2 2.8	28.2	29.6* 3.3*	I II	achevés	Portugal
Romania	completed	I II				49.4 3.0	45.0 2,7	45.6	54.9 3.2	55.9 3.2	78.1 4.4	••	I II	achevés	Roumanie
Spain	sompleted	I II	62.1 2.3	55.1 2.0	53.4 1.9	56.5 2.0	63.3 2.2	67.2 2.4	87.2 3.0	112.2 3.9	121.8	98 <del>*</del>	I II	achevés	Espagne
Sweden	completed under construction	I J.I I		42.6 6.1	44.9 6.4	40.8 5.8	45.6 6.4	52.7 7.3	59.0 81.2	57.6 7.9	57.6 7.9	64.8 8.8 66.4	I I I	achevés en cours	Suède
Switzerland	completed under construction	I II I	26.0 5.7 10.8	20.0 4.3 11.5	25.0 . 5.3 14.7	30.0 6.3 16.4	27.5 5.7 15.0	29.4 6.0 21.3	36.1 7.3 26.2	39•4 7.9 26.4	39.4* 7.8* 25.1	37•5* 7•3*	I II I	achevés on cours	Suisse
Turkey	completed	I II									•	•	I II	achevés	Turquie
JSSR	completed	I II						1245.0 6.5	1351.0 7.0	1512.0 7.6	1613.0 8.0	2090.0 10.2	I II	achevés	URSS
Jnited Kingdom	completed under construction	I II I	260.9 5.2 196.7	220.0 4.4 202.0	214.7 4.3 208.5	209.4 4.2 233.9	254.5 5.0 287.7	33C.4. 6.5 315.8	356.7 7.0 298.6	328.6 6.4 294.2	310.0* 6.1* 271.5	310.0* 6.0* 245.2	I II I	achevés en cours	Royaune Uni
lestern Germany	completed under construction	I II I		215.0	360.0 7.5	410.3 8.5 280.2	443.3 9.1 295.4	514.6 10.5 319.3	542.8 10.9 345.8	538.1 10.7 389.9	560.7 11.0 350.1	528.5 10.1	I II I	achevés en cours	Allemagne Occidentale
ugosla <b>via</b>	completed	I II				· 26.6 1.6	34.9 2.1	38.2. 2.2	34.2. 2.0	29.7 1.7	37.0 2.1	46.0 2.5	I II	achevés	Yougoslavio

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(b) I = 1,000 dwellings II ≃ dwellings per 1,000 inhabitants

For further notes and sources see Annexes I and II.

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(b) I = 1.000 logements II :: logements par 1.000 habitants

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Four les notes supplémentaires et les sources voir Annexes I et III.

## Table 5 : Dwelling Construction - Work Completed, by Kind of Activity

(in 1,000 units and in percentages)

(en 1.000 unités et en pourcentages)

Country	Kind of activity <sup>(a)</sup>	Unit	19 <b>4</b> 8	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Genre d'activité $^{(a)}$	Pays
Austria	Total	1 000 dwellings	26.1	29.0	46.2	13.0	57.3	38.2	40.5	41.6	42.0*	-	1 000 logements	Total	Autriche
·····	I II	% %					83.9 16.1	85.6 14.4	87.2 12.8	88.9 11.1		1	96 50	I II	
Belgium	Total	l 000 dwellings	24.4	36.2	44.7	35.5	33.3	39.2	44.9	44.6	44.1	42.5	1 000 logements	Total	Belgique
	I II	% %				- - -	96.0 4.0	96.1 3.9	96.8 3.2	96.4 3.6	96.4 3.6	: : : :	% %	I II	
Denmark	Total	l 000 dwellings	16.9	21.0	17.5	18.0	16.2	18.2	19.5	19.9	16.4	23.0	1 000 logements	Total	Danemark
· · · ·	I II	% %	97.0 3.0	97.6 2.4	98.3 1.7	98.9 1.1	98.8 1.2	98.9 1.1	99.0 1.0	<b>99.</b> 0 1.0	98 <b>.8</b> 1.2	98.7 1.3	9% K	I II	
France	Total	1 000 dwellings	40.2	55.6	70,6	76.7	83.9	115.5	162.0	210.1	236.5	273.7	1 000 logements	Total	France
	I II	% %		92.4 7.6	96 <b>.3</b> 3 <b>.</b> 7	97.7 2.3	97.0 3.0						50 76	I II	
Ireland	Total	1 000 dwellings	2.4	6.7	12.2	12.5	13.8	12.5	11.1	9.8			1 000 logements	Total	Irlande
	I II	% <b>%</b>	100	98.5 1.5	99.2 0.8	99.2 0.8	99.3 0.7	98.4 1.6	98.2 1.8	96.9 3.1			;6 %	I II	
Italy	Total	l 000 dwellings	36.6	45.7	73.4	92.6	116.1	149.0	175.8	213.7	228.6	1	1 000 logements	Total	Italie
• • • • • •	I II	K K		•	· • •				88.6 11.4	87.7 12.3	88.3 11.7		% %	I II	
Netherlands	Total	1 000 dwellings	38.8	48.7	54.8	64.8	57.4	62.6	70.5	61.9	69.2	89.3	1 000 logements	Total	Pays-Bas
	I II	% %	94 6	.88 12	86 14	91 9	95 5	95 5	97 3	98 2	99 1	99 1	% %	I II	

Figures for the following countries do not refer to total dwelling construction but to the approximate percentages given in brackets: Denmark (83 to 87), Ireland (95), Italy (99) and Switzerland (88-92).

I = new construction (including reconstruction) (a)

II = reconstruction repairs, extensions and conversions (the latter two only if creating additional dwelling units).

For further notes and sources see Annexes I and II.

Les chiffres pour les pays suivants ne se rapportent pas au total de la construction de logements mais aux pourcentages approximatifs indiqués entre parenthèses: Danemark (83 à 87), Irlande (95), Italie (99) et Suisse (88 à 92).

(a) I = nouvelles constructions (y compris la reconstruction) de neuveaux logements).

Pour les notes supplémentaires et les sources voir Annexes I et II.

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Tableau 5 : Construction de logements - Travaux achevés, d'après le genre d'activité

II = construction partielle, les agrardissements et les transformations (les agrandissements et transformations comptant seulement s'il en résulte

#### Dwelling Construction - Work Completed, by Kind of Activity (continued) Table 5

#### Tableau 5

(in 1,000 units and in percentages)

(en 1.000 unités et en pourcentages)

Country	Kind of activity <sup>(a)</sup>	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Genre d'activité <sup>(a)</sup>	Pa <b>ys</b>
Spain	Total	l 000 dwellings	62.1	55.1	53.4	56.5	63.3	67.2	87.2	112.2	121.8	98.0	1 000 logements	Total	Espagne
	III	% %	84.9 15.1	88.7 11.3		90.1 9 <b>.9</b>	91.0 9.0	90.6 9₃4	91.9 8.1	88.9 11.1	88.2 11.8		70 %	I II	
Sweden	Total	1 000 dwellings		42.6		40.8	45.6	52.7	59.0	57.6	57.6	64.8	1 000 logements	Total	Suède
	I II	% %		98 2	98 2	98 2	98 2	98 2	99 2	99 1	99 1	99 1	9% 5%	I II	
Switzerland	Total	1 000 dwellings	23.0	17.9	22.6	27.7	25.4	27.0	33.0	35.9	35•9	1	1 000 logements	Total	Suisse
	I II	% %	96 4	96 4	97 3	97 3	97	97 3	98 2	98 2	97 3		% %	I · II	
United	Total	1 000 dwellings	260.0	220.0	214.7	209.4	254.5	330.4	356.7	328.6	310.0*	310.0*	1 000 logements	Total	Royaume Uni
Kingdom	I II	% %	89 11	93 7	96 4	96 4	98 2	99 1.	99 1	99 1	99 1	99 1	% %	I II	
Western	Total	1 000 dwellings	••	215.0	360.0	410.3	443.3	514.6	542.8	538.1	560.7	528.5	1 000 logements	Total	Allemagne Occidentale
Germany	I II	% %			4 	t	91 9	92 8	93 7	93 7	93 7		96 96	I II	

(a) I = new construction (including reconstruction)

II = reconstruction repairs, extensions and conversions (the latter two only of creating additional dwelling units).

For further notes and sources see Annexes I and II.

I = nouvelles constructions (y compris la reconstruction) (a) II = construction partielle, les agrandissements et les transformations (les agrandissements et transformations comptant seulement s'il en résulte de nouveaux logements).

Pour les notes supplémentaires et les sources voir Annexes I et II.

Construction de logements - Travaux achevés, d'après le genre d'activité (suite)

## Table 6: Dralling Construction - Work Completed, by Size of Dwellings

Tableau 6 : Construction de logements - Travaux achevés, d'après la grandeur des logements (en 1.000 logements et en pourcentages)

(in 1,000 dwellings and in percentages)

						(611	<b>1.</b> 000 10	gements et en pour	centrages /	
1950	1951	1952	1953	1954	1955	1956	1957	Unité	Logements ayant pièces	Pays
46.2	13.0 <sup>(a)</sup>	57.3 <sup>(b)</sup>	38.2	40.5	41.6			1000 logements	Total	Autriche
		26.9 40.1 23.6 5.9 1.9 1.6	23.3 38.8 26.7 6.8 2.6 1.8	18.3 41.5 28.6 6.9 3.0 1.7	16.8 36.3 32.7 9.2 3.1 1.9			50 70 70 FC FC FC	$\frac{1}{22}$ à 1 $1\frac{1}{2}$ à 2 $2\frac{1}{2}$ à 3 $3\frac{1}{2}$ à 4 $4\frac{1}{2}$ à 5 $5\frac{1}{2}$ et plus	
38.2	30.9	39.3	39.0	38.2	50.6	63.7	63.1	1000 logements	Total	Tchécoslovaquie
						3.3 3.8 53.9 27.4 11.6	3.0 3.2 54.5 27.1 12.2	50 50 50 50 50	Studios 2 3 4 5 et plus	
17.5	18.0	16.2	18.2	19.5	19.9	16.4	23.0	1000 logements	Total	Danemark
4 18 42 28 8	4 14 43 27 12	5 12 45 27 11	4 13 42 30 11	4 11 41 31 13	5 13 39 30 13	8 16 38 28 10	13 14 37 30 6	80 80 80 80 80	l 2 3 4 5 et plus	
			32.3	34.7	32.8	32.8	61.1 3.3 25.7 51.5 15.8 3.7	1000 logements % % % %	Total 1 2 3 4 5 et plus	Allemagne orientale

Country	Dwellings with rooms	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Logements ayant pièces	Pays
Austria	Total	1000 dwellings	26,1	29.0	46.2	13.0 <sup>(a)</sup>	57.3 <sup>(b)</sup>	38.2	40.5	41.6			1000 logements	Total	Autriche
	불 to 1 1를 to 2 2를 to 3 3를 to 4 4를 to 5 5를 and more	59 89 69 89 89 89					26.9 40.1 23.6 5.9 1.9 1.6	23.3 38.8 26.7 6.8 2.6 1.8	18.3 41.5 28.6 6.9 3.0 1.7	16.8 36.3 32.7 9.2 3.1 1.9			De 10 10 10 10 10 10	$ \frac{1}{2} \dot{a} 1 $ $ 1 \dot{a} 2 $ $ 2 \dot{a} 3 $ $ 3 \dot{a} 4 $ $ 4 \dot{a} 5 $ $ 5 \dot{a} et plus $	
Czechoslovakia	Total	1000 dwellings	21.7	29.1	38.2	30.9	39.3	39.0	38.2	50.6	63.7	63.1	1000 logements	Total	Tchécoslovaquie
	Flatlets 2 3 4 5 and more	8° 8° 8° 8° 8°									3.3 3.8 53.9 27.4 11.6	3.0 3.2 54.5 27.1 12.2	76 76 76 76 76	Studios 2 3 4 5 et plus	
Denmark	Total	1000 dwellings	16.9	21.0	17.5	18.0	16.2	18.2	19.5	19.9	16.4	23.0	1000 logements	Total	Danemark
Eastern Germany	1 2 3 4 5 and more Total 1 2 3 4 5 and more	7 7 7 7 7 7 1000 dwellings 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	5 21 45 22 7	7 20 43 23 7	4 18 42 28 8	4 14 43 27 12	5 12 45 27 11	4 13 42 30 11 32.3	4 11 41 31 13 34.7	5 13 39 30 13 32.8	8 16 38 28 10 32.8	13 14 37 30 6 61.1 3.3 25.7 51.5 15.8 3.7	% % % % 1000 logements % % % %	l 2 3 4 5 et plus Total 1 2 3 4 5 et plus	Allemagne orientale

#### Notes:

- Figures for the following countries do not refer to total dwelling construction but to the approximate percentages given in brackets: Denmark (82 to 95), Finland (40 to 60), Ireland (90 to 95), Italy: for the years 1948 to 1954 (60 to 82), Netherlands (90 to 99), Poland (State: 60, and Private: 90), Portugal (8 to 16), Sweden (98), Switzerland (85 to 90), United Kingdom (50 to 70).
- The kitchen is not considered as a room in the following countries: Denmark -(but practically all dwellings have a kitchen), Eastern Germany, France (if smaller than 12 m<sup>2</sup>), Hungary, Norway, Portugal, Switzerland and Yugoslavia,

For footnotes (a) to (e) see end of table and for further notes and sources see Annexes I and II.

#### Notes:

- Les chiffres pour les pays suivants ne se rapportent pas au total de la construction
- Dans les pays suivants la cuisine n'est pas considérée comme une pièce: Danemark et Yougoslavie.
- Pour les références (a) à (e), voir la fin du tableau et pour les notes supplémentaires et les sources voir Annexes I et II.

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de logements (mais aux pourcentages approximatifs indiqués entre parenthèses: Danemark (82 à 95), Finlande (40 à 60), Irlande (90 à 95), Italie: pour les années 1948 à 1954 (60 à 82), Pays-Bas (90 à 99), Pologne (par l'Etat: 60, et privee: 90), Portugal (8 à 16), Suede (98), Suisse (85 à 90), Royaume-Uni (50 à 70).

(pratiquement tous les logements disposent d'une cuisine), Allemagne orientale, France (si la cuisine est inférieure à 12 m<sup>2</sup>), Hongrie, Norvège, Portugal, Suisse

### Table 6 : Dwelling Construction - Work Completed, by Size of Dwelling (continued)

(in 1,000 dwellings and in percentages)

Tableau 6 : Construction de logements - Travaux achéve

(en 1.000 logements et en

Count <b>ry</b>	Dwellings with rooms	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Logements ayant pièces	Pays
Finland	Total	1000 dwellings	5.5	6.6	8.1	9.7	12.5	10.9	14.2	16.9	19.1	19.6	1000 logements	Tot <b>a</b> l	Finlande
France <sup>(c)</sup>	l 2 3 4 5 6 and more		12.6 35.2 31.8 11.7 5.8 2.9	9.6 35.4 32.1 13.6 6.5 2.8	10.3 33.2 30.9 14.6 7.9 3.1	13.6 27.5 31.1 15.1 9.5 3.2	14.5 22.4 31.9 17.0 10.1 4.9	10.3 24.5 32.6 17.4 11.3 3.9	16.2 24.9 33.5 14.7 7.9 2.8	16.5 25.3 31.1 16.3 7.9 2.9	14.3 24.6 30.3 18.3 9.1 3.4	15.3 25.5 27.8 18.5 9.2 3.7		1 2 3 4 5 6 et plus Tot <b>a</b> l	France <sup>(c)</sup>
France '	Total 1 2 3 4 5 6 and more	1000 dwellings % % % % %						-		3 12 31 33 16 5	3 13 32 33 14 5	3 11 32 34 16 4	7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7	1 2 3 4 5 6 et plus	
Greece	Total 1 2 3 4 5 and more	73 1000 dwellings % % % % %				222.7 <sup>(d)</sup> 32.2 46 12.6 4.9 4.2							1000 logements % % % % %	Total 1 2 3 4 5 et plus	Grèce
Hungary	Total 1 2 and more	1000 dwellings % %			24.7 27.3 72.7	17.7 49.1 50.9	16.7 48.8 51.2	16.8 42.0 58.0	27.2 40.0 60.0	31.5 40.0 60.0	25.5	48.0	1000 logements % %	Total 1 2 et plus	Hongrie
Ireland	Total 2 3 4 5 and more	1000 dwellings % % % %	2.3 4 2 44 50	6.5 3 45 52	12.0 1 6 56 37	12.1 1 3 60 36	13.0 1 3 53 43	11.9 1 3 46 50	10.5 - 3 49 48	9.0 2 5 43 50	10.1	8,1 3 5 43 49	1000 logements % % % %	Total 2 3 4 5 et plus	Irlande
Italy <sup>(e)</sup>	Total 1 2 3 4 5 6 and more	1000 dwellings % % % %	22.3 7.6 23.3 29.6 23.8 7.2 8.5	30.2 7.0 21.8 27.8 25.5 8.6 9.3	51.8 5.2 19.5 27.2 26.3 10.8 11.0	69.4 4.8 17.4 24.8 29.0 12.1 11.9	91.5 4.4 17.3 25.0 29.4 12.3 11.6	1	146.2 4.3 15.8 26.5 29.7 13.2 10.5	215.9 6.1 17.6 25.1 28.3 13.0 9.9	230.6 6 18 26 28 )22	255.0 6 18 27 28 )21	1000 logements % % % % % %	Total 1 2 3 4 5 6 et plus	It <b>ali</b> e <sup>(e)</sup>

For footnotes (a) to (e) see end of table, and for further notes and sources, Annexes I and II. Pour les références (a) à (e) voir la fin du tableau, et pour les notes supplementaires et les sources voir Annexes I et II.

ee	d'après	1 <b>a</b>	grandeur	des	logements	(suite)	1
	pourcents				·		

Table 6 :	Dwelling Construction	- Work Completed, by Size	of Dwelling (continued)

Tableau 6 : Construction de logements - Travaux achevés, d'après la grandeur des logements (suite) (en 1.000 logements et en pourcentages)

(in 1,000 dwellings and in percentages)

Country	Dwellings with rooms	Unit	1.948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Logements ayant pièces	Pays
Netherlands	Total	1000 dwellings	37.0	44.0	52.0	63.1	56.7	61.6	69.9	61,1	68.5	88.5	1000 logements	Tot <b>a</b> l	Pays-Bas
	less than 3 3 4 5 6 and more	BC BC BC BC BC		•					0.3 7.2 19.9 46.3 26.3	0.3 5.7 17.8 48.0 28.2	0.3 4.2 13.3 51.0 31.2	0.5 3.1 12.4 49.6 34.5	えがびゃり	moins de 3 3 4 5 6 et plus	
Norway	Total	1000 dwellings	16.6	18.3	20,7	20.9	32.7	35.1	35.4	32.1	27.3	26.5	1000 logements	Tot <b>al</b>	Norvège
	Flatlets 1 2 3 4 5 and more	8° 8° 5° 5° 5° 5°			) 1.9 13.1 36.2 26.6 22.2	0.4 3.0 18.4 39.4 21.5 17.3	0.3 4.0 21.9 33.6 17.5 11.7	0.3 3.0 20.6 45.6 19.2 11.3	0.8 3.7 18.0 41.6 21.5 14.4	1.4 4.7 14.3 39.5 22.7 17.4	0.9 3.3 13.5 38.9 24.8 18.6		7° 8° 8° 8° 8° 8°	studios 1 2 3 4 5 et plus	
Poland	Total (State)	1000 dwellings	a de la constante de								34.4	41.0	1000 logements	Total (Etat)	Pologne
- -	1 2 3 4 and more	5° 5° 5°						8.0 24.5 55.5 12.0	5.3 28.0 56.6 10.1	5.1 23.6 59.7 11.6	7.6 33.2 51.0 8.2	7.5 36.1 47.9 8.5	5° 5° 5° 5°	l 2 3 4 et plus	
	Total (Private	) 1000 dwellings			24.0	18.0	16.0	19.5	28.5	34.5	34.7		1000 logements	Total (Privé)	
	1 2 3 4 and more	80 84 80 80						10.1 45.1 31.5 13.3	10.8 41.3 34.0 13.9	7.3 34.8 34.4 23.8	5.1 32.6 32.9 32.4		50 50 50	l 2 3 4 et plus	
Portugal	Total	1000 dwellings		5.6	2.5	2.4	2.5	2,3	1.9	1.9			1000 logements	Tot <b>al</b>	Portugal
2 • #	l and 2 3 4 5 and more	84. 80 80 80		1.8 26.8 41.0 30.4	4.0 32.0 32.0 32.0	4.2 29.2 37.5 29.1	4.0 32.0 24.0 40.0	8.7 21.7 30.4 39.2	5.3 42.1 26.3 26.3	10.5 47.4 21.1 21.0			PC 82. 82 84	l et 2 3 4 5 et plus	
Spain	Total	1000 dwellings	62.1	55.1	53.4	56.4	63.3	67.2	87,2	112.2	121.8	98*	1000 logements	Total	Espagne
• • •	1 2 3 4 5 6 and more	20 BC BC BC BC BC								- 10.3 45.7 33.0 11.0	- 4.5 51.7 34.9 8.9		80.00 00 00 00 00	1 2 3 4 5 6 et plus	

For footnotes (a) to (e) see end of table, and for further notes and sources, Annexes I and II.

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Pour les références (a) à (e) voir la fin du tableau, et pour les notes supplémentaires et les sources voir Annexes I et II.

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## Table 6 : Dwelling Construction - Work Completed, by Size of Dwelling (continued)

Tableau 6 : Construction de logements - Travaux acheves, d'apres la grandeur des logements (suite) (en 1.000 logements et en pourcentages)

(in 1,000 dwellings and in percentages)

Country	Dwellings with rooms	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Logements ayant pièces	Pays
Sweden	Total	1000 dwellings	48.0	41.6	43.9	39,8	44,7	51.9	58.2	57.0	56.9	64.11	1000 logements	Total	Suède
	1 2 3 4 5 6 and more	N. N. N. N. N. N.		10,4 8.5 35.6 30.1 10.7 4.7	9.8 7.3 34.1 30.2 12.7 5.9	10,1 7,7 33.0 29.0 13.1 7.1	15.9 8.1 35.0 26.2 9.8 5.0	16.5 8.4 37.5 23.9 9.3 4.4	11.8 8.6 36.4 25.6 11.4 6.2	10.7 9.4 32.2 25.3 14.1 8.3	9.0 9.0 31.3 27.5 14.8 8.4	<pre></pre>	2 2 K y K 4 9 9 9 9	1 2 3 4 5 6 et plus	
Switzerland	Total 1 2 3 4 5 and more	1000 dwellings % % % % %	22,0 0.4 9.1 40.9 33.2 16.4	17.1 1.2 10.5 42.1 31.6 14.6	21.9 2.3 12.3 40.7 30.1 14.6	26.8 3.7 14.6 39.2 26.5 15.0	24.6 8.9 17.9 35.4 23.6 14.2	26.2 9.5 19.5 35.5 22.9 12.6	32,3 8,0 16,7 38,4 24,5 12,4	35.1 7.4 17.4 37.0 25.1 13.1	35.0 8.0 18.3 36.0 24.6 13.1		1000 logements	Total 1 2 3 4 5 et plus	Suisse
United Kingdom	Total	1000 dwellings	168.9	141,1	139.0	141.6	165.6	202.9	199.6	162.5	140.0	137.6	1000 logements	_	Royaume Uni
	1 2 3 4 and 5 6 7 and more	52 52 52 52 52 52	- 3.4 13.1 80.5 3.0	- 5.8 15.9 75.0 3.3			7.5 35.1 54.6 2.8	- 8.2 37.1 52.6 2,1	- 8.4 35.6 54.3 1.7	- 9.8 35.7 52.7 1.8	- 10.6 34.7 52.7 1.9	- 13.2 35.9 48.8 2.1	ちいちゃちゃちゃちゃ	1 2 3 4 et 5 6 7 et plus	
Western Germany	Total 1 ) 2 ) 3 4 5 ) 6 and more)	1000 dwellings 7/2 7/2 7/2 7/2 7/2 7/2 7/2 7/2 7/2 7/2		215.0	360.0	410,3	443.3 )16.1 46.8 28.0 }	514.6 14.3 44.4 31.8 9.5	542.8 11.6 39.4 37.5 11.5	538.1 ) 10.4 35.6 40.0 ) 14.0	560.7 ) 9.8 ) 33.3 41.1 ) 15.8	528.5	1000 logements	Total (1 (2 3 4 (5 (6 et plus	Allemagne occidentale
Yugoslavia	Total Single room 1 2 3 4 and more	1000 dwellings 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.			•	26.6	34.9	, 38 <b>.</b> 2	, 34.2 7.3 24.9 49.1 14.0 4.7	29.7 11.1 23.9 47.8 13.8 3.4	37.0 7.0 25.1 50.3 14.3 3.3	46.0	1000 logements 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Total pièce isolée l 2 3 4 et plus	Yougoslavie

(a) 1 January 1951 to 31 May 1951.

- (b) 1 June 1951 to 31 December 1952.
- (c) Figures are based on authorizations.
- (d) 1949 to 1953.
- (e) Figures for 1948 up to and including 1954 have an incomplete coverage.

For further notes and sources see Amnexes I and II,

- (a) ler janvier 1951 au 31 mai 1951.
- (b) ler juin 1951 au 31 décembre 1952.
- (c) Les chiffres sont basés sur les autorisations de construire.
- (d) 1949 **a** 1953.
- (e) Les chiffres pour les années 1948 jusqu'à 1954 y compris ne se rapportent qu'à une partie du total des logements construits.

Pour les notes supplementaires and les sources voir Annexes I et II.

## Table 7 : Dwelling Construction - Work Completed, by Type of Dwelling

(in 1,000 units and in percentages)

(en 1.000 unités et en pourcentagea)

Country	Type of dwelling(a)	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Uni∵é	Genre de logement(a)	Pa <b>ys</b>
Austria	Total	1000 dwellings	26.1	29.0	46.2	13.0 <sup>(b)</sup>	57-3 <sup>(c)</sup>	38.2	40,5	41.6			1000 logements	Total	Autriche
	I III(d)	1504 82	34.1 16.9 49.0	39.3 17.6 43.1	35.5 14.1 50.4	40.0 13.8 46.2	28.1 12.0 59.9	29.8 12.3 57.9	29.4 12.6 58.0	28.6 12.5 58.9			9  e  0  c	I III(d)	
Belgium	Total	1000 dwellings	24.4	36.2	44:7	35.5	39.3	39.2	44.9	44.06	44.1	42.5	1000 logements	Total	Belgique
	I II and III	0'  0  -  -	71.7 28.3	71.3 28.7	71.6 28.4	71.5 28.5	71.8 _28.2	71.7 28.3	71.3 28.7	68.2 31.8		67.0 33.0	7. 7.	I II et III	
Czechoslovakia	Total	1000 dwellings						• •			63.7	63.1	1000 logements	Total	Tchekoslovaquie
	I II III	5 K C1 - F0	.,					. *			47.5 1.9 50.6	49.0 2.0 49.0	P. P. P.	I II III	
Denmark	Total	1000 dwellings	16.9	21.0	17.5	18.0	16,2	18.2	19.5	19:0	16,4	23.0	1000 logements	Total	Danemark
	I II and III other(e)	50.00 50	43.2 53.3 3.5	34.3 61.9 3.8	36.6 61.1 2.3	42.8 55.0 2.2	43.2 54.3 2.5	48.9 47.5 1.6	54.9 43.6 1.5	44.7 53.8 1.5	42.7 54.9 2.4	37.8 60.0 2.2	P° P^ P	I II et III autres(e)	
Eastern Germany	Total	1000 dwellings								_		61.1	1000 logements	Total	Allemagne
	I II III	01 70 80 81 81										17.8 5.3 76.9	D0 D0 D0	I II III	crientale
$France^{(f)}$	Intal	1000 dwellings											1000 logements	Total	France <sup>(f)</sup>
	I II and III other(g)	017 10 10 10						7		47 44 9	39.5 50.3 10.2		10 Je Je	I II et III autres(g)	
Hungary	Total.	1000 dwellings								·			1000 logements	Total	Hongrie
	I II and III	र्थ १ ४ १			77 23	62 38	56 44	46 <b>54</b>	56 44				79.70	I II et III	

Figures for the following countries do not refer to total dwelling construction but to the approximate percentages given in brackets: Denmark (82 to 95), Hungary (..), Ireland (92 to 96), Netherlands (90), Portugal (8 to 16), Sweden (98), Switzerland (74 to 82), Turkey (urban areas only representing about 25 per cent of total population in 1950), the United Kingdom (50 to 70), Western Germany (..).

- (a) I = in one-dwelling houses,
  - II in two-dwelling houses.

III = in multi-dwelling houses.

For footnotes (b) to (k) see end of table, and for further notes and sources, Annexes I and II.

Les chiffres pour les pays suivants ne se rapportent pay au total de la construction de logements mais aux pourcentages approximatifs indiqués entre parenthèses: Danemark (82 à 95), Hongrie (...), Irlande (92 à 96), Pays-Bas (90), Portugal (8 à 16), Suède (98), Suisse (74 à 82), Turquie (les chiffres s'entendent uniquement des agglomérations urbaines qui représentent environ 25% de l'ensemble de la population en 1950), Royaume-Uni (50 à 70), Allemagne occidentale (..).

- (a) I = dans une maison particulière.
  - II = dans une maison à deux logements.
  - III dans une maison à appartements.

Pour les références (b) à (k) voir à la fin du tableau, et pour les notes supplémentaires et les sources, voir Annexes I et II.

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Tableau 7 : Construction de logements - Travaux achevés, d'après le genre de logement

## Table 7 : Dwelling Construction - Work Completed, by Type of Dwelling (continued)

Tableau 7 : Construction de logements - Travaux achevés, d'auprès le genre de logement (suite) (en 1.000 unités et en pourcentages)

(in 1,000 units and in percentages)

a and a substant formation of the state of the		an a										-			
Country	Type of dwelling(a)	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Genre de logement(a)	Pays
Ireland	Total	1000 dwellings	2.4	6.6	12.1	12.4	13.7	12,3	10.9	9.5	10.6*	8.5*	1000 logements	Total	Irlande
letherlands <sup>(i)</sup>	II and III <sup>(h)</sup>	1	95 5	95 5	96 4	97 3	95 5	97 3	99 1	94 6		93 7	<b>9</b> /e 9/0	II et III <sup>(h)</sup>	(.)
etherlands '	Total	1000 dwellings											1000 logements	Total	Pays-Bas <sup>(i)</sup>
		612 812 812 .							59 (41	61 4 35			50 50	I II III	
orway	Total	1000 dwellings	16.6	18.3	22.4	20.9	32.7	35.1	35.4	32.1	27.3	26.5	1000 logements	Total	Norvège
	I II III other(j)	2'0 8'0 8'0 8'0 8'0				32.0 41.8 21.0 5.2	23.4 51.9 19.8 4.9	22.2 48.7 24.1 5.0	26.0 40.1 27.1 6.8	30.9 34.4 26.5 8.2	32.1 31.9 29.2 6.8		80.80	I II III autres(j)	
ortugal	Total	1000 dwellings		5.6	2.5	2.4	2.5	2.3	1.9	1.9		- 	1000 logements	Total	Portugal
	I II III			63.7 1.7 34.6	38.2 1.1 60.7	31.5 2.2 66.3	61,2 3.0 35.8	34.7 9.0 56.3	33.9 11.6 54.5	11.2 6.7 S2.1			9. 9.	I II III	
weden	Total	1000 dwellings	48.0	41.6	43.9	39,8	44.7	51.9	58.2	57.0	56.9	64.0	1000 logements	Total	Suède
<b>e</b>	I II III other <sup>(k)</sup>	5° 7° 5° 5°		20.1 6.2 73.1 0.6	21.6 6.0 71.7 0.7	21.6 5.6 72.1 0.7	14.8 3.9 80.6 0.7	15.5 2.9 80.9 0.7	18.5 3.0 77.9 0.6	23.5 3.7 72.1 0:7	23.5 2.9 72.8 0.8	23.0 2.0 75.0	80 BC BC BC	I II III autres <sup>(k)</sup>	
vitzerland	Total	1000 dwellings	19.3	15.0	19.4	24.4	22.4	23.8	29.1	31.3	31.2	31.1	1000 logements	Total	Suisse
•	I II and III other(a)	4. 19 <b>00 800</b>	21.3 72.5 6.2	18.7 72.6 8.7	18.0 72.7 9.3	19,3 68.4 12,3	16.5 68.3 15.2	15,1 70.2 14.7	14.1 73.9 12.0	13.7 73.2 13.1	12.8 71.5 15.7	13.2 70.1 16.7	P.C. ; ; C. ; P.C.	I II et III autres(a)	
ırkey	Tctal	1000 dwellings	32.0	35.0	37.0	33.0	42.0	60.0	54.2	58.5			1000 logements	Total	Turquie
	I II III	1. 1.						· · · · · ·	51.8 24.9 23.3	56.6 23.4 20.0			00 80 70	I II III	
nited Kingdom	Total	1000 dwellings	168.9	141.1	139.0	141.6	165.6	202.9	199.6	162.5		137.6	1000 logements	Total	RoyaumeUni
	I II and III	0 0 1 10	93.0 7.0	87.3 12.7	83.5 16.5	79.9 20.1	80.1 19.9	77.5 22.5	77,4 22.6	74.5 25.5		69.2 30.8	910 10 10	I II et III	

(a) I = in one-dwelling houses.

II = in two-dwelling houses.

III = in multi-dwelling houses,

For footnotes (b) to (k) see end of table, and for further notes and sources, Annexes I and II.

(a) I = dans une maison particulière.

II = dans une maison à deux logements.

III = dans une maison à appartements.

Pour les références (b) à (k) voir à la fin du tableau, et pour les notes supplémentaires et les sources, voir Annexes I et II.

Table 7 : Dwelling Construction - Work Completed, by Type of Dwelling (continued)

(en 1.000 unités et en pourcentages)

(in 1,000 units and in percentages)

Country	Type of dwelling (a)	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Genre de logement(a)	Раув
Western Germany	Total I II III	1000 dwellings % %			•	15 35 50	13 34 53	13 34 53	14 37 49	13 31 56			1000 logements % % %	Total I II III	Allemagne occidentale

- I = in one-dwelling houses. (a) II = in two-dwelling houses. III = in multi-dwelling houses.
- (b) 1 January 1951 to 31 May 1951.
- (c) 1 June 1951 to 31 December 1952.
- (d) Including dwellings located in non-residential buildings. The number is however insignificant.
- (e) Dwellings which are part of a farm; those located in buildings destined mainly for business purposes; those created by conversions.
- (f) Based on dwellings authorized.
- (g) Dwellings in buildings destined mainly for non-residential purposes.
- (h) Less than 1% in two-dwelling houses.
- (i) Based on dwellings authorized.
- (j) Dwellings in buildings destined for mainly non-residential purposes.
- (k) Dwellings in buildings destined mainly for non-residential purposes.

For further notes and sources see Annexes I and II.

- I = dans une maison particulière. (a) II = dans une maison à deux logements. III - dans une maison à appartements.
- (b) ler janvier 1951 au 31 mai 1951.
- (c) ler juin 1951 au 31 décembre 1952.
- (d) Cette série comprend quelques logements situés dans des bâtiments non-résidentiels. Leur nombre est toutefois très peu élevé.
- transformation.
- (f) Données se rapportant aux logements autorisés.
- l'habitation.
- (h) Moins de 1% dans des maisons à deux logements.
- (i) Données se rapportant aux logements autorisés.
- l'habitation.
- (k) Logements situés dans des immeubles destinés principalement à un usage autre que l'habitation.

Pour les notes supplémentaires et les sources, voir Annexes I et II.

, where the model  $h_{\rm eff}$  is the contract N GeV

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Tableau 7 : Construction de logements - Travaux achevés, d'auprès le genre de logement (suite)

(e) Logements faisant partie d'une ferme; ceux situés dans des immeubles destinés principalement à une activité commerciale; ceux ajoutés au stock à la suite de (g) Logements situés dans des immeubles destinés principalement à un usage autre que (j) Logements situés dans des immeubles destinés principalement à usages autres que

## Table 8 : Dwelling Construction - Work Completed, by Builder

(in 1,000 units and in percentages)

Tableau 8 : Construction de logements - Travaux achevés, d'après le maître de l'ouvrage

(en 1.000 unités et en pourcentages)

Total authorities ratives ng Associations te persons or es s(c) Total , Local prities Public bodies ce sector	1000 dwellings % % % % 1000 dwellings % %	26.1	29.0	46.2	13.0 <sup>(a)</sup>	57.3 <sup>(b)</sup> 24.2 5.8 5.4 48.5 16.1 33.3	38.2 21.5 7.3 5.5 51.3 14.4	40.5 21.5 9.1 5.2 51.6 12.6	41.6 20.7 11.1 6.7 50.7 10.8			1000 logements 70 70 70 70 70 70 70	Total Collectivités locales Coopératives Sociétés de constructior Particuliers et	Pays Autriche
ratives ng Associations te persons or es s(c) Total , Local prities Public bodies	% % % 1000 dwellings %	24.4		а (л. ала 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		24.2 5.8 5.4 48.5 16.1	21.5 7.3 5.5 51.3	21.5 9.1 5.2 51.6	20.7 11.1 6.7 50.7			FC 50 BC	Collectivités locales Coopératives Sociétés de construction	Records and the second se
ng Associations te persons or es s(c) Total , Local prities Public bodies	% % % 1000 dwellings %	24.4	36.2		35.5	5.8 5.4 48.5 16.1	7.3 5.5 51.3	9.1 5.2 51.6	11.1 6.7 50.7			8 0 9 20 8 0 9 4 0	Coopératives Sociétés de constructior	1 1 1 1 1 1 1
te persons or es s(c) Total , Local prities Public bodies	76	24.4	36.2	44.7	35.5	5.4 48.5 16.1	5.5 51.3	5.2 51.6	6.7 50.7			5' 6' 0'	Coopératives Sociétés de constructior	1997 - 1999 9
es s(c) Total , Local prities Public bodies	76	24.4	36.2	44.7	35.5	48.5 16.1	51.3	51.6	50.7			07 10	Sociétés de construction	<b>n</b>
s(c) Total , Local prities Public bodies	76	24.4	36.2	44.7	35.5	16.1		51.6 12.6		2		01	I Ponti guli one of	
, Local prities Public bodies	76	24.4	36.2	44.7	35.5		14.4	12.6	10 0			10	organismes privés	
, Local prities Public bodies	76	24.4	36.2	44.7	35.5	32 2			TO*0		ļ	.%	Autres(c)	ŧ.,
Prities Public bodies	₿2 ₿2 ₽						39.2	44.9	44.6	44.1	42.5	1000 logements	Total	· · · ·
Public bodies	20 20 20	. <b> </b>	1	1							1.00	Tooo ToBoutound		Belgique
e sector	đ		1								0.1	76	Etat, Collectivités locales	
											16.2	%	Organismes para-	
led	6 80										83.7	8	stataux Secteur privé	
aided	<i>₫</i> ∕0 .										36.8	C.	- avec aide	Constant States
ndividuals	%										46.9	6/2	- sans aide	
enterprises	%										44•7 2•2	%	- particuliers	
Total	1000 m <sup>2</sup>		899	1 140	741	732	839		_		2.2	%	- entreprises	
	92							1 111	1 758	1 397		1000 m <sup>2</sup>	Total	Bulgarie
bodies	7. %		10.3	24.6	28.2 0.7	33.5	34.7	33.6	35.8	23.8		%	Etat	-
atives	70		-	_	- 0.7	0.4	0.9	0.4	0,6	0.5		К	Organismes publics	
e persons ed	70.		89.7	75.4	71.1	66.1	64.4	66.0	63.6	0.2 75.5		%	Coopératives	
ided	% of							00.0	19.6	(2.5		% Ø	Particuliers	
	<i>[</i> 0			· · · ·	1				44.0			/° %		
	1000 dwellings	21.7	29.1	38.2	30.9	39.3	39.0	38.2	50.6	63 7	62 1	1000 10 moment		
	₩ <sup>1</sup> / <sub>1</sub> / <sub>1</sub> / <sub>1</sub>	54.8	67.4	76.2	72.2			Į	1	1		-		Tchécoslovaqu
d)			2			[[+4]]	10.2	12.0	70.4	52.3	50.6			
e persons, (e)	. %	45.2	32.6	23.8	27.8	22.6	23.8	27.2	29.6	47.7	49. h	2	Particuliers, avec	
г	Fotal	Fotal 1000 dwellings %	Fotal 1000 dwellings 21.7 % 54.8	Notal         1000 dwellings         21.7         29.1           %         54.8         67.4	Fotal         1000 dwellings         21.7         29.1         38.2           %         54.8         67.4         76.2	Fotal       1000 dwellings       21.7       29.1       38.2       30.9         %       54.8       67.4       76.2       72.2	Fotal       1000 dwellings       21.7       29.1       38.2       30.9       39.3         %       54.8       67.4       76.2       72.2       77.4	Fotal       1000 dwellings       21.7       29.1       38.2       30.9       39.3       39.0         %       54.8       67.4       76.2       72.2       77.4       76.2	Fotal       1000 dwellings       21.7       29.1       38.2       30.9       39.3       39.0       38.2         persons,       %       54.8       67.4       76.2       72.2       77.4       76.2       72.8	Fotal       1000 dwellings       21.7       29.1       38.2       30.9       39.3       39.0       38.2       50.6         %       54.8       67.4       76.2       72.2       77.4       76.2       72.8       70.4	Fotal       1000 dwellings       21.7       29.1       38.2       30.9       39.3       39.0       38.2       50.6       63.7         %       54.8       67.4       76.2       72.2       77.4       76.2       72.8       70.4       52.3	Fotal       1000 dwellings       21.7       29.1       38.2       30.9       39.3       39.0       38.2       50.6       63.7       63.1         persons,       %       54.8       67.4       76.2       72.2       77.4       76.2       72.8       70.4       52.3       50.6	Fotal       1000 dwellings       21.7       29.1       38.2       30.9       39.3       39.0       38.2       50.6       63.7       63.1       1000 logements         %       54.8       67.4       76.2       72.2       77.4       76.2       72.8       70.4       52.3       50.6       %	Fotal       1000 dwellings       21.7       29.1       38.2       30.9       39.0       38.2       50.6       63.1       1000 logements       Total $\%$ 54.8       67.4       76.2       72.2       77.4       76.2       72.8       70.4       52.3       50.6 $\%$ Etat(d) $\%$ 45.2       32.6       23.8       27.9       22.6       20.4       20.4       20.4       50.6       50.6       %       Etat(d)

- The "builder" refers to the person or body for whose account the dwellings are built and not to those actually erecting them. In some countries the various categories of builders correspond to particular kinds of methods of financing, while in some others, however, this is not the case. Aided construction excludes dwellings in receipt only of public financial aid not involving disbursement of public funds (e.g. tax concessions, mortgage insurance).

- Figures for the following countries do not refer to total dwelling construction but to the approximate percentages given in brackets: Denmark (82 to 95), Finland (23 to 51), France (54 to 86), Ireland (92 to 96), Netherlands (86 to 99), Portugal (about 70), Spain (about 90), Sweden (98) and Switzerland (74 to 82).

For footnotes (a) to (q), see at end of table, and for further notes and sources, Annexes I and II.

Notes:

- Le "maître de l'ouvrage" se rapporte à la personne ou à l'organisme pour le compte desquels les logements sont construits et non à ceux qui, en fait, construisent la maison. Dans certains pays les catégories différentes des maître de l'ouvrage publique ne requérant pas le remboursement de fonds publics (par exemple, exemptions d'impôts, assurances d'emprunts hypothécaires).
- Les chiffres pour les pays suivants ne se rapportent pas au total de la construction de logements mais aux pourcentages approximatifs indiqués entre parenthèses: Danemark (82 à 95), Finlande (23 à 51), France (54 à 86), Irlande (92 à 96), Pays-Bas (86 à 99), Portugal (environ 70), Espagne (environ 90), Suède (98), et Suisse (74 à 82).

Pour les références (a) à (q), voir à la fin du tableau, et pour les notes supplémentaires et les sources voir Annexes I et II.

correspondent à différentes méthodes de financement tandis que cela n'est pas le cas dans d'autres pays. La construction de logements qui bénéficient d'une aide ne comprend pas les logements qui auraient bénéficié d'une aide financière

#### Dwelling Construction - Nork Completed, by Builder (continued) Table 8 :

(in 1,000 units and in percentages)

Tableau 8 : Construction de logements - Travaux achevés, d'après le maître de l'ouvrage (suite) (en 1.000 unités et en pourcentage)

Country	Builder	Unit	1948	1949	1 <b>95</b> 0	1951	1952	1953	1954	1955	1956	1957	Unité	Maître de l'ouvrage <sup>(a)</sup>	Pays
Denma <b>r</b> k	Total	1000 dwellings	16.9	21.0	17.5	18.0	16.2	18.2	19.5	19.9	16.4			Total	Danemark
Ho Pr -	Public bodies Housing Associations Private persons - aided - unaided	K F2 F2 K K	13.0 35.5 51.5 22.5 29.0	9.5 43.3 47.2 24.8 22.4	10.3 44.0 45.7 31.4 14.3	6.1 47.2 46.7 36.1 10.6	5.6 48.1 46.3. 37.0. 9.3.	4.4 44.0 51,6 44.5 7.1	5.6 37.4. 57.0 49.8 7.2	4.5 48.8 46.7 38.2 8.5	6.7 44.5 48.8 39.6 9.2			Organismes publics Sociétés de construction Particuliers - avec aide - sans aide	
Eastern Germany	Total	1000 dwellings			31.0	61.0	47.6	32.3	34.7.	32.8.	32.8.	61.1		Total	Allemagne orièntale
	State Cooperatives Private, aided - individuals - others	K K K K							86.6  13.4 0.9 12.5	60.1 10.8 29.1 13.4 15.7	57.0 16.0 27.0 9.2 17.8	62.8 12.8 24.4 4.4 20.0		Etat Coopératives Secteur privé, avec aide - particuliers - autres	
Finland <sup>(f)</sup>	Total	1000 dwellings	5.5	6.6	8.1	9.7	12.5	10.9	14.2	16.9	19.1	19.6			Finlande (f
	State Local authorities Private persons Housing corporations Industry and Trade Others	5% 5% 5% 5% 5% 5%	5.4 5.5 )78.2 )10.9	7.6 10.6 )77.3 4.5	7.4 7.4 )81.5 )3.7	2.1 7.2 ) 87.6 3.1	1.6 12.0 ) 83.2 ) 3.2	3.7 15.6 ) <sub>78.9</sub> ) 1.8	$ \begin{array}{c} 1.4^{(1)} \\ 15.5^{(f)} \\ )_{82.4}^{(f)} \\ ) \\ 0.7^{(f)} \\ -(f) \end{array} $	7.7. 37.3 46.7 3.5	1.6 8.9 35.6 47.6 4.2 2.1	1.7 7.0 32.2 56.0 1.9 1.2		Etat Collectivités locales Particuliers Sociétés immobilières Industrie et Commerce Autres Total <sup>(g)</sup>	
France	Total <sup>(g)</sup>	1000 dwellings	32.0	32.1	38.0	44.3	54.9	80.3	124.8	175.4	203.5				France
	Public bodies (HLM) Private - aided - unaided <sup>(e)</sup>	K 1% K 8			0.5	16.7	23.0 77.0 39.3 37.7	30.1 69.9 49.7 20.2	24.5 75.5 58.5 17.0.	28.6 71.4 57.0. 14.4	22.9 77.1 67.3 9.8			Organismes publics (HLM Secteur privé - avec aide - sans aide	
Greece	Total	1000 dwellings	18,8	21.7	48.7	43.9	59.9	51.5.	46.3.	53.3	55.4		1000 logements	Total	Grèce
110000	State & Private, aided	%	46.3	42.4	61.2	51.0	56.1	26.6	19.2	25.0	26.5		. Fo	Etat et Particuliers, avec aide	
	Private, unaided	%	53.7	57.6	38.8	49.0	43.9	73.4	80.8	75.0	73.5		×	Secteur privé, sans aide	l I
Hungary	Total	1000 dwellings			24.7	17.7	15.7	16.8	27.2	31.5	25.5		1000 logements	Total	Hongrie
	State Private - aided - unaided	80 87 80 M	Angele and a second and a	n an	23.4 76.6 6.5 70.1	35.7 64.3 15.6 48.7	44.2 55.8 16.1 39.7	54.7 45.3 10.3 35.0	41.6 58.4 18.1 40.3	43.2 56.8 9.0 47.8	28.9 71.1 16.2 54.9	47.6 52.4	9% 9% 9% 9%	Etat Secteur privé - avec aide - sans aide	
Ireland	Total	1000 dwellings	2.4	6.6	12.1	12.4	13.7	12.3	10.9	9.5	10.6*	8.5*	1000 logements	Total	Irlande
	Public authorities Private, aided	% K	62.4 37.5	63.6 36.4	68.6 31.4	60.5 39.5	55:5 44.5	55.3 44.7	56.0 44.0	48.4 51.6	44.3 55.7	54.1 45.9	% %	Autorités publiques Secteur privé, avec aide	

For footnotes (a) to (q), see at end of table, and for further notes and sources, Annexes I and II.

Pour les références (a) à (q), voir à la fin du tableau, et pour les notes supplémentaires et les sources voir Annexes I et II.

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Table 8 : Dwelling Construction - Work Completed, by Builder (continued)

(in 1,000 units and in percentages)

. . . . . . . .

(en 1.000 unités et en pourcentage)

Country	Builder	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Maître de l'ouvrage	Pays
Netherlands	Total <sup>(h)</sup>	1000 dwellings	36.4	42.8	47.3	58.7	54.6	59.6	68.5	60.8	68.3	88.4	1000 logements	Total <sup>(h)</sup>	Pays-Bas
	State Municipalities Housing Associations Private (i)	K 1 1 80	3.6 48.3 32.4 15.7	2.8 40.0 32.9 24.3	2,1 37,0 26,0 34,9	1.4 41.4 27.4 29.8	1.5 34.2 26.9 37.4	1.3 34.9 30.9 32.9	0.9 30.2 30.8 38.1	0.8 27.8 24.5 46.9	1.0 22.1 27.7 49.2	0.8 26.6 25.2 47.5	K K K	Etat Municipalities Sociétés de construction Secteur privé	
Norway	Total <sup>(i)</sup>	1000 dwellings	16,6	18.3	22.4	20.9	32.7	35.1	35.4	32.1	27.3		1000 logements	Total <sup>(i)</sup>	Norvège
Poland(j)	Public authorities Housing Associations Industry Private persons	X X X				-		2,2 22.5 2.5 72.8	2.7 25.3 2.2 69.8	3.1 25.5 1.9 69.5			12 12 12 12 12 12 12 12 12 12 12 12 12 1	Autorités publiques Sociétés de construction Industrie Particuliers	
oland 'o'	Total	1000 dwellings			68.0	66.0	65.0	79.0	79.0	<b>9</b> 4.0	94.5	120.0	1000 logements	Total	Pologne <sup>(j)</sup>
	State - urban - rural Cooperatives Private persons - urban, - aided	બ્લ અન્ જર જ્ય કર			66.7 62.6 4.1 - 33.3	73.9 59.9 14.0  26.1	77.2 71.0 6.2 22.8	77.0 66.2 10.8 0.2 22.8	75.7 63.9 11.8 1.0 23.3	70 54 16 1 29.0 1.0	59 47 12 1 39.4	58 1 41	10 K 12 K 10 K	Etat - régions urbaines - régions rurales Coopératives Particuliers - régions urbaines,	
	- unaided	5/p			6.3	4.1	3.5	3.1	2.6	5.0	) 9.5	••	01 10	- avec aide - sans aide	
	- rural	%		under state stat	27.0	22.0	19.3	19.7	20.7	23.0	29.9	•••	- P	- régions rurales	
ortugal	Total	1000 dwellings		14.9	13.9	13.9	14.6	16.9	17.0	18.8	21.6		1000 logements	Total	Portugal
	Public bodies Private, unaided	BQ 62		32.9 67.1	13.7 86.3	7.2 92.8	11.0 89.0	7.1 92.9	4.7 95.3	2.2 97.8			% %	Organismes publics Secteur privé, sans aide	
lomania	Total	1000 dwellings				49.4	45.0	45.6	54.9	55.9			1000 logements	Total	Roumanie
	State Other authorities Private - aided - unaided - urban - rural	K 12 % K 18 K				10.9 0.7 88.4 - 88.4 8.8 79.6	12.1 0.3 87.6 0.1 87.5 8.9 78.6	20.8 2.3 76.9 0.8 76.1 11.0 65.1	16.1 1.0 82.9 5.8 77.1 12.1 65.0	18.7 1.1 80.2 8.0 72.2 11.9 60.3		•	DR DR DR DR DR DR DR	Etat Autres autorités Secteur privé - avec aide - sans aide - régions urbaines - régions rurales	
Spain	Total	1000 dwellings	52.7	48.9	47.2	50.9	57.6	60,9	80,1	99.7	107.4		70 1000 logements	Total	Espagne
	Public bodies Private - aided - unaided	% % % %								51 49 22 27	• / <del>/</del> /	•	2000 100001000 % % % %	Organismes publics Secteur privé - avec aide - sans aide	- <b>70</b> 100 100

For footnotes (a) to (q), see end of table, and for further notes and sources, Annexes I and II.

Pour les références (a) à (q), voir à la fin du tableau, et pour les notes supplémentaires et les sources voir Annexes I et II.

Tableau 8 : Construction de logements - Travaux achevés, d'après le maître de l'ouvrage (suit

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## Table 8 : Dwelling Construction - Work Completed, by Builder (continued)

(in 1,000 units and in percentages)

Tableau 8 : Construction de logements - Travaux achevés, d'après le maître de l'ouvrage (suite)

(en 1.000 unités et en pourcentages)

Country	Builder	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Maître de l'ouvrage	Pays
Sweden	Total	1000 dwellings	48.0	41.6	43.9	39.8	44.7	51.9	58.2	57.0	56.9		1000 logements		Suède
	State Municipalities Cooperatives Private(k) - owner-occupiers	* * * * * *		0.9 32.1 15.8 51.2 22.0	1.3 32.6 15.5 50.6 23.9	1.4 34.0 15,0 49,6 23.5	1.1 38,5 17.6 42.8 16.0	1.0 37.7 20.6 40.7 16.4	0.8 31.4 24.7 43.1 20.2	0.8 29.9 20.3 49.0 25.5	0.9 29.4 25.2 44.5 24.1	1	K K	Etat Municipalités Coopératives Secteur privé(k) - proprietaires particuliers	
	- others	×		29.2	26.7	26.1	26,8	24.3	22.9	23.5	20.4		z	- autres	
Switzerland	Total	1000 dwellings	19.3	15.0	19.4	24.4	22.3	23.8	29.1	31.3	31.2		1000 logements	Total	Suisse
	Public bodies Cooperatives(m) Private(m) - individuals - others	BC B2 B2 B6 B6	3.1 45.1 51.8 33.7 18.1	3.3 41.3 55.4 32.7 22.7	1.5 37.6 60.9 36.1 24.8	0.8 23.0 76.2 47.1 29.1	1.3 17.1 81.6 42.6 39.0	0.8 16.0 83.2 45.0 38.2	1.4 11.7 86.9 48.8 38.1	1.6 10.9 87.5 48.5 39.0	1.0 9.6 89.4 45.5 43.9		K % % % %	Collectivités publiques Coopératives(m) Secteur privé(m) - particuliers - autres	
USSR*	Total	1000 dwellings				/		1 245	1 351	1 512	1 61 <b>3</b>	2 090	1000 logements	Total	URSS*
	State Private - urban - rural	<b>K</b> K K K						50.2 49.8 17.7 32.1	49.2 50.8 16.0 34.8	45.7 54.3 14.9 39.4	43.4	42.2 57.8 20.9 36.8	16 16 16 16 16 16 16 16 16 16 16 16 16 1	Etat Secteur privé - régions urbaines - régions rurales	
United Kingdom	Total	1000 dwellings	260.9	220.0	214.7	209.4	254.5	330.4	356.7	328.6	310.0*	310,0*	1000 logements	Total	Royaume Uni
	Local authorities Other authorities	% %	76.4 1.8	79.0 2.9	78.8 3.4	79.9 4.8	78.4 4.9	74.2 5.2	67.2 6.2	59.8 3.6	56.2* 3.2*	49.8 8.3	X X	Collectivités locales Autres collectivités Particuliers,	
(o Western German	Private persons, unaided(n)	K	21.8	18.1	17.8	15.3	16.7	20,6	26.6	36.6	40.6*	41.9	Ŗ	sans aide(n)	Allemagne
Western German	y Public authorities							4.3	3.4	2.8	2.7			Autorités publiques	occidentale
n an	Housing Associations and cooperatives(P)							35.5	30.2	29.0	28.4			Sociétés de construction et coopératives(p)	n
1	Private(9) - individuals - housing corporations							60.2 53.4 4.3	66.4 59.6 4.2	68.0 59.6 4.0	68.9 60.6 3.8			Secteur privé(q) - particuliers - societés immobilières	
	- enterprises							2.5	2.6	4.1	4.5			- entreprises	
Yugoslavia	Total	1000 dwellings				26.6	34.9	38.2	34.2	29.8	37.0	46.0	1000 logements	Total	Yougoslavie
	State — urban — rural	X X X				22.9	23.2	23.8	36.0	43.3	38.9 30.8 8.1	47.8	\$K \$K	Etat - régions urbaines - régions rurales	
	Private - aided - urban - rural	2 K K K				77.1	76.8	76.2 10.0	64.0 11.4	56.7 24.7	61.1 32.4 13.5 18.9	52.2	K K K K	Secteur privé - avec aide - régions urbaines - régions rurales	
	- unaided - urban - rural	KRRR						66.2	52.6	32.0	28.7 1.6 27.1		KA 140 120	- sans aide - régions urbaines - régions rurales au, et pour les notés sup	

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#### Notes to Table 8

- (a) 1 January to 31 May 1951.
- (b) 1 June 1951 to 31 December 1952.
- (c) Dwellings made available by other than new construction.
- Including cooperatives. (d)
- (e) Mainly in rural areas.
- (f) The classification by builder has been changed from 1955 onwards; in recent years aided housing represented about 55 to 60% of the total number of dwellings built in towns and market towns; in 1956 about 40% of the total number of dwellings built in the whole country was aided.
- (g) Excluding reconstruction.
- (h) Only 2 to 5% of the total number of dwellings built are unaided (in 1957: 5.2% of privately built dwellings).
- (i) 70 to 80% of the total number of dwellings built are aided.
- The breakdown is based on the original figures, expressed in number of rooms.
- (k) More than 90% of these dwellings are aided.
- (m) The extent to which the total number of dwellings built by cooperatives and the private sector have received an aid, is as follows (in percentages): 1948: 71; 1949: 67; 1950: 49; 1951: 22; 1952: 13; 1953: 8; 1954: 8; 1955: 6; 1956: 6.
- (n) In the main for owner-occupiers; the construction of privately-owned rented accommodation remains minimal.
- (o) Breakdown based on dwellings authorized; in recent years about 50% of all dwellings built received public aid; about 50% were built with the aid of tax concessions (90% to 95%) or without any aid (5% to 10%).
- (p) Almost all with aid.
- (q) Individuals partly with and partly without aid. Housing corporations and enterprises: most without aid.

For further notes and sources, see Annexes I and II.

- (a) ler janvier au 31 mai 1951.
- (b) ler juin 1951 au 31 décembre 1952.
- (c) Logements ajoutés au stock par des activités de construction autres que la nouvelle construction.
- (d) Y compris les coopératives.
- (e) Principalement dans les régions rurales.
- (f) La classification par maître de l'ouvrage a été changée à partir de 1955; dans les années récentes environ 55 à 60% des logements construits dans les villes et grands bourgs ont bénéficié d'une aide: en 1956, environ 40% des logements construits dans le pays entier ont bénéficié d'une aide.
- (g) La reconstruction est exclue.
- (h) 2 à 5% seulement du nombre total des logements construits n'ont pas bénéficié d'une aide. (en 1957: 5,2% des logements construits par le secteur privé).
- 70 à 80% du nombre total des logements construits ont bénéficié d'une aide. (i)
- (j) La répartition des logements selon les maîtres de l'ouvrage a été basée sur les données originales exprimées en nombre de pièces.
- (k) Plus de 90% des logements ont bénéficié d'une aide.
- 1950: 49; 1951: 22; 1952: 13; 1953: 8; 1954: 8; 1955: 6; 1956: 6.
- (n) Principalement les particuliers construisant des logements pour leur propre usage.
- (o) Répartition basée sur les logements autorisés; pendant les dernières années environ aide (5 à 10%).
- (p) Presque tous les logements ont bénéficié d'une aide.
- (q) Particuliers: partiellement avec et partiellement sans aide. d'une aide.

Pour les notes supplémentaires et les sources voir Annexes I et II.

#### Notes relatives au Tableau 8

La mesure dans laquelle les logements construits par les coopératives et le secteur privé ont recu une aide est la suivante (en pourcentage): 1948: 71; 1949: 67;

La construction de logements par des particuliers destinés à la location reste minime.

50% de tous les logements construits ont bénéficié d'une aide publiques: les autres 50% ont bénéficié d'une exemption d'impôts (90 à 95%) ou n'ont bénéficié d'aucune

Sociétés immobilières et entreprises: la plupart des logements n'ont pas bénéficié

Table 9: E	Imployment	in the	Construction	Industry
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Country	Base year 1953 Année de base	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Pays
oounory	Annee de base 1000	<u> </u>		<u>.</u>		1953=10	0 (a)				·	1
Austria	153.6	••		114	122	104	100	110	122	124	125	Autriche
Belgium	169•4 <sup>(b)</sup>	· • • • · ·	••		•	••	100	95	99	104		Belgique
Bulgaria	121.0	54	91	63	77	100	100	107	108	102		Bulgarie
Czechoslovakia	359	63				••	100	100	97	101	102	Tchécoslovaquie
Denmark	101.1					••	100	102	98	95	98	Danemark
Eastern Germany	476.5			78	97	101	100	98	96	113		Allemagne orientale
Finland	(c)	96	97	133	128	120	100	113	105	102		Finlande
France	998 <sup>(d)</sup>	77	83	86	91	98	100	106	111	113	115	France
Hungary	259	••	28	72	93	104	100	73	60	64	62	Hongrie
Ireland	~ > 7		~~	1 1~								Irlande
- Building	28.1			107	104	102	100	100	99			- Bâtiment
- Public works	30.9	•••	•••	96	98	99	1.00	105	101			- Travaux publics
Netherlands	282.6	82	85	91	93	88	100	100	106			Pays-Bas
Norway	101.5	79	85	88	83	90	100	103	99	92	96	Norvège
Poland	708.7	••	39	65	87	93	100	94	91	93	91	Pologne
Romania	414.4			43	70	86	100	91	95	96		Roumanie
Switzerland	(c)	94	. 88	88	102	97	100	105	109	116	119	Suisse
Turkey (a)	148.4					••			100	88		Turquie <sup>(a)</sup>
USSR <sup>(a)</sup>		••	••	•• 81	•• 88*	94*	96*	100	100	112		URSS <sup>(a)</sup>
USSR <sup>()</sup> United Kingdom <sup>(e)</sup>	3,179	••	49				100	100	103	106	105	Royaume Uni <sup>(e)</sup>
	1,426	••	••	80	•• 85	•• 90	1.00	101	112	122	127	Allemagne occidentale
Western Germany	1,352.7	••	••			83	100	114	121	87	95	Yougoslavia
Yugoslavia	233	••	••	••.	••		TOO	<u> </u>				

(a) 1954 = 100 for the USSR and 1955 = 100 for Turkey.
(b) Average situation of June and December.
(c) Original statistics are expressed in indices
(d) Situation in May 1954.
(e) Excluding Northern Ireland.

For further notes and sources see Annexes I and II.

(a) 1954 = 100 pour l'URSS et 1955 = 100 pour la Turquie.
(b) Situation moyenne de juin et décembre.
(c) Les statistiques originales sont exprimées en indices. (b) Situation moyenne de ju
(c) Les statistiques origin
(d) Situation en mai 1954.

(e) Non compris l'Irlande du Nord.

Pour les notes supplémentaires et les sources voir Annexes I et II.

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Tableau 9: Emploi dans l'industrie de la construction

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#### Table 10 : Unemployment in the Construction Industry

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Tableau 10 : Chômage dans l'industrie de la construction

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Country	Base year 1953 Année de base	Unit	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Unité	Pays
	1.000			A	perc	entages a	nd 1953 =	100 <sup>(a)</sup> e	t pourcen	tages				
Austria	45•5	index		••	••	· · ·	86	100	81	55	59	55	indice	Autriche
Belgium	33•7	index	••	••	108	74	101	100	103	98	103	74	indice	Belgique
- wholly unemployed		%	4.1	7.3	13.2	10.8	11.0	11.9	11.4	7.5	7.1		%	- chômeurs complets
- partially unemployed		×	2.1	1.9	5.5	2.4	5.3	3.9	4.8	6.7	8.2		%	- chômeurs partiels
Denmark	17.6	index	••	••	••	••	••	100	102	132	151	138	indice	Danemark
		%	••	••	••	••	••	15	15	19	22	20	%	
Finland	4.8	index	8	63	48	21	31	100	69	29	33		indice	Finlande
France	10.7	index	••	69	79	94	47	100	107	72	35	25	indice	France
Ireland	17.1	index	- 74	74	65	62	77	100	80	71	81	96	indice	Irlande
		%	15.8	15.3	12.8	11.4	14.1	18.9	15.7	13.8	-		%	
Italy	276.4	index	••		••	••	105	100	99	103	107	100*	indice	Italie
Netherlands	11.5	index	20	39	55	. 90	181	100	70	49	30	61	indice	Pays-Bas
Norway	6.3	index	68	59	70	84	83	100	95	103	110	103	indice	Norvège
Spain	17.7	index	••	••	302	231	119	100	107	103	94		indice	Espagne
Sweden	<sub>8.9</sub> (a)	index	••	••	••	••	••		••	••	100	117	indice	Suède <sup>(a)</sup>
Switzerland	2•4	index	63	146	193	79	123	100	87	57	82	48	indice	Suisse
- wholly unemployed	•	×		• •	••	1	3.4	3.3	3.1	2.0	. 2.4		%	- chômeurs complets
- partially unemployed		%	••		••		0.1	0.1	-	-	-		%	- chômeurs partiels
United Kingdom	45.2	index	••	••	93	69	94	100	87	65	75		indice	Royaume Uni
		%	••	••	3.1	2.3	3.1	3.3	2.8	2.1	2•3		10	
Western Germany	200.7	index	r 		84	101	107	100	110	92	92	87	indice	Allemagne occidentale
•		×	••		11.2	13.6	13.7	11.9	12.3	· ···	•••		%	
Yugoslavia	6.2	index	••		••	••	69	100	162	352	599	5 · · · · · · · · · · · · · · · · · · ·	indice	Yougoslavie

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(a) 1956 = 100 for Sweden.

For further notes and sources see Annexes I and II.

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(a) 1956 = 100 pour la Suède.

Pour les notes supplémentaires et les sources voir Annexes I et II.

#### Table 11 : Building Materials : Wholesale Prices

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		1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Rubrique	Pays
Country	Items	••••••••••••••••••••••••••••••				1953 =	= 100						
Austria	Cement Bricks Roofing tiles Girders Sawnwood	55 52 51 54 34	54 55 54 61 39	65 69 67 76 47	89 92 90 87 88	99 103 102 91 101	100 100 100 100 100	100 100 100 110 114	100 100 100 110 141	106 110 108 110 142	108 114 111 110 144	Ciment Briques Tuiles Poutrelles Bois scié	Autriche
Belgium	Total Cement Bricks Roofing materials Steel Timber Glass	81 79 90 86 67 98 81	88 81 90 86 67 87 83	92 94 106 86 71 88 77	96 98 109 93 88 111 84	99 100 98 100 92 104 92	100 100 100 100 100 100	104 100 108 103 97 101 103	106 100 112 105 112 108 105	107	112	Total Ciment Briques Matériaux de toiture Aoier marchand Bois Verre	Belgique
enmark <sup>(a)</sup>	Cement Bricks Bars S <sub>a</sub> wnwood	•••	•••	••	85 81 89 96	111 100 111 95	100 100 100 100	92 101 91 105	99 105 102 112	107 111 114 113	114 116 120 112	Ciment Briques Barres Bois scié	Danemark <sup>(a)</sup>
Finland	Total Cement Bricks Bars Sawnwood Glass	··· ·· ··	• • • • • • • •	•• •• •• ••	99 88 95 88 <b>104</b> 88	103 100 101 96 103 95	100 100 100 100 100 100	97 99 100 90 94 103	95 98 100 87 82 117	101 104 109 93 84 117	104 107 114 102 88 114	Total Ciment Briques Barres Bois scié Verre	Finlande
France	Total Cement Bricks Roofing tiles Girders Sawnwood Glass	57 •• ••	67 ••• •• 37	70 70 75 73 60  71	91 91 90 91 78 ••	103 104 101 103 96  99	100 100 100 100 100 100 100	100 101 101 103 98 90 102	101 102 103 106 99 103 102	103 103 105 108 107 115 102	108 109 110 114 115 116 105	Total Ciment Briques Tuiles Poutrelles Bois scié Verre	France
freece	Cement Stone Bars Glass	••	77 60 57 67	75 70 56 73	83 73 81 85	83 84 95 93	100 100 100 100	113 109 95 114	120 109 113 121	124 109 136 131	125 109 138 131	Ciment Pierre Barres Verre	Grèce
Ireland	Total Cement Bricks Roofing tiles Girders Sawnwood Glass	•• •• •• ••	•• •• •• •• ••	87 94 93 73 63 86	105 98 96 106 <b>87</b> 89	106 117 100 100 117 105 93	100 100 100 100 100 100	97 95 100 97 76 98 114	99 98 100 98 79 98 114	106 109 111 103 102 106 114	112 126 112 108 108 108 122	Total Ciment Briques Tuiles Poutrelles Bois scié Verre	Irlande

(a) lst Jul**y** 1953 = 100

(a) 1<sup>er</sup> juillet 1953 = 100

For notes and sources see Annexes I and II

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Tableau 11 : Materiaux de construction : Prix de gros

Pour les notes et les sources voir Annexes I et II.

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Table 11 : Building Materials : Wholesale Prices (continued)

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		1948 .	1949	1950	1951	1952	1953	1954	1955	1956	1957	Rubrique	Pa <b>ys</b>
Country	Items				<u></u>	1953 =	= 100						
Italy	Total Cement Bricks & tiles Girders Sawnwood Glass	90 76 113 70 105	88 77 97 67 108	87 80 91 68 108	93 86 116 86 107	 101 99 119 99 103	100 100 100 100 100 100	101 99 106 93 102 93	102 98 107 95 115 87	101 99 97 97 118 87	103 101 98 106 118 86	Total Ciment Briques et tuiles Poutrelles Bois scié Verre	Italie
Netherlands	Cement Bricks Roofing tiles Girders Sawnwood Glass	77 76  75 78 79	84 81 74 73 80	85 85  75 80 88	98 93  126 124 95	100 96 96 127 109 102	100 100 100 100 100 100	100 109 108 99 110 99	100 113 107 113 123 99	103 118 107 122 116 99	110 121 114 125 115 99	Ciment Briques Tuiles Poutrelles Bois scié Verre	Pays-Bas
Norway	Total Cement(a) Girders	•• 69	 73		  101	98 98 113	100 100 100	98 98 93	100 97 105	104 101 114	111 113 120	Total (a) Ciment Poutrelles	Norvège Pologne <sup>(b)</sup>
Poland <sup>(b)</sup>	Cement Bricks Roofing tiles Sawnwood Glass	•• •• ••	••	25 63 44 •• 93	25 63 44  59	25 63 44 •• 59	100 100 100 100 100	100 100 100 100 100	100 100 100 100 100	100 100 100 100 100	100 172 101 202 100	Ciment Briques Tuiles Bois scié Verre	Pologne
Portugal	Total	105	105	100	102	102	100	100	101	102	102	Total	Portugal
Spain	Total Cement Bricks Roofing tiles Girders Sawnwood	57 36 76 112 56 67	61 40 71 60 65 77	71 51 82 54 92 81	81 88 95 81 100 81	85 100 94 82 100 89	100 100 100 100 100 100	106 106 108 103 123 100	107 106 125 107 131 104	121 108 140 133 136 138	151 127 163 179 193 193	Total Ciment Briques Tuiles Poutrelles Bois scié	Espagne
Switzerland	Total Cement Bricks Roofing tiles Iron Sawnwood	92 102 97 112 79	90 102 96 103 80	83 96 96 89 75 79	96 97 96 89 112 89	104 100 100 99 120 97	100 100 100 100 100 100	101 100 100 100 91 106	112 100 100 100 101 124	123 111 101 101 110 139	127 114 111 110 118 139	Total Ciment Briques Tuiles Fer Bois scié Total	Suisse Turquie
Turkey	Total Cement Bricks Roofing tiles Sawnwood	102 71 94 87 93	90 81 86 84 76	80 81 70 84 77	82 81 72 79 82	98 81 93 95 99	100 100 · 100 100 100	112 89 <b>107</b> 112 103	124 85 <b>116</b> 108 141	161 89 1 <b>16</b> 111 242		Total Ciment Briques Tuiles Bois scié	rar dare

(a) Including bricks and roofing tiles.
 (b) Based on retail prices in the socialized sector.

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For further notes and sources see Annexes I and II.

(a) Y compris les briques et les tuiles.
 (b) Les données se réferent aux prix de détail applicables dans le secteur socialisé.

Pour les notes supplémentaires et les sources voir annexes I et II.

## Tableau 11 : Materiaux de construction : Prix de gros (suite)

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<u>Table 11</u>	: Building Materials : Wholesale Prices	(continued)
	and the second	· • ·

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		1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	n an	Pays
Country	Items					1953 =	= 100					· · · · ·	
United Kingdom <sup>(a)</sup>	Total Cement Bricks Roofing tiles Girders Imported softwood Glass Cement Bricks Roofing tiles Girders Sawnwood	77	78 •• •• •• 73 95 90 •• 74	82 79 79 71 70 67 79 73 92 93 57 67	98 96 38 77 76 100 80 91 100 103 69 88	102 102 96 83 96 108 90 97 102 103 96 115	100 100 100 100 100 100 100 100 100 100	101 102 103 103 102 101 100 99 102 102 102 96 101	105 105 106 107 106 108 106 97 108 108 108 100 118	109 109 110 113 116 108 113 97 115 114 103 113	113 115 113 118 137 108 123 101 118 120 109 112	Total Ciment Briques Tuiles Poutrelles Bois scié importé Verre Ciment Briques Tuiles Poutrelles Dois scié	Royaume-Uni <sup>(a)</sup> Allemagne occidentale
Yugoslavia	Glass Total Cement Bricks Roofing tiles Bars Sawnwood Glass	••	84	87	91	97 90 84 88 97 77 128	100 100 100 100 100 100 100	100 116 115 121 101 100 152 111	99 123 112 131 114 100 175 114	99 124 102 132 118 100 175 114	100 124 83 132 103 100 175 114	Verre Total Ciment Briques Tuiles Barres Bois scié Verre	Yougoslavie

(a) Excluding Northern Ireland

For further notes and sources see Annexes I and II

(a) A l'exception de l'Irlande du Nord

Pour les notes supplémentaires et les sources voir annexes I et II . . . . . .

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Tableau 11 : Materiaux de construction : Prix de gros (suite)

#### HOU/WP.3/Working Paper No. 24/Add.1 page 32

#### Table 12 : Price Indices on Input and Output of House-building

## Tableau 12 : Indices des prix des entreés et des sorties pour la construction de logements

Country	Item	Type of series	1948	1949	1950	1951	1952   1953-1	فيصلك فكالبيد فلأعد فالمرابع	1954	1955	1956	1957	Type de serie	Rubrique	Pays
Austria	Total Materials Wages	input	••	60 59 61	68 67 69	89 92 89	100 100 99	100 100 100	102 100 106	107 102 113		120 111 132	entreés	Total Matériaux Salaires	Autriohe
Belgium	Total	output	••		101	113	107	100	100	102	107		, sorties	Total	Belgique
Czechoslovakia <sup>(a)</sup>	Total	output		••		••	••	• •	100	108	112		sorties	Total	Tchecoslovaquie <sup>(a)</sup>
Denmark	Total Materials Wages	input	75 79 70	77 78 75	82 83 80	99 105 88	104 108 97	100 100 100	101 100 104	105 10 <b>3</b> 107	109 108 112	112 111 116	entreés	Total Matériaux Salaires	Danemark
Finland	Total Materials Wages	input	••	••	••	99 99 101	102 103 104	100 100 100	100 97 106	102 95 114	108 100 124	112 104 128	entreés	Total Matériaux Salaires	Finlande
France <sup>(b)</sup>	Total	output	••	••	••	••		100	99	103	116	127	sorties	Total	France <sup>(b)</sup>
Ireland	Total Materials Wages	input	••	••	••	•• ••	101 106 92	100 100 100	98 97 100	100 99 103	107 106 109	112 112 111	entreés	Total Matériaux Salaires	Irlande
Italy	Total Materials Wages	input	83 91 71	80 84 74	83 85 78	93 97 86	99 102 93	100 100 100	103 103 104	105 103 107	107 102 113	110 104 119	entreés	Total Matériaux Salaires	Italie
Netherlands	Total	output	109	100	91	100	104	100	104	116	128	139	entreés	Total	Pays-Bas
Norway	Total (Urban areas) Total (Rural areas)	input	78 72	79 73	79 73	86 80	99 95	100 100	99 99	105 100	108 103	115 109	entreés	Total (Régions urbaines) Total (Régions rurales)	Norvège
Portugal	Total Materials Wages	input	••	110 112 103	101 101 101	106 107 101	106 107 10C	100 100 100	99 98 101	101 98 1C5	102 99 107	102 99 110	entreés	Total Matériaux Salaires	Portugal
Sweden	Total Materials Wages	input	••	75 73 75	77 78 75	99 104 89	103 106 97	100 100 100	99 98 100	102 101 101	106 106 104	109 108 107		Total Matériaux Salaires	Suède
Switzerland	Total	output	99	96	91	96	102	100	97	100	103	106	sorties	Total	Suisse
United Kingdom <sup>(c)</sup>	Total Materials Mages	output input	 78	81 79	82 82 80	95 96 87	102 101 95	100 100 100	100 102 105	106 107 112	111 111 120	114 114 127	sorties entreés	Total Matériaux Salaires	Royaume Uni <sup>(c)</sup>
Western Germany	Total Materials Wages	input	94 90 91	88 88 78	84 81 82	97 98 91	104 107 98	100 100 100	100 100 102	108 110 110	112 111 117	117 111 127	entreés	Total Matériaux Salaires	Allemagne O <b>ccide</b> ntale

(a) 1954 = 100.

(b) IVth quarter 1953 = 100.

(c) Excluding Northern Ireland; the index for output covers all new building work.

For further notes and sources see Annexes I and II.

(a) 1954 **-** 100.

(b) IV<sup>e</sup> trimestre 1953 - 100.

(c) Non compris l'Irlande du Nord; l'indice rélatif a la série de sortie comprend tous les nouveaux travaux de construction.

Four les notes supplementaires et les sources voir Annexes I et II.

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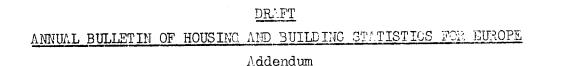
Original: ENGLISH/FRENCH

ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Morking Party on Housing and Building Statistics

(Item 4 of the provisional agenda of the tenth session)



This document contains two additional tables (that is, Table 13 on the supply of building materials, and Table 14 on consumers' prices and rents) for possible inclusion in the Annual Bulletin after consideration by the Uorking Party. The first set of twelve tables was included in HOU/WP.3/Working Paper No. 24/Add.1. The Secretariat is considering the possibility of drawing up a table on investments which will possibly be issued as document HOU/WP.3/Working Paper No. 24/Add.4.

#### COMMISSION ECONOMIQUE POUR L'EUPOPE

COMITE DE L'HABITAT

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Groupe de travail des statistiques du logement et de la construction

(Point 4 de l'Ordre du jour provisoire de la dixième session)

PROJET DE

Additif

Ce document comprend deux tableaux supplémentaires (c'est-à-dire, le Tableau 13 relatif à l'approvisionnement en matériaux de construction, et le Tableau 14 relatif aux prix à la consommation et aux loyers) qui pourraient être éventuellement inclus dans la version définitive du Bulletin Annuel après examen par le Groupe de travail. Le première série de douze tableaux figure dans le document HOU/WP.3/Document de travail No. 24/Add.l. Le Secrétariat examine actuellement la possibilité de préparer un tableau relatif aux investissements qui le cas échéant sera publié dans le document HOU/WP.3/Document de travail No. 24/Add.4.

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Table 13: Supply of building materials

Country	Item	Un <b>it</b>	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Austria										i i	******	j i	an daa ah sa ah sa dada da				Autriche
	Cement	1000 tons	Р	720	1 098	1 290	1 475	1 391	1 394	1 622	1 856	I 936	2 129	P	1000 tonnes	Ciment	
	Lime	1000 tons	P	252	275	257	299	279	285	384	425	469	518	1	1000 tonnes	Chaux	Į
and the second	Plaster	1000 tons	P	26	••	••	44	35	27	39	44	46	48			Plâtre	1
	Bricks	millions	P :	382	486	568	628	578	471	699	775	848	847		millions	Briques	
	Roofing tiles	millions	Р	63	82	96	101	86	69	66	72	73	68		millions	Tuiles	
	Hollow bricks	1000 m <sup>2</sup>	P	186	362	335	450	356	460	732	950	977	1 243	Р	1000 m <sup>2</sup>	Briques creuses	
	Fibro-cement	1000 m <sup>2</sup>	P	1 105	1 442		2 599	2 602	2 132		3 579		••	P	1000 m <sup>2</sup>	Fibro-ciment	
	Light weight panels	1000 m <sup>3</sup>	Р	106	151	143	163	101	131	154	185	191	195		1000 m3	Panneaux ligers	
	Sheet glass	1000 m <sup>2</sup>	Р						:		-	4 992	5 124		1000 m <sup>2</sup>	Verre à vitres	
Belgium						i	1			- - 	1 021		<i>y</i> <u>-</u> <u></u>				Belgique
	Cement	1000 tons	P		2 925	3 557	4 395	4 111	4 626	4 376	4 689	4 669	4 710	Р	1000 tonnes	Ciment	
•	Cement	1000 tons	C	1 770	1 850	2 339		2 664	2 772	2 681	2 779		•	C	1000 tonnes	Ciment	
	Lime	1000 tons	P					1 635				1 848	1 908	Р	1000 tonnes	Chaux	
•	Plaster	1000 tons	P				28	27	32	36	36	35	36	P	1000 torines	Plâtre	
	Hollow bricks	1000 tons	P	• •	159	156	212	220	241	235	250	255	265	P	1000 tonnes	Briques creuses	
	Bricks	millions	P	• •	••	• •	••	2 160	2 208	2 232	2 420	2 242	2 409	P	millions	Briques	
	Bricks	1000 tons	C	3 593	4 036	4 804	4 673		4 050	4 054	4 324			C	1000 tonnes	Briques	
	Roofing tiles	1000 tons	C	128	138	186	191	181	176	200	197			C	1000 tonnes	Tuiles	
	Slates	1000 tons	C	12	12	13	11	10	10	10	10			C	1000 tonnes	Ardoises	
	Concrete blocs	1000 tons	Р						227	289				P	1000 tonnes	Blocs en béton	
	Concrete pugging	1000 tons	P				101	119	146	189		i		P	1000 tonnes		
	Sheet glass	1948 = 100	P	100	64	90	113	68	104	••	• •			P	1948 = 100	Verre plat	
	Metallic building accessories	1000 tons	Р	••	••	••	••	••	111	125	141	167	• •	Р	1000 tonnes	Accessoires metall- iques du bâtiment	••• <sup>2</sup>
	Sawn softwood (b)	1000 m3	C	760	600	925	785	740	810	860	• •	••		C	1000 m <sup>3</sup>	Sciage résineux(b)	
	$\frac{Building}{materials}(c)$	1948 = 100	Р	100	80	92	115	96	112	114	••	••			1948 = 100	Matériaux de construction(c)	
· · ·	Building materials(d)	1950 = 100	C	••	••	100	104	100	103	106	••	•		C	1950 = 100	Matériaux de construction(d)	

Source: National statistics.

(a) AC : apparent consumption C : consumption D : deliveries

- HD : home deliveries
- I : imports
- P : production.

(b) (c)

Including Luxembourg. Cement, quarrying and glass. Consumption of cement, bricks and imported wood. (d)

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Table 13 page 1

Tableau 13: Approvisionnment en materiaux de construction

Source: Statistiques nationales.

(a) CA : consommation apparente C : consommation L : livraisons LP : livraisons à l'intérieur du pays I : importations P : production.

(b) Y compris le Luxembourg
(c) Ciment, carrières et verre.
(d) Consommation de ciment, briques et bois importé.

# HOU/WP.3/Working Paper No. 24/Add.3 Table 13 page 2

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<u>Table 13</u> :	Supply of building materials

Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Bulgaria		separat separat separat provide a separat provide a separat provide separat separat separat separat separat sep													<u> </u>		Bulg <b>a</b> rie
	Cement	1000 tens	P	378	491	602	627	672	701	780	812	859	880	Р	1000 tonnes	Ciment	
	Bricks	nillions	P	125	331	237	208	672 407	701 427	780 417	444	8 <b>5</b> 9 553	493	P	millions	Briques	
	Roofing tiles	millions	Р	94	119	139	105	109	146	159	157	158		Р	millions	Tuiles	
	Sheet glass	1000 m <sup>2</sup>	P			1 808					3 177	-		P	1000 m <sup>2</sup>	Verre à vitres	
Czechoslovakia																	Tchécoslovaqui
	0 - m - m t	1000 tons		1 (50	1 770	1 000	0.064	0.000	0 700	0 560	0 000	2 7/0	3 672	P	1000 tonnes	Ciment	
	Cement Cement	1000 tons	P AC	1 658	1 738	1 998	2 064			2 461		3 148 2 991	3 632	CĂ	1000 tonnes	Ciment	
	Lime	1000 tons	P	924	968	952	1 070	1 128	2 512 1 144				1 750	P	1000 tonnes	Chaux	
	Bricks	millions	P	924	803	865		1 079	1 144 1 212			1 592	1 701	P	millions	Briques	
	Roofing tiles	millions	P	152	160	152	124	119	1212	152	172	183	175	P	millions	Tuiles	-
	Prefabricated			192	TOO	192	424	117		1	2 1	1			4	Eléments préfabriqués	
	parts	1000 m <sup>3</sup>	P	••	••	••	••	••	257	427	483	556	818	P	1000 m <sup>3</sup>		
	Sheet glass	millions m <sup>2</sup>	Р	16	16	19	16	19	17	18	21	23	24	Р	millions m <sup>2</sup>	Verre à vitres	
Denmark			i		ļ						1						Danemark
	Cement	1000 tons	P	769	833	873	985	1 211	1 260	1 222	1 259	1 187	1 121	P	1000 tonnes	Ciment	
	Cement	1000 tons	A.C.	597	625	649	705	872	988	989	865	918	951	C.A.	1000 tonnes	Ciment	
	Bricks	millions	P P		434	451	433	458	468	485	421	367	375	P	millions	Briques	
	Bricks	millions	Ĉ	464	566	611	577	490 591	653	618		501		Ċ	millions	Briques	
	Roofing tiles	millions	č	27	26	27	28	26	27	24				Ċ	millions	Tuiles	
	Sawn softwood		; P	-	20	1 -1	20	20	677	882	617	468	526	Р	1000 m3	Sciages rési <b>n</b> eux	
Eastern			•		1												Allemagne
Germany						*	•							1			Orientale
	Cement	1000 tons	Р	4 1 2		1 412	1 656	0.02	2 448	2 635	2 971	3 269	3 460	P	1000 tonnes	Ciment	
	Lime	1000  tons	r P	ţ			1 708			2 303	2 453	2 487		P	1000 tonnes	Chaux	1
	Plaster	tons	r P			•	130			165			••		tonnes	Plâtre	
	Bricks	tons millions	P P			112 1 356		143	154 1920		176 1963	183 1954	2 148	r D	millions	Briques	
	Roofing tiles	millions	P			1 556	202	1 759	1 920 187					P	millions	Tuiles	
	Stoneware pipes	tons		1			56	209 61	187 59	181 58	186 66	191 69	.••	P	tonnes	Tuyaux en grès	
	Gravel	1000 tons	r P			49 1 009	1 310	1 385		1 799		2 087	••	· r	1000 tonnes		10 - 1
	Crushed stone	1000 tons	. r P	•				1 702		1 948	1 962	2 2087	• • •	P			
	Concrete products	1000 tons	r P	,		280		578					••	r E p		Produits en béton	

.

(a) AC : apparent consumption C : consumption D : deliveries

HD : home deliveries

I : imports P : production

#### Tableau 13: Approvisionnment en materiaux de construction

(a) CA : consommation apparente C : consommation L : livraisons LP : livraisons à l'intérieur du pays I : importations P : production .

Table 13: Supply of building materials

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Tableau 13: Apr

Finland Ceme Brid Root	nent	1000 tons 1000 tons	P	563						<u>i</u>				<u>+</u>	+		
Ceme Brid	nent			563		1 4			1								Finlande
Brid					656	743	829	777	937	1 040	1 011	960	946	P	1000 tonnes	Ciment	8
	lcks		AC	527 131 23	644	762	805	751	856	932	999	1 009	940	CA	1000 tonnes	Ciment	
Root		millions	P	131	152 25	187 25	198	164	856 1 <b>7</b> 9	189	189	180	181	Р	millions	Briques	
	ofing tiles	millions	P	23	25	25	28	19	••	••	• •	••	• •	Р	millions	Tuiles	
	et glass	$1000 m^2$	P	3	3	3	4	4	4	4	4	5	5	P	1000 m <sup>2</sup>	Verre à vitres	
	nforced iron and steel	1000 tons	P	••	••	••		27	30	64	71	76	64	P	1000 tonnes	Fer et acier à béton	
rance	•			1				1									France
		7000 1		E 070	C (74)		0 755	0.077		0 655		77.00		- n	1000 +	Ciment	
Ceme Ceme		1000 tons 1000 tons	P AC	5 830	ь 5 <sup>7</sup> 4	7 415	৬ ১১১			9 557				P CA	1000 tonnes 1000 tonnes	Ciment	
1	lent Ister	1000 tons		1 088	977	דרר ר	1 189	1 201	1 356	8 502	9 /9/ 1 678	71 212	TT 202	P	1000 tonnes	Plâtre	
Brid		1000  tons	P	17 000	211			3 276			4 096	4 104	4 334	P	1000 tonnes	Briques	
Brid		1000 tons	AC	3 225	3 071	3 088			3 511	3 946	4 646	<b>→ → → →</b>	т <i>уу</i> т	CA	1000 tonnes	Briques	
	fing tiles	1000 tons	AC	729	713	750	838	906	881	906	956			CA	1000 tonnes	Tuiles	
	fing slates	1000 tons	P	160	145	156	164	151	131	123	121	127	126	P	1000 tonnes	Ardoises de	
		0	ł	5					5							couverture	
	dstone tiles	1000 m <sup>2</sup>	Ρ	••	• •	••	• •	••		5 460	7 481			Р	1000 m <sup>2</sup>	Carreaux de grès	
	ni-earthenware tiles	1000 m <sup>2</sup>	Р	••	••	••	<b>,</b> ,	: ; ;		900	965			Р	1000 m <sup>2</sup>	Carreaux de demi- grès	
Faie	ence tiles	1000 m <sup>2</sup>	P					1		1 481	1 466			P	1000 m <sup>2</sup>	Carreaux de faience	
Roug	igh freestone	1000 tons	AC	230	264	320	456	325	233	327	445			CÀ	1000 tonnes	Pierres de taille	
Ash	lon	1000 tons	AC	625	775	1 027	1 223	1 009		1 085	1 310			CA	1000 tonnes	brutes Moellons	
a	, ,, (e)	$1000 \text{ m}^2$	P	1 650	775 955	983				1 846	1 971			P	1000 m <sup>2</sup>	Carreaux en ciment <sup>(e)</sup>	
Conc	crete tiles (f)	1000 tons	P	675	707	813				1 721	2 189			P	1000 tonnes	Produits en béton(f)	
Asbe	estos-cement	1000 tons	' P	205	194	201	254	265	233	274	319	382	478	P	1000 tonnes	Amiante-ciment	
	te glass	1000 tons	P	42	49	49	53	59	62	63	61	1	• •	P	1000 tonnes	Glace brute	
	st glass	1000 tons	P	82	71	65	78	68	71	72	88			P	1000 tonnes	Verre coulé	
	et glass i	1000 tons	• AC	59	30	<b>3</b> 9	49	37	50	52	64			' CA	1000 tonnes	Verre à vitres	

(f) Parpens, pugging, non-reinforced piping.

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pprovisionnment en materiaux	de	construction
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(f) Parpaings, hourdis, tuyaux non armis.

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#### Table 13: Supply of building materials

Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	195 <b>7</b>	(a)	Unité	Rubrique	Pays
reece															9 - 9 - 19 - 19 - 19 - 19 - 19 - 19 - 1		Grèce
	Cement	1000 tons	Р	276	316	397	433	596	746	864	1 134	1 237	••	P	1000 tonnes	Ciment	
	Cement	1000 tons	C	260	325	390	417	494	592	704		• •		Ċ	1000 tonnes	Ciment	
	Bricks	millions	P	120	150	220	200	240	460	520	••	••	••	Р	millions	Briques	
	Roofing tiles	millions	Р	20	23	38	33	39	50	120	••	• •	••	Р	millions	Tuiles	
	Steel reinforcing	1000 tons	P	13	20	· 22	25	31	36	56		,		Р	1000 tonnes	Bars d'acier pour	
	bars							-			••	• •	• •	-	•	béton	
	Sheet glass	1000 m <sup>2</sup>	P	880	1 600	2 848	602	480	1 253	1 930		· • •		P	1000 m <sup>2</sup>	Verre à Vitres	
ungary															1		Hongrie
ringar y		7000 1			550		040		1 000	047	1 175	995	989	P	1000 tonnes	Ciment	
	Cement	1000 tons 1000 tons	P AC	••	552	797	948 1 012	1 057 1 055	1 060 1 057	947 756	883		989 981	CA	1000 tonnes	Ciment	
	Cement Lime	1000 tons 1000 tons	P	••	542 226	798 313	359	407	447	460	510		469	P	1000 tonnes	Chaux	
	Bricks	millions	P	••	220 389	796	867	1 099	1 321	1 138	1 198			P	millions	Briques	
	Roofing tiles	millions	P	••	119	102	98	104	109	121	149	135	130	P	millions	Tuiles	
	Cement-asbestos	1	1	••			-	1	-					- D	1000 m <sup>2</sup>	Tuiles en fibro-	
	roofing tiles	1000 m <sup>2</sup>	Р	••	765	1 683	2 243	2 587	1 906	3 122	2 905	2 520	2 988	P	TOOD III	ciment pour toitures	
	Ferro-concrete	1000 m	Р		71	622	1 614	1 552	1 037	1 492	1 409	1 620	2 700	Р	1000 m	Poutres en beton arme	
	roofing beams			••	-						1	1	1	1	4	i	
	Drawn glass	1000 m <sup>2</sup>	Р	••	3 434	3 966	4 239	4 101	4 379	3 572	4 586	3 530	4 556	P	1000 m <sup>2</sup>	Verre étire	
reland													i i	1	1 7 1		Irlande
	()	1000 tons	P	397	431	444	426	460	· 509	592	683	628	452	Р	1000 tonnes	Ciment	
	Cement Cement	1000 tons	AC	i	1	i		616		618			445	CA	1000 tonnes	Ciment	
	Bricks	millions	P	9	9	13		910						P	millions	Briques	
	DI LORD		-					,	Ū								Italie
taly																	
	Cement	1000 tons	P	3 144	4 035	5 148		6 906				11 337	11 870	P	1000 tonnes	Ciment	
	Bricks	millions	P	1 025	1 128	1 458		1 788		2 409			••	P	millions	Briques	
	Roofing tiles	millions	P	144	151	161	189	215	219	245	273	••	• •	P	millions	Tuiles	
	Ceramic flooring	1000 m <sup>2</sup>	P		••	••	19	24	26	32	••	•	••	P	1000 m <sup>2</sup>	Ceramique pour planchers	
	tiles	1000 m <sup>2</sup>			1							••	·	Р	1000 m <sup>2</sup>	Verre à vitres	1
	Window glass	1	P P	07	00	100	8 634	8 216		12 031	207	•		P P	1938 = 100	Matérieux de	
	Building material	1938 = 100	Ľ	91	96	120	129	138	162	175	201	•		, <b>F</b>		construction	- -

(a) AC : apparent consumption
 C : consumption
 D : deliveries

HD : home deliveries

I : imports

P : production

Tableau 13: Approvisionnment en materiaux de construction

(a) CA : consommation apparente C : consommation •. · · L : livraisons LP : livraisons à l'intérieur du pays I : importations P : production

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#### Table 13: Supply of building materials

Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
etherlands																	Pays-Bas
	Cement	1000 tons	P	589	565	593	702	813	861	972	1 101	1 256	1 310	Р	1000 tonnes	Ciment	
	Cement		AC	1 205		1 570				2 135		2 646	2 801	CÁ	1000 tonnes	Ciment	
	Bricks	millions	P	972		1			1	1 427		1 486	1 583	Р	millions	Briques	
	Bricks	millions	C	1 055		1 195	1 160	1 165	1 490	1 430	1 437	1 476		С	millions	Briques	
	Roofing tiles	millions	P	••	••	• •	••	102	106	109	110	115	••	Р	millions	Tuiles	
	Roofing tiles		C	80	97	97	95	79	97	94	99	98		C	millions	Tuiles	
	Lime-sandstone bricks	millions	C	460	540		691	682	780	760	776	854		C	millions	Briques silico-	
		3						1		;					- Т – Х	calcaires	
	Timber	1000 m <sup>3</sup> 1000 m <sup>2</sup>	C				1 200		1 380	••	••	••	••	C	1000 m <sup>3</sup> 1000 m <sup>2</sup>	Bois de charpente	•
	Sheet glass	1000 m <sup>2</sup>	C	3 030	2 700	3 500	2 975	2 840	3 080	3 190	3 400	3 565		C	1000 m <sup>2</sup>	Verre à vitres	
rway																	Norvège
	Cement	1000 tons	Р					706	755	770	831	916	989	Р	1000 tonnes	Ciment	
	Cement	1000 tons	Ċ	473	577	573	665	780	915	939	908	873		ċ	1000 tonnes	Ciment	
	Bricks	millions	P	74	91	97	96	93	109	118	105	102		P	millions	Briques	
	Bricks	millions	C	89	100	103	90 95	93	105	116	103	96		Ċ		Briques	
	Roofing materials	millions m <sup>2</sup>	Ŭ		700	109			700	<b></b>		, ,,,		Ŭ	millions m <sup>2</sup>	)Matériaux de	
		covered	C	.: 2	3	4	4	5	5	5	5			C	de surface	) toiture	
		surface		-	_	1	1				_			1	couverte		
	Lightweight concrete	1000 m <sup>3</sup>	C	20	31	44	49	89	158	190	216	185	1	C	1000 m <sup>3</sup>	Béton léger	
	Sheet glass	1000 tons	C	15	31 14	16	49 13	12	14	15	16	16		C	1000 tonnes	Verre à vitres	
	Reinforcing steel	1000 tons	C	40	50	50	62	63	74	84	87	84		C	1000 tonnes	Acier à béton	
	Timber	1000	С	200	300	270	260	280	290	290		- •		C	1000	Bois de charpente	
	Wallboards	1000 tons	C	34	42	49	57	55	6 <b>3</b>	68	63	61		C	1000 tonnes	Panneaux pour	
n - 1					•				_		-					cloisons	Pologne
oland														1			TOTORNE
	Cement	millions tons		2	2	3	3	3	3 3	3	4	4	••	Р	1000 tonnes	Ciment	
	Cement	millions tons		••	••	2	2	2	3	3	3	4	5	CA	1000 tonnes	Ciment	
	Lime	1000 tons	$ \Sigma $		868	932	1 018	1 070		1 271	1 342			Р	1000 tonnes	Chaux <b>vive</b> en blocs	
	Bricks	millions	Ъ		1 141	1 235	1 634			2 454		2 624	2 676	Р	millions	Briques	
	Roofing tiles	millions 2	Р		63	73	89	92	85	107	127			Р	millions 2	Tuiles	
	Sheet glass	millions m <sup>2</sup> millions m <sup>2</sup>	Р		11	12	13	15	16	16	16			Р	millions m	Verre à vitres 🖕	
	Softwood planks	1000 m <sup>3</sup>	Р			4 198	4 761	4 590	5 369	5 682	5 826			P	1000 m <sup>3</sup>	Madriers de	
		3	_								<i></i>			-	1000 m <sup>3</sup>	conifères	
	Hardwood planks	1000 m <sup>3</sup>	Р			311	454	444	480	554	617		P	P	1000 m <sup>-</sup>	Madriers de	
			1					1	1	• · · · ·			ł			feuillus	

(a) AC : apparent consumption C : consumption D : deliveries

HD : home deliveries

I : imports P : p oduction

L : livraisons

(a) CA : consommation apparente C : consommation

LP : livraisons à l'intérieur du pays I : importations P : production

# HOU/WP.3/Working Paper No. 24/Add.3 Table 13 page 6 Table 13 : Supply of building materials

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Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Portugal	alle ander en der eine eine eine eine eine der der eine der eine der eine eine eine eine eine eine einer seine 		1							·	anglianne d'annan Bir Initi						Portugal
	Cement	1000 tons	P	498	521	573	642	727	<sup>.</sup> 769	783	780	1 024	978	Р	1000 tonnes	Ciment	
	Sheet glass	1000 tons	P	7	3	8	1	8	9	2	9			P	1000 tonnes	Verre à vitres	
	Sawn softwood	1000 m <sup>3</sup> 1000 m <sup>3</sup>	P	617	617	519 30	523	528	663	649 30				P P	1000 m <sup>3</sup> 1000 m <sup>3</sup>	Sciages résineux Sciages feuillus	
	Plywood Plywood	1000 m <sup>3</sup>	P P	45	45 2	3	32 4	34 4	28 3	50 4	6			r P	1000 m <sup>3</sup>	Contreplaqué	
Romania														н. 1			Roumanie
	Cement	1000 tons	Р	657		1 028					1 991	2 186	2 421	P	1000 tonnes	Ciment	
	Bricks	millions	P	118		371		713	800	609	668	736	,	P	millions	Briques	
	Roofing tiles	millions	P	109		134		146	122	111	140	147		Р	millions	Tuiles	
	Prefabricated concrete	1000 m <sup>3</sup>	P	••	• •	••	••	20	131	118	192	353		P	1000 m <sup>3</sup>	Eléments préfa- briques en béton	
	elements Sheet glass	1000 m <sup>2</sup>	P	4 398	••	5 769					7 632	8 358		Р	1000 m <sup>2</sup>	Verre à vitres	
	Concrete iron	1000 m 1000 t <u>o</u> ns	P	4 )90	••	50	••	••	••	••	64	73	••	P	1000 tonnes	Acier à béton	
	Timber	1000 m <sup>3</sup>	P		•••	3 559	••	•••	••	•••	3 218	3 408	••	Ρ	1000 m <sup>3</sup>	Bois de charpente	
Spain											I						Espagne
	Cement	1000 tons	Р	1 803	1 864	2 103	2 323	2 457	2 773	3 323	3 752	3 998		Р	1000 tonnes	Ciment	
	Cement	1000 tons	D	1 867	1 903	2 172	2 386	2 550	2 891	3 375	3 846	••	••	L	1000 tonnes	Ciment	
	Total building	1948 = 100	P	100	98	110	121	131	143				••	Р	1948 = 100	)Ensemble des )matériaux de	
	materials	A			-			-								)construction	
Sweden																,	Suède
	Cement	1000 tons	Р	1 486	1 698	1 936	2 035	2 116	2 352	2 465	2 544	2 498	2 446	Р	1000 tonnes	Ciment	
	Cement	1000 tons	ĀC				1 729	1 778	1 966			2 193	2 223	CA	1000 tonnes	Ciment	
	Cement	1000 tons	D	1 367	1 431		1 709	1 751	1 971	2 120	2 169	••	••	D	1000 tonnes	Ciment	
	Anhydrous lime	1000 tons	Ρ	••	••	582	569	543	545	558	••	••	••	Р	1000 tonnes	Chaux	
	Bricks	millions	P	••	••		770	341	348	337	338	317	296	P	millions	Briques	
	Bricks	millions	D P	294 67	314 76	367 71	339 68	321 72	353 63	357 67	319	••	••	D P	millions millions	Briques Tuiles	
	Roofing tiles Cement and	millions	_	01	10									_		Ciment et produits	
	concrete products	1000 tons	Р			1 508	1 579	1 756	2 155	2 575				Р	1000 tonnes	en béton	
	Drains	million	P	••	••	43	45	49	53	52				Р	millions	Tuyaux de	
		units	Ţ			~ ~ ~	70							n	unités	drainage Verre à vitres	
	Window glass Wallboards	1000 tons 1000 tons	P P	••	••	27 274	30 328	26 231	22 272	22 368				P P	1000 tonnes 1000 tonnes	Panneaux pour	
	Planed batons for													-		cloisons (Elements	
	parquet floors	1000 tons	Ρ			9	10	8	8	8	••	••	• •	Р	1000 tonnes	rabotės pour	
									<u> </u>	: 	<u> </u>	 	!			parquets)	

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HD : home deliveries I : imports P : production

LP : livraisons à l'intérieur du pays I : importations P : production

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#### Tableau 13 : Approvisionnment en materiaux de construction

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#### Table 13 : Supply of building materials

Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Switzerland					1									1.			Suisse
	Cement Lime	1000 tons 1000 tons	P P	1 022 114	977 98	1 085 111	1 320 126	1 384 106	1 581 115	1 817 126	2 117	••	••	P P	1000 tonnes 1000 tonnes	Ciment Chaux	
Turkey			1	• •	2												Turquie
	Cement Cement Glass	1000 tons 1000 tons 1000 tons	P AC I	336 435 ••	372 398	396 531 ••	396 640 19	470 860 17	510 1 047 22	647 920	819 1 630	1 020 1 313	1 263 1 561	P CA I	1000 tonnes 1000 tonnes 1000 tonnes	Ciment Ciment Verre	
USSR																	URSS
	Cement	millions tons	s P	7	8	10	12	14	16	19	23	25	29	P	millions de tonnes	Ciment	
	Bricks Slate	Billions million	P P	· • •	••	10 440	13	15 706	17 861	19 1 007	21 ••	22		P P	billions millions de	Briques Ardoises	
	Precast concrete units	sheets million m <sup>3</sup>	P	••	••	• •	• •	••	• •	2	••	••	• •	Р	feuilles million m <sup>3</sup>	Eléments préfa- briqués	
	Window glass Plate glass	million m <sup>2</sup> 1000 m <sup>2</sup>	P P	••	••	84	••	62	75	86 40	100	••	• •	P P	million m <sup>2</sup> 1000 m <sup>2</sup>	Verre à vitres Verre plat	
(g United Kingdom																	Royaume Uni (g)
	Cement Cement Cement Lime from chalk Lime from limestone Whiting (h) Bricks Bricks Roofing tiles Clay roofing tiles Clay flooring tiles	1000 tons 1000 tons 1000 tons 1000 tons 1000 tons 1000 tons millions 1000 m <sup>2</sup> 1000 squares 1000 sq. yards	P	8 521 6 980 302 1 910 165 4 598 4 424 13 191 842 2 489	184 5 227 5 537 13 650 753	8 050 7 938 332 2 003 196 5 921 5 929	8 669 8 424 291 1 899 208 6 03; 6 059	9 130 9 187 311 1 896 164 6 624 6 655	9 801 9 781 332 1 867 183 7 200 7 235 24 253 806	10 327 10 079 321 1 961 198 7 248 7 112	305 2 137 205 7 162 7 203 23 731 721	<b>12</b> 9 <b>68</b> 11 335 276 2 217 187 7 132 7 064  583 2 394	12 155 10 702  6 <b>3</b> 13 	P CA P P P L L P P	1000 tonnes 1000 tonnes 1000 tonnes 1000 tonnes 1000 tonnes 1000 tonnes millions millions 1000 m <sup>2</sup> 1000 pièces 1000 yards <sup>2</sup>	Ciment Ciment Ciment Chaux Chaux Chaux Lait de chaux Briques Briques Tuiles Tuiles Tuiles Carrelage d'argile pour plancher	
	Ceramic flooring tiles	1000 sq. yards	P	522	576	626	766	710	683	725	784	850		Р	1000 yards <sup>2</sup>	Carrelage pour plancher	
	Glazed walltiles	1000 sq. yards	P	7 655	8 021	7 948	8 846	9 028	7 654	9 354	10 263	10 209		Р	1000 yards <sup>2</sup>	Carrelage vernissés.	
	Gravel	JOOO cu. yards	Р	14 676	16 256	17 592	19 470	21 071	21 731	22 215	25 357	26 649	• •	Ρ	1000 yards <sup>3</sup>	pour murs Gravier	

(a) AC : apparent consumption C : consumption

- D : deliveries

HD : home deliveries

- I : imports
- P ; production

**Ex**cluding Northern Ireland United Kingdom

 $\begin{pmatrix} g \\ h \end{pmatrix}$ 

(a) CA : consommation apparente C : consommation

L : livraisons

P : production

(g) Irlande du Nord non compris (h) Royaume-Uni

#### Tableau 13 : Approvisionnment en matériaux de construction

LP : livraisons à l'intérieur du pays I : importations

#### HOU/WP.3/Working Paper No. 24/Add.3 Table 13 page 8

Table 13 : Supply of building materials

(a)1957 1954 1955 1956 (a) 1948 1949 1950 1951 1952 1953 Item Unit Country United Kingdom (cont'd.) Ρ 100 8 597 9 324 9 411 10 113 6 409 6 928 8 134 Ρ 5 643 6 222 1000 cu.yds. • • Washed sand 100 238 238 Ρ 250 Ρ 300 282 278 262 328 311 1000 squares • • Roofing slates Damp-proof course Ρ 6 386 6 399 mil 7 853 6 801 6 199 Ρ 8 009 8 030 7 954 7 268 thousands • • slates Gypsum (excluding Ρ 100 1 690 P 1 086 1 167 1 238 1 358 1 521 1 654 1 581 1000 tons 1 054 • • anhydrite) Gypseous plaster 100 Ρ Ρ 342 408 461 455 501 1000 tons 229 253 283 285 • • (hard wall) Ρ 100 3 673 53 440 55 646 54 578 52 687 Ρ 49 788 43 750 44 792 48 382 Plasterboard Board(i) . . 1000 sq.yds. 52 Ρ 100 49 50 Ρ 39 35 38 33 44 1000 tons 33 • • Stoneware pipes and Ρ 100 620 652 634 638 658 1000 tons Ρ 521 519 547 558 .. conduits équ Equiv.1000 Cast iron vipes and Ρ 75 104 115 129 129 147 141 de Ρ 97 108 tons of fitting toncast iron fon Ρ 100 71 79 79 74 Ρ 84 70 80 72 60 Lead sheet and pipes 1000 tons Ρ 100 47 37 47 50 53 Ρ 40 39 41 45 1000 tons Copper sheet, strip (j) Copper pipe Ρ 60 58 100 1000 tons Ρ 47 51 59 61 54 44 63 and plate Metal windows, doors, ..... and curtain walling: Ρ 100 93 Ρ 55 81 93 97 82 88 88 - Steel 1000 tons 74 Ρ 100 1 0.5 11 2 2 1000 tons Ρ 2 1 11 - Aluminium 4

.

(a) AC :apparent consumption

- C : consumption
- D :deliveries
- HD :home deliveries
- I :imports
- P :production
- Insulation board, laminated wallboard and hardboard  $\begin{pmatrix} i \\ j \end{pmatrix}$
- The figures before 1949 are for copper sheet only.

- (a) CA : consoumation apparente
  - C : consommation
  - L : livraisons
  - I : importations
  - P: production
- (i)

#### Tableau 13 : Approvisionnment en matériaux de construction

er plantette allerangle sigless gave, waarster allerationen a	a series and the series of the s	AND ANY
Unité	Rubrique	Pays
3		Royaume Uni (suite)
00 yards <sup>2</sup> 00 pièces	S <b>able lavé</b> Ardoises de toiture	
lliers	(Ardoises d'étanchéité)	
00 tonnes	Gypsé (à l'exclusion de gypse anhydre)	
00 tonnes	(Plâtre (murs en dur))	
00 yds. <sup>2</sup> 00 tonnes	Plaques en plâtre Panneaux (1)	
00 tonnes	Tuy <b>au</b> x et canali- sations en grès	
uivalent 1000	Tuyaux et montages en foute	
nnes de <b>n</b> te		
00 tonnes	Feuilles et tuyaux en plembs	
00 tonnes	Tuyaux en cuivre	
00 tonnes	Tôle mince, feuillard et tôle forte de cuivre(Ĵ) Fenêtres, portes et	
000 tonnes 000 tonnes	oloisons métalliques: - Acier - Aluminium	

LP : livraisons à l'intérieur du pays

(j) Les chiffres avant 1949 ne se rapportent qu'aux feuilles de cuivre.

#### Table 13 : Supply of building materials

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Country	Item	Unit	(a)	1948	1949	19 <b>5</b> 0	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Western Germany	7	Ŷ															Allemagne
		1000 tons	Ρ	5 580	8 150	10 877	12 211	12 886	15 378	16 278	18 769	19 662	19 244	Р	1000 tonnes	Ciment	Occidentale
	Cement Cement	1000 tons	r AC			9 558	10 590	12 000 11 116	13 409	14 990	17 154	18 539	17 743	CA	1000 tonnes	Ciment	
	Hydraulic lime	1000 tons	P	••	••		10 ))0		1 330	1 381	1 342	1 400		P	1000 tonnes	Chaux hydraulique	
	Ordinary lime	1000 tons	P	••					6 383					P	1000 tonnes	Chaux ordinaire	
	Plaster	1000 tons	P						740	814	861	906		P	1000 tonnes	Plâtre	
	Bricks	nillions	P	2 061	3 541	4 232	4 607	4 731	<b>5</b> 082	5 571	5 931	5 724	5 515	P	millions	Briques	
	Roofing tiles	millions	P	460	752	900	993	919	921	1 012	1 018			Р	millions	Tuiles	
	Natural stone	million tons		9	15	18	21	24	29	29	35			Р	millions de	Pierre naturelle	
	Matural Stone	milition cond	+						_					1	tonnes		
	Limestone	1000 tons	Ρ						15 245	15 507	27 942	32 322		P	1000 tonnes	Pierre calcaire	
	Pumice	1000 m <sup>3</sup>	P						7 164	7 897	8 632	8 598		Р	1000 m <sup>3</sup>	Pierre ponce	
	Sand-lime bricks	1000 m <sup>3</sup>	Р						3 524	4 110	5 036	5 515		Р	1000 m <sup>3</sup>	Briques silico-	
																calcaires	
	Concrete roofing	1000 units	Р						7 537	8 940	14 241	24 172		P	1000 unités	Carreaux en béton	
	tiles									}						pour toitures	
	Lightweight building		P		23	23	26	24	28	30	35			P	millions m <sup>2</sup>	Panneaux en béton	
	plates	million m <sup>2</sup>	ľ	••	25	25	20	24	20			1		-		Lacor	
	-	million m <sup>2</sup>	P				6	9	8	11	14			P	millions m <sup>2</sup>	Produits en	
	Asbestos cement ware	million m	L L													amiante-ciment	
	Glass	1000 tons,	P						303	375	423	462		P	1000 tonneş	Verre	
	Sawnwood	million m <sub>z</sub>	P						7	7	8			P	millions m	Bois scié	ļ
	Sawnwood	million m <sup>3</sup>	AC				9	10	10	9	1			CA	millions m	Bois scié	
	Damimood										-						Yeugoslavie
Yugoslavia				1													
	Cement	1000 tons	P	1 169	1 288	1 219	1 159	1 313	1 281	1 393	1 577	1 555	1 981	Р	1000 tonnes	Ciment	
	Cement	1000 tons	AC					••		771				CA	1000 tonnes	Ciment	
	Lime	1000 tons	P	321	329	334	302	291			400	449	545	P	1000 tonnes	Chaux	
	Bricks	millions	P	723	775	769	554	551			799	813		P	millions	Briques	
	Roofing tiles	millions	P	216	212	228	191	190		177	177	186		P	millions	Tuiles	
	Construction ceramics	tons	P	5 473	1	5 941	5 961	7 149		9 225	13 349	10 933	22 582	P	tonnes	Céramique de	
														1	2	construction	
	Stone and marble tiles	$1000 \text{ m}^2$	P	26	41	44	40	46	61	82	105	••		P	1000 m <sup>2</sup>	Carreaux de pierre	
							· ·								4	et de marbre	
	Lightweight panels	$1000 \text{ m}^2$	P	1 374	1 673	1 254	919	554	881	920	979	709	1 011	P	1000 m <sup>2</sup>	Panneaux légers de	
				- / /									ļ	_	- 0.00	construction	
	Bitumen felt	1000 tons	P	14	16	17	19	16	15	16	5 17	14		Р	1000 tonnes		
	Glass	million n <sup>2</sup>	P	3	3	2	4	3	3	5	5 5	5	6	P	millions m <sup>2</sup>		
	Sawnwood	1000 m <sup>3</sup>	P	2 770	3 191	3 007	2 371	2 112	2 107	1 881	. 1 877	1 832	1 860	; P	1000 m <sup>3</sup>	Bois scié	

(a) AC : apparent consumption C : consumption

D : deliveries

HD : home deliveries

,

I : imports P : production

(a) CA : consommation apparente C : consommation

L : livraisons

LP : livraisons à l'intérieur du pays I : importations P : production

# MOU/WP.3/Working Paper Ho. 24/22d.3 Table 13 page 9 Tableau 13 : Approvisionnment en matériaux de construction

#### Table 14 : Consumers' prices and Rents

	Item <sup>(a)</sup>	1938	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Rubrique <sup>(a)</sup>	Pays
Country	Item	+	<u>a na sanga na sa sa</u> na sa	ang mananan ang mananan ang kata ang kata na manang ka		19	53 = 100	<b>.</b>						
Austria	Total Rent	14 30	50 31	64 32	'72 37	92 53	106 1.00	100 1.00	104 100	105 100	108 102	111 103	Total Loyer	Autriche
Belgium	Total Rent	24 36	94 70	91 77	91 79	99 83	101 88	100 100	101 110	101 112	104 113	•••	Total Loyer	Belgique
Denmark	Total Rent	53 68	79 82	<b>8</b> 0 86	88 88	99 92	101 96	100 100	102 104	109 110	110 115	115 122	Total Loyer	Danemark
Finland	Total Rent	8 19	66 28	74 35	84 43	100 63	100 77	100 100	98 123	97 134	104 159	115 190	Total Loyer	Finlande
France	Total Rent	4	62 29	71 43	78 58	91 70	102 <b>8</b> 9	100 100	99 112	100 124	102 138	106 147	Total Loyer	France
Greece	Total Rent	0.1	••	• •	91 27	99 43	101 57	100 100	113 103	115 146	119 154	117 174	Total Loyer	Grèce
Ireland	Total Rent	41	79 83	79 92	80 94	87 90	95 99	100 100	100 103	103 106	107 110	111 115	Total Loyer	Irlande
Italy	Total Rent	1 6	91 21	91 32	89 42	96 72	99 91	100 100	102 106	104 121	107 156	107 187	Total Loyer	Italie
Netherlands	Total Rent	34 87	76 87	81 87	89 88	100 100	100 100	100 100	104 120	106 122	108 126	113 136	Total Loyer	Pays-Bas
Norway	Total Rent	43 98	72 92	72 93	77 93	90 94	98 97	100 100	104 106	105 111	108 114	111 120	Total Loyer	Norvège
Portugal	Total Rent	••	97 121	100 121	100 107	99 99	99 100	100 100	99 101	100 112	103 116	104 118	Total Loyer	Portugal
Sweden	Total Rent	47 80	76 86	<b>78</b> 86	78 86	91 87	100 93	100 100	102 102	105 105	109 114	113 118	Total Loyer	Suède
Switzerland	Total Rent	55 83	98 87	97 88	94 90	99 93	101 98	100 100	100 102	101 106	102 108	164 111	Total Loyer	Suisse
Turkey	Total Rent	23 73	••	99 88	94 87	91 87	98 87	100 100	108 145	114 188	130 218	••	Total Loyer	Turquie
United Kingdom	Total Rent	40 80	76 89	79 89	81 90	89 92	97 95	100 100	102 104	106 107	111 113	115 121	Total Loyer	Royaume Uni
Western Germany	Total Rent	56 89	101 93	100 93	93 93	101 95	102 97	100 100	100 100	102 103	104 109	106 111	Total Loyer	Allemagne occidentale

Sources : National statistics

- (a) The indices relative to the "Total refer to the total of the consumers' prices, excluding rent; the rent-index is the component of the general consumers' price index.
  - For some countries successive revisions of the consumers' price index have taken place in the course of the period for which figures are shown; for this reason it has been necessary to splice these successive series of indices.

Sources : Statistiques nationales.

- des prix à la consommation.
  - d'enchaîner ces séries successives d'indices.

HOU/WP.3/Working Paper No.24/Add.3 Table 14

## page 1 Tableau 14 : Prix à la consommation et loyers

(a) - Les indices relatifs au "Total" se rapportent au total des prix à la consommation à l'exclusion du loyer; l'indice du loyer est un composant de l'indice général

- L'indice des prix à la consommation ayant été révisé dans certain pays au cours de la période pour laquelle des données sont fournies, il a été nécessaire

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ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Item 4 of the provisional agenda of the tenth session)

#### DRAFT ANNUAL BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE Addendum

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This document contains two additional tables (that is, Table 13 on the supply of building materials, and Table 14 on consumers' prices and rents) for possible inclusion in the Annual Bulletin after consideration by the Working Party. The first set of twelve tables was included in HOU/WP.3/Working Paper No. 24/Add.1. The Secretariat is considering the possibility of drawing up a table on investments which will possibly be issued as document HOU/WP.3/Working Paper No. 24/Add.4. COMMISSION ECONOMIQUE POUR L'EUPOPE COMITE DE L'HABITAT Groupe de travail des statistiques du logement et de ta construction (Point 4 de l'Ordre du jour provisoire de la dixième session) <u>PROJET DE</u> <u>BULLETIN ANNUEL DI STATISTIQUES DU LOGEMENT ET DE LA CONSTRUCTION POUR L'EUROPE</u> Additif

Ce document comprend deux tableaux supplémentaires (c'est-à-dire, le Tableau 13 relatif à l'approvisionnement en matériaux de construction, et le Tableau 14 relatif aux prix à la consommation et aux loyers) qui pourraient être éventuellement inclus dans de version définitive du Bulletin Annuel après examen par le Groupe de travail. Le première série de douze tableaux figure dans le document HOU/WP.3/Document de travail No. 24/Add.l. Le Secrétariat examine actuellement la possibilité de préparer un tableau relatif aux investissements qui le cas échéant sera publié dans le document HOU/WP.3/Document de travail No. 24/Add.4.

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#### Table 13 page 1

#### Table 13: Supply of building materials

Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Austria	7						i			· · · · · · · · · · · · · · · · · · ·		1					Autriche
	Cement	1000 tons	Р	720	1 098	1 290	1 475	1 391	1 394	1 622	1 856	1 936	2 129	P	1000 tonnes	Ciment	
	Lime	1000 tons	Р	252	275	257	299	279	285	384	425	469	518	P	1000 tonnes	Chaux	
	Plaster	1000 tons	P	26	••		44	35	27	39	44	46	48	P	1000 tonnes	Plâtre	
	Bricks	millions	Р	382	486	568	628	578	471	699	775	848	847	P	millions	Briques	
	Roofing tiles	millions	P	63	82	568 9 <b>6</b>	101	86	69	66	72	73	68	P	millions	Tuiles	
	Hollow bricks	1000 m <sup>2</sup>	P	186	362	335	450	356	460	732	950	977	1 243	P	1000 m <sup>2</sup>	Briques creuses	
	Fibro-cement	1000 m <sup>2</sup>	P	1 105	1 442	1 922	2 599	2 602	2 132	2 722	3 579	••		P	1000 m <sup>2</sup>	Fibro-ciment	
	Light weight panels	1000 m <sup>3</sup>	Р	106	151	143	163	101	131	154	185	: 191	195	P	1000 m3	Panneaux ligers	
	Sheet glass	1000 m <sup>2</sup>	Р			- 12					4 824		5 124		1000 m <sup>2</sup>	Verre à vitres	
Belgium		4 2									1 1 1						Belgique
	Cement	1000 tons	Р		2 925	3 557	4 395	4 111	4 .626	4 376	4 689	4 669	4 710	р	1000 tonnes	Ciment	
	Cement	1000 tons		1 770	1 850		2 529		2 772		2 779	+ 005	+ 1	Ĉ	1000 tonnes		
, ,	Lime	1000 tons	P	T 110		2 )))				-	1 812	1 848	1 908	P	1000 tonnes	Chaux	
	Plaster	1000 tons	P				28	27	32	36	36	35	36	P	1000 tonnes	Plâtre	
	Hollow bricks	1000 tons	P		159	156	212	220	241	235	250	255	265	P	1000 tonnes	1	
	Bricks	millions	·P	• •					2 208	2 232	2 420	2 242	2 409	P	millions	Briques	
	Bricks	1000 tons	1 1	3 593	4 036	4 804	4 673	÷		4 054	1 7	6 676	2 700	Ċ	1000 tonnes		
	Roofing tiles	1000 tons	C	128	138	186	191	181	176	200	197	1		, c	1000 tonnes		
	Slates	1000 tons	C	120	198	13	11	101	10	10	10			Ċ		Ardoises	
	Concrete blocs	1000 tons	P	C	<b></b>	17	<b>بلرید</b> ز	. 10	227	289				P	1000 tonnes	Blocs en béton	
	Concrete pugging	1000 tons	! P				101	119	146	189	!	1		P	1000 tonnes		
· · · · ·	Sheet glass	1948 = 100	P	100	64	90	113	68	104		1				1948 = 100	Verre plat	
	Metallic building		1 1	100	04			. 00		• •	••		•			Accessoires metall-	
	accessories	1000 tons	Р	• •	••	• •	• •	• •	111	125	141	167	••	P	1000 tonnes	iques du bâtiment	
	Sawn softwood (b)	1000 m3	C	760	600	925	785	740	810	860	•	••	:	С	1000 m <sup>3</sup>	Sciage résineux(b)	
	Building materials(c)	1948 = 100	Р	100	80	92	1.15	96	112	114	••	••	1 9	1	1948 = 100	Matériaux de construction(c)	
	Building materials(d)	1950 = 100	; C	• • • •	••	100	104	100	103	106	•	• •	۹	C	1950 = 100	Matériaux de construction(d)	

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Source: National statistics.

(a) AC : apparent consumption

- C : consumption D : deliveries
- HD : home deliveries
- I : imports
- P : production.

Including Luxembourg. (b)

(c) Cement, quarrying and glass.
 (d) Consumption of cement, bricks and imported wood.

Tableau 13: Approvisionnment en materiaux de construction

 $(a,b) \in [a,b]$ 

Source: Statistiques nationales.

(a) CA : consommation apparente C : consommation L : livraisons LP : livraisons à l'intérieur du pays I : importations P : production.

(b) I compris le Luxembourg (c) Ciment, carrières et verre.
(d) Consommation de ciment, briques et bois importé.

# HOU/WP.3/Working Paper No. 24/Add.3 Table 13 page 2

#### Table 13: Supply of building materials

#### Tableau 13: Approvisionnment en materiaux de construction

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Country	Item	Unit	(a) ]	948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Bulgaria		N			- <b></b>										ng mang bar ng mang bar ng tan ng T		Bulgarie
	Cement	1000 tons	P	378	491	602	627	672	701	780	812	859	880	Р	1000 tonnes	Ciment	
	Bricks	millions	Р	125	331	237	208	<b>672</b> 407	701 427	417	444	8 <b>5</b> 9 553	49 <b>3</b>	Р	millions	Briques	
	Roofing tiles	millions	P	94	119	139	105	109	146	159	157	158		P	millions	Tuiles	
	Sheet glass	1000 m2	P 1	410	1 837	1 808	2 557	3 136	2 805	2 585	3 177	3 395		P	1000 m <sup>2</sup>	Verre à vitres	
zechoslovakia				1													Tchécoslovaqu
	Cement	1000 tons	P 1	658	1 738	1 998	2 064	2 209	2 320	2 562	2 892	3 148	3 672	P	1000 tonnes	Ciment	
	Cement	1000 tons	DA	••	• •	••		••	2 312	2 461	2 901	2 991	3 632	CA	1000 tonnes	Ciment	
	Lime	1000 tons	P	924	968	952	1 072					1 679	1 750	P	1000 tonnes	Chaux	
	Bricks	millions	P	924	803	865	912			1 320	1 475	1 592	1 701		millions	Briques Tuiles	
	Roofing tiles Prefabricated	millions		152	160	152	124	119	127	152	172	183	175	P	millions	Eléments préfabriqués	
	parts	1000 m <sup>3</sup>	P	••	• •	••	••	••	257	427	483	556	818	Р	1000 m3	Prometter brorestradees	
	Sheet glass	millions m <sup>2</sup>	P	16	16	19	16	19	17	18	21	23	24	P	millions m <sup>2</sup>	Verre à vitres	
enmark								_									Danemark
	Comout.	2000	·	<b>P</b> (0)	077	077									7000 +	Ciment	
	Cement Cement	1000 tons 1000 tons	P A.C.	769 597	833 625	873	985		1 260	1 222	1 259	1 187	1 121 951	P C.A.	1000 tonnes 1000 tonnes	Ciment Ciment	
	Bricks	millions	P	t	629 434	649 451	705 433	872 458	988 468	989 485	865 421	918 367	375	P.	millions	Briques	
	Bricks	millions	Ĉ	464	566	611	577	591	653	618	744	101	212	Ċ	millions	Briques	
	Roofing tiles	millions	C	27	26	27	28	26	27	24	I	1		C	millions	Tuiles	
	Sawn softwood	1000 m <sup>3</sup>	Р			}			677	882	617	468	526	P	1000 m3	Sciages rési <b>n</b> eux	
astern							-										Allemagne
Germany			э 1	1		1				5 <b>E</b>		2 8 5		1			Orientale
	Cement	1000 tons	P	1		1 412	1 656	2 023	2 448	2 635	2 971	3 269	3 460	Р	1000 tonnes	Ciment	
	Lime	1000 tons	Р					1 782	2 045	2 303	2 453	2 487		Р	1000 tonnes	Chaux	
	Plaster	tons	Р			112	130	143	154	165	176	183	••	P	tonnes	Plâtre	
	Bricks	millions	P			1 356	1 678	1 759,	1 920	1 907	1 963	1 954	2 148	Р	millions	Briques	
	Roofing tiles	millions	P	1		166		209	187	181	186	191	••	P	millions	Tuiles	
	Stoneware pipes Gravel	tons 1000 tons	P P			49	56	61	59	58	66	69	••	P	tonnes	Tuyaux en grès	
	Crushed stone	1000 tons	г Р	4		1 009 1 360	1 658	エ 202 1 702	1 724	1 019	1 062	2 087	• • •	r D	1000 tonnes	Pierre concassée	•
	Concrete products	1000 tons	P				397	578				2 204		· P		Produits en béton	
	n na seann an tha an	• :					· · · · · · · ·	:	, — r				* *	· -			
a) AC : appa	rent consumption													(a)	) CA : sons	commation apparente	
	umption													(a)		sommation apparence	

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HD : home deliveries

I : imports P : production

LP : livraisons à l'intérieur du pays I : importations P : production

#### Table 13: Supply of building materials

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Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
inland						ļ			······································		•						Finlande
	Cement	1000 tons	P	563	656	743	829	777	937	1 040	1 011	960	946	P	1000 tonnes	Ciment	
	Cement	1000 tons	AC	527	644	762	805	751	856	932	999	1 009	940	CA	1000 tonnes	Ciment	
	Bricks	millions	P	131	152	187	198	164	179	189	189	180	181	Р	millions	Briques	1
	Roofing tiles	millions	P	23	25	25	<b>2</b> 8	19	••	••	••	• •	••	Р	millions	Tuiles	
	Sheet glass	1000 m <sup>2</sup>	P	3	3	3	4	4	4	4	4	5	5	Р	1000 m <sup>2</sup>	Verre à vitres	
	Reinforced iron and steel	1000 tons	Р	••	••	••	••	27	30	64	71	76	64	P	1000 tonnes	Fer et acier à béton	
rance								4 1 2 3									France
	Cement	1000 tons	, P	5 830	6 674	7 115	8 355	8 833	0 227	0 557	0 760	11 389	10 705	P	1000 tonnes	Ciment	
	Cement	1000  tons	AC		0.014	1 447						10 512		CA	1000 tonnes	Ciment	J đ
	Plaster	1000 tons	P	1 088	977	1 113	1 189	1 291	1 356	1 516	1 678		TT 200	P	1000 tonnes	Plâtre	
	Bricks	1000 tons	P	1				3 276	3 132	3 480		4 104	4 334	P	1000 tonnes	Briques	
	Bricks	1000 tons	AC	3 225	3 071	3 088				3 946	4 646	1	1 227	CA	1000 tonnes	Briques	ł
	Roofing tiles	1000 tons	AC	729	713	750	838	906	881	906	956	1		CA	1000 tonnes	Tuiles	
	Roofing slates	1000 tons	Р	160	145	156	164	151	131	123	121	127	126	P	1000 tonnes	Ardoises de couverture	
	Sandstone tiles	1000 m <sup>2</sup>	P			••	• •	••	ł	5 460	7 481			Р	1000 m <sup>2</sup>	Carreaux de grès	
	Semi-earthenware tiles	1000 m <sup>2</sup>	Р	• •	• •	• •	••			900	965	1		P	1000 m <sup>2</sup>	Carreaux de demi- grès	
	Faience tiles	1000 m <sup>2</sup>	P	1				•	ļ	1 481	1 466			P	1000 m <sup>2</sup>	Carreaux de faience	
	Rough freestone	1000 tons	AC	230	264	320	456	325	233	327	445			C.	1000 m <sup>2</sup> 1000 tonnes	Pierres de taille	
	Ashlar ( )	1000 tons	AC	625	775	1 027	1 223	1 009	1 142	: 1 085	1 312			Cá	1000 tonnes	brutes Moellons	1 
	$\begin{array}{c} \text{Ashlar} \\ \text{Concrete tiles} \\ \text{(e)} \\ \text{(f)} \end{array}$	1000 m <sup>2</sup>	Р	1 650	955	983					1 971			P	1000 m <sup>2</sup>	Carreaux en ciment $\begin{pmatrix} e \\ c \end{pmatrix}$	8. 8. 9.
	Concrete tiles (f) Concrete products	1000 tons	P	675	707	813				• • •	2 189	1		' P	1000 tonnes	Produits en béton(f)	
	Asbestos-cement	1000 tons	` P	205	194	201	254	265	233	274	319	382	478	P	1000 tonnes	Amiante-ciment	
	Plate glass	1000 tons	Р	42	49	49	53	59	62	63	61		110	- P	1000 tonnes	Glace brute	
	Cast glass	1000 tons	P	82	71	65	<b>7</b> 8	68	71	72	88			p P	1000 tonnes	Verre coulé	
	Sheet glass	1000 tons	AC	<b>5</b> 9	30	39	49	37	50	52	64			CÂ	1000 tonnes	Verre à vitres	: • •
	arent consumption	an a			4-140.000 ayo a ta ayo ya		a nahu yang dan dan dan dan yang yang dan dan kang dan ka	······					Brayle olynomiae olyn Arlyn - Synapayda	(a	) CA : con:	sommation apparente	
C: cons																Sommation	
	lveries e deliveries									,					L : liv		
I: impe																raisons à l'intérieur du	ı pays
	luction														I : impo P : prod		
e) As from 195	52, including granite fla	ags and marble	e mosai	c tiles										(e	) à partir de	e 1952, y compris carrea iques de marbre	ux granits
) Parpens. pu	agging, non-reinforced pi													:		-drop do matoro	

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Tableau 13: Approvisionnment en materiaux de construction

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## HOU/WP.3/Working Paper No. 24/Add.3 Table 13 page 4

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#### Table 13: Supply of building materials

Tableau 13: Approvi

Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	195 <b>5</b>	1956	1957	(a)	Unité	Rubrique	Pays
Greece	anna an an Anna an Anna an Anna an Anna an Anna Ann	an a	n. jan - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 194 - 1											•			Grèce
	Cement Cement Bricks Roofing tiles Steel reinforcing bars Sheet glass	1000 tons 1000 tons millions millions 1000 tons 1000 m <sup>2</sup>	P C P P P P	276 260 120 20 13 880	316 325 150 23 20 1 600	397 390 220 38 22 2 848	433 417 200 33 <b>2</b> 5 602	596 494 240 39 31 480	746 592 460 50 36 1 253	864 704 520 120 56 1 930	1 134   	1 237   	••	P C P P P P	1000 tonnes 1000 tonnes millions millions 1000 tonnes 1000 m <sup>2</sup>	Ciment Ciment Briques Tuiles Bars d'acier pour béton Verre à Vitres	
Hungary							:					1					Hongrie
	Cement Cement Lime Bricks Roofing tiles	1000 tons 1000 tons 1000 tons millions millions	P AC P P P	•• •• ••	552 542 226 389 119	797 798 313 796 102	948 1 012 359 867 98	1 057 1 055 407 1 099 104	1 060 1 057 447 1 321 109	947 756 460 1 138 121	1 175 883 510 1 198 149	995 815 409 1 188 135	989 981 469 1 385 130	P CA P P P	1000 tonnes 1000 tonnes 1000 tonnes millions millions	Ciment Ciment Chaux Briques Tuiles	
	Cement-asbestos roofing tiles	1000 m <sup>2</sup>	P	••	765	1 683	2 243	2 587	1 906	3 122	2 905	2 520	2 988	P	1000 m <sup>2</sup>	Tuiles en fibro- ciment pour toitures	
	Ferro-concrete roofing beams	1000 m	Р	••	71	622	1 614	1 552	1 937	1 492	1 409	1 620	2 700	P	1000 m	Poutres en beton arme	
	Drawn glass	1000 m <sup>2</sup>	P	• •	3 434	<b>3</b> 966	4 239	4 101	4 379	3 572	<sup>.</sup> 4 586	3 530	4 556	P	1000 m <sup>2</sup>	Verre etire	
Ireland		1 1 1								•		I					Irlande
	Cement Cement Bricks	1000 tons 1000 tons millions	P AC P	397 ••	431 ••	444 13	426 •• 9	460 616 9	509 603 8	618	683 649 9	628 591 9	452 445 5	P CA P	1000 tonnes 1000 tonnes millions	Ciment Ciment Briques	
Italy										1					:		Italie
	Cement Bricks Roofing tiles Ceramic flooring tiles Window glass Building material	1000 tons millions millions 1000 m <sup>2</sup> 1000 m <sup>2</sup> 1938 = 100	P P P P P	3 144 1 025 144  91	4 035 1 128 151  96	5 148 1 458 161  120	5 748 1 550 189 19 8 634 129	6 906 1 788 215 24 8 216 138	2 008 219 26	2 409 245 32 12 031	2 801 273	11 337  	11 870  	P P P P P	1000 tonnes millions 1000 $m^2$ 1000 $m^2$ 1938 = 100	Ciment Briques Tuiles Ceramique pour planchers Verre à vitres Matérieux de construction	

(a) AC : apparent consumption
 C : consumption
 D : deliveries

HD : home deliveries

I : imports P : production

provisionnment en	materiaux de	construction
		Construction and an an other distance of the state of the

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(a) CA : consolumation apparente C : consolution . L : livraisons LP : livraisons à l'intérieur du pays I : importations P : production

# HOU/WP.3/Working Paper No. 24/Add.3 Table 13 page 5 Tableau 13: Approvisionnment en materiaux de construction

#### Table 13: Supply of building materials

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Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Netherlands	ο το ματοριατικό το την του		<b>†</b>														Pays-Bas
	Cement	1000 tons	P	589	565	593	702	813	861			1 256	1 310	Ρ	1000 tonnes	Ciment	
	Cement		AC	1 205	1 460	1 570	1 770	1 640				2 646	2 801	CA	1000 tonnes	Ciment	
	Bricks	millions	P	972	1 083	1 192	1 239	1 311		1 427			1 583	Р	millions	Briques	
	Bricks Boofing tiles	millions millions	C	1 055	1 060	1 195	1 160	1 165		1 430	1 437	1 476		C	millions	Briques	
	Roofing tiles Roofing tiles	millions	P C	80	••	••	••	102	106	109	110	115	••	P	millions	Tuiles Tuiles	
	Lime-sandstone bricks	millions		460	97 540	97 680	95 691	79 682	97 780	94 780	99 776	98 854		C C	millions millions	Briques silico-	
	Dime-Sandstone Direks	militions		400	940	000	091	002	100	100	110	024		U	millions	calcaires	
	Timber	1000 m <sup>3</sup>	C			1 140	1 200	1 200	1 380				ĺ	C	1000 m <sup>3</sup>	Bois de charpente	
	Sheet glass	1000 m <sup>2</sup>	C	3 030	2 700			2 840		3 190	3 400	3 565	••	Ċ	1000 m <sup>2</sup>	Verre à vitres	
lorway	C *					5 500		2 040	5 000	J 1,0	J 400			Ŭ	7000 m		DT N
orway			ļ														Norvège
	Cement	1000 tons	P					706	755	770	831	916	989	P	1000 tonnes	Ciment	
	Cement	1000 tons	C	473	577	573	665	780	915	· 939	908	873		C	1000 tonnes	Ciment	
	Bricks	millions	P	74	91	97	96	93	109	118	105	102		Р	millions	Briques	
	Bricks	millions	C	89	100	103	95	93	106	· 116	103	96		C	millions 2	Briques	
	Roofing materials	millions m <sup>2</sup>													millions m <sup>2</sup>	)Matériaux de	
		covered	C	2	3	4	4	5	5	5	5			C	de surface	) toiture	
	Tinhatana talat ana t	surface												~	couverte		
	Lightweight concrete	1000 m <sup>3</sup>	C	20	31	44	49	89	158	190	216	185		C	1000 m <sup>3</sup>	Béton léger	
	Sheet glass Reinforcing steel	1000 tons	C	. 15	14	16	13	12	14	15	16	16		C	1000 tonnes	Verre à vitres	
	Timber	1000 tons 1000	C	40 200	50 300	50 270	62 260	63 280	74	84	87	84		C C	1000 tonnes 1000	Acier à béton Bois de charpente	
	Wallboards	1000 tons	C	200 34	42	49	260 5 <b>7</b>	280 <b>55</b>	290 6 <b>3</b>	290 6 <b>8</b>	63	61		C	1000 tonnes	Panneaux pour	
	"arrooarus			94	42	49	21	22	60	с <b>о</b>	CO.	01		U	TOOD FOUTIES	cloisons	
oland			-		17 MAR 19930- 199	400 J. 100	-									CTOTROUR	Pologne
	Cement	millions tons	s P	2	2	3	3	3	3	3	4	· 4	••	Р	1000 tonnes	Ciment	
	Cement	millions tons	s AC	••	••	2	2	2	3	3	3	4	5	CA	1000 tonnes	Ciment	
	Lime	1000 tons	P		868	932	1 018	1 070	1 168	1 271	1 342	•		P	1000 tonnes	Chaux vive en blocs	
	Bricks	millions	P	5	1 141	1 235	1 634		2 207	2 454	2 564	2 624	2 676	Р	millions	Briques	
	Roofing tiles	millions 2	P		63	73	89	92	85	107	127			Р	millions 2	Tuiles	
	Sheet glass	millions m <sup>2</sup>	P	1	11	12	13	15	16	16	16			Р	millions m <sup>2</sup>	Verre à vitres	
	Softwood planks	1000 m <sup>3</sup>	P			4 198	4 761	4 590	5 369	5 682	5 826			Р	1000 m <sup>3</sup>	Madriers de	
	II and and a local state	1000 m <sup>3</sup>	T				. – .						_	-	1000 m <sup>3</sup>	conlieres	
	Hardwood planks	1000 m	P			311	454	444	480	554	617		Р	Р	1000 m <sup>-</sup>	Madriers de	
			1		1	l	•	1	E							feuillus	

(a) AC : apparent consumption C : consumption D : deliveries

HD : home deliveries

I: imports P: p oduction

(a) CA : consommation apparente

C : consommation

L : livraisons

LP : livraisons à l'intérieur du pays I : importations P : production

# HOU/WP.3/Working Paper Ho. 24/Add.3 Table 13 page 6 Table 13 : Supply of building materials ÷

Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
ortugal	1999 - Mariana Andrea, Angelander (Mariana), Angelander ( Mariana), Angelander (Mariana), Angelander (Mariana), Angelander (Mariana), Angelander (Mariana), Angelander ( Mariana), Angelander (Mariana), Ang	• • • • • • • • • • • • • • •				1											Portugal
	Cement Sheet glass Sawn softwood Plywood Plywood	1000 tons 1000 tons 1000 m <sup>3</sup> 1000 m <sup>3</sup> 1000 m <sup>3</sup>	P P P P P	498 7 617 45 2	521 3 617 45 2	573 8 519 30 3	642 1 523 32 4	727 8 528 34 4	769 9 663 28 3	783 2 649 30 4	780 9 6	1 024	978	P P P P P	1000 tonnes 1000 tonnes 1000 m <sup>3</sup> 1000 m <sup>3</sup> 1000 m <sup>3</sup>	Ciment Verre à vitres Sciages résineur Sciages feuillus Contreplaqué	
mania													-				Roumanie
	Cement Bricks Roofing tiles Prefabricated concrete elements	1000 tons millions millions 1000 m <sup>3</sup>	P P P P	657 118 109	••	1 028 371 134	••	713 146 20	800 122 131	609 111 118	1 991 668 140 192	2 186 736 147 353	2 421	P P P P	1000 tonnes millions 1000 m <sup>3</sup> 2	Ciment Briques Tuiles Eléments préfa- briques en béton	
	Sheet glass Concrete iron Timber	1000 m <sup>2</sup> 1000 tons 1000 m <sup>3</sup>	P P P	4 398	••	5 769 50 3 559	••	••	••	••	7 632 64 3 218	8 358 73 3 408	••	P P P	1000 m <sup>2</sup> 1000 tonnes 1000 m <sup>3</sup>	Verre à vitres Acier à béton Bois de charpente	Espagne
pain		2000		1 007	2.000	0 107	0 707		0 1777	3 323	7 750	7 000		Р	1000 tonnes	Ciment	nspagne
	Cement Cement Total building materials	1000 tons 1000 tons 1948 = 100	P D P		1 864 1 903 98		2 323 2 386 121	2 457 2 550 151					••	L P	1000 tonnes 1000 tonnes 1948 = 100	Ciment )Ensemble des )matériaux de	
										-						)construction	Suède
weden	Cement Cement Cement Anhydrous lime Bricks Bricks Roofing tiles Cement and concrete products	1000 tons 1000 tons 1000 tons 1000 tons millions millions 1000 tons	P AC D P D P P P	1 486 1 367  294 67		1 675 1 655 582 367 71	1 709 569 339 68	1 778 1 751 543 341 321 72	2 352 1 966 1 971 545 348 353 63 2 155	2 242 2 120 558 337 357 67	2 544 2 186 2 169  338 319	2 498 2 193  317 	2 446 2 223  296 	P CA D P D P P P	1000 tonnes 1000 tonnes 1000 tonnes 1000 tonnes millions millions 1000 tonnes	Ciment Ciment Ciment Chaux Briques Briques Tuiles Ciment et produits en béton	Succe
	Drains	million	Р	••	••	43	45	49	53	52				Р	millions	Tuyaux de	
	Window glass Wallboards Planed batons for parquet floors	units 1000 tons 1000 tons 1000 tons	P P P	••	••	27 274 9	30 328 10	26 231 8	22 272 8	22 .368 8		••		P P P	unités 1000 tonnes 1000 tonnes 1000 tonnes	drainage Verre à vitres Panneaux pour cloisons (léments rabotés pour parquets)	

I : imports P : production

I : importations P : production

### Tableau 13 : Approvisionnment en materiaux de construction

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# HOU/WP.3/Working Paper No. 24/Add.3 Table 13 page 7

## Table 13 : Supply of building materials

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Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Switzerland				1												· · · · · · · · · · · · · · · · · · ·	Suisse
	Cement	1000 tons	Р	1 022	977	1 085	1 520	1 384	1 581	1 817	2 117	••		   P	1000 tonnes	Ciment	
	Lime	1000 tons	Р	114	98	111	126	106	115	126	••	••	• •	Р	1000 tonnes	Chaux	
Turkey			t														Turquie
	Cement	1000 tons	P	336	372	396	396	470	510	647	819	1 020	1 263	P	1000 tonnes	Ciment	-
	Cement	1000 tons	AC	435	398	531	640	860	1 047			1 313		CA	1000 tonnes	Ciment	
	Glass	1000 tons	I	••	••	••	19	17	22					I	1000 tonnes	Verre	
USSR					Ĩ						*						URSS
	Cement	millions tons	P	7	8	10	12	l²,	16	1.9	23	25	29	Р	millions de	Ciment	Ξ.
	Bricks	Billions	P			10	17	7		10					tonnes		
	Slate	million	P	••	••	440	13	15   706	17 861	19 1 007	21,	22		P P	billions millions de	Briques Ardoises	
		sheets	-		••	770		100	001	1 007	••	••	••	Г	feuilles		
	Precast concrete	million m <sup>3</sup>	Р							2					3	Eléments préfa-	
	units Window glass	2		••	••	••	••	••	• •		••	••	••	Р	million m <sup>2</sup>	briqués	
	Plate glass	million m <sup>2</sup> 1000 m <sup>2</sup>	P P	••	••	84	• •	62	75	86	100	••	••	P	million m	Verre à vitres	·\$ .
(g) United Kingdom		TOOO W	1	••	••	••	••	••	••	40	••	••	••	P	1000 m <sup>2</sup>	Verre plat	
														4			Royaume Uni
	Cement	1000 tons	Р	8 521	9 216	9 752	10 192	138	1 218	12 <b>156</b>	12 <b>712</b>	12 968	12 155	Р	1000 tonnes	Ciment	
	Cement Cement	1000 tons	AC		••	8 050	8 669	9 130	9 801	10 327	10 790	11 335	10 702	CA	1000 tonnes	Ciment	
	Lime from chalk	1000 tons 1000 tons	HD P	6 980 302	7 662	7 938			1	10 079			••	L	1000 tonnes	Ciment	*.
	Lime from limestone	1000 tons	P	1 910	315 1 982 :	332 2 003	291 1 899	311 1 896	332 1 867	321 1 961	305	276 2 217	••	P P	1000 tonnes	Chaux Chaux (, )	
	Whiting (h)	1000 tons	P	165	184	196	208	164	183	1901	2 137 205	187	••	P P	1000 tonnes 1000 tonnes	Chaux Lait de chaux <sup>(h)</sup>	
	Bricks	millions	P	4 598		5 921	6 084		7 200	7 248	7 162	7 132	6 913	P	millions	Briques	
	Bricks	millions	HD	4 424	5 537	5 929	6 059	6 655	7 235	7 112	7 203	7 064	•••	L	millions	Briques	
	Roofing tiles	1000 m <sup>2</sup>	HD	13 191	13 650 1	L4 015			24 253.	24 806	23 731	••	••	L	1000 m <sup>2</sup>	Tuiles	
	Clay roofing tiles	1000 squares	P	842	753	697	641	718	806	818	721	583	••	P	1000 pièces	Tuiles d'argile	
	Clay flooring tiles	1000 sq. yards	P	2 489	2 196	2 218	2 339	2 174	2 107	2 164	2 328	2 394		P	1000 yards <sup>2</sup>	Carrelage d'argile	
	Ceramic flooring tiles	1000 sq.	P	522	576	626	766	710	683	725	784	850		P	1000 yards <sup>2</sup>	pour plancher Carrelage pour	
		yards												-		plancher	
	Glazed walltiles	1000 sq.	Р	7 655	8 021	7 948	8 846	9 028	7 654	9 354	10 263	10 209		P	$1000 \text{ yards}^2$	Carrelage vernissés	
	Gravel	yards 1000 cu.	D	14 (7)											7	pour murs	
	ATCHACT .	yards	r	14 676	10 256	1 592	19 470 2	έτ ΟΛΤ <sup>1</sup> 5	1 731 i	22 215	25 357	26 649	••	Р	1000 yards	Gravier	

(a) AC : apparent consumption C : consumption

D : deliveries

HD : home deliveries

I : imports

P : production

**Ex**cluding Northern Ireland United Kingdom

(g) (h)

(a) CA : consommation apparente C : consommation

L : livraisons

I : importations P : production

(g) Irlande du Nord non compris (h) Royaume-Uni

#### Tableau 13 : Approvisionnment en matériaux de construction

LP : livraisons à l'intérieur du pays

## HOU/WP.3/Working Paper No. 24/Add.3 Table 13 page 8 Table 13 : Supply of building materials

Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Jnited Kingdom												a sector and the sect			7		Royaume Uni (suite)
(cont'd.)	Washed sand Roofing slates	1000 cu.yds. 1000 squares	P P	5 643 328	6 222 311	6 409 300	6 928 282	8 134 278	8 597 262	9 324 250	9 411 238	10 113 238	••	P P	1000 yards 1000 pièces	Sable l <b>avé</b> Ardoises de toiture	(54100)
	Damp-proof course slates	thousands	P	8 009	-		7 268	7 853	6 801	6 199	6 386	6 399	••	P	milliers	(Ardoises d'étanchéité)	
	Gypsum (excluding anhydrite)	1000 tons	P	1 054	1 086	1 167	1 238	1 358	1 521	1 654	1 581	1 690	••	Р	1000 tonnes	Gypsé (à l'exclusion de gypse anhydre)	
	Gypseous plaster (hard wall)	1000 tons	Р	229	253	283	285	342	408	461	455	501	••	P	1000 tonnes	(Plâtre (murs en dur))	
	(hard wall) Plasterboard Board(i)	1000 sq.yds. 1000 tons	P P	49 788 33	43 750 39	44 792 35	48 382 38	43 673 33	53 440 44	55 646 49	54 578 50	52 687 52	••	P P	1000 yds. <sup>2</sup> 1000 tonnes	Plaques en plâtre Panneaux (1)	
	Stoneware pipes and conduits	1000 tons	P	521	519	547	558	620	652	634	638	658	••	P	1000 tonnes	Tuy <b>aux</b> et canali- sations en grès	
	Cast iron pipes and fitting	Equiv.1000 tons of cast iron	P	75	97	104	108	115	129	129	147	141		P	équivalent de 1000 tonnes de	Tuyaux et montages en foute	
	Lead sheet and pipes	1000 tons	P	84	70	80	72	60	71	79	79	74		P	fonte 1000 tonnes	Feuilles et tuyaux en plémbs	
	Copper pipe (i)	1000 tons	P	40	39	41	45	47	37	47	50	53		P	1000 tonnes	Tuyaux en cuivre	
	Copper sheet, strip() and plate Metal windows, doors,	1000 tons	P	47	51	59	61	54	. 44	60	63	. 58		Р	1000 tonnes	Tôle mince, feuillard et tôle forte de cuivre(j) Fenêtres, portes et	
	and curtain walling: - Steel - Aluminium	1000 tons 1000 tons	P	55	74	81	93 1	97 1	82 0.5	88 1				P P	1000 tonnes 1000 tonnes	oloisons métalliques: - Acier - Aluminium	

(a) AC :apparent consumption C :consumption

- D :deliveries
- HD :home deliveries
- I :imports
- P :production
- (i) Insulation board, laminated wallboard and hardboard (j) The figures before 1949 are for copper sheet only.

- (a) CA : consommation apparente C : consommation

  - L : livraisons
  - LP : livraisons à l'intérieur du pays
  - I: importations P: production
- (i)

### Tableau 13 : Approvisionnment en matériaux de construction

(j) Les chiffres avant 1949 ne se rapportent qu'aux feuilles de cuivre.

# Table 13 page 9 Tableau 13 : Approvisionnment en matériaux de construction

#### Table 13 : Supply of building materials

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Country	Item	Unit	(a)	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	(a)	Unité	Rubrique	Pays
Western Germany																	Allemagne
-	Cement	1000 tons	P	5 580	8 459	10 877	12 211	12 886	15 378	16 278	18 769	19 662	19 244	P	1000 tonnes	Ciment	Occidentale
	Cement	1000 tons	AC	••	••	9 558	10 590	11 116	13 409	14 990	17 154	18 539	17 743	CA	1000 tonnes	Ciment	
	Hydraulic lime	1000 tons	Р						1 330			1 400		P	1000 tonnes	Chaux hydraulique	
	Ordinary lime	1000 tons	Ρ	••					6 383	6 757				P	1000 tonnes	Chaux ordinaire	
	Plaster	1000 tons	P		(				740	814	861	906		P P	1000 tonnes	Plâtre Briques	
	Bricks	millions	Ρ	2 061	3 541	4 232			5 082		5 931		5 515	P	millions millions	Tuiles	
	Roofing tiles	millions	P	460	752	900	993	919	921	1 012	•	1 069	••	P	millions de	Pierre naturelle	
	Natural stone	million tons	Р	9	15	18	21	24	29	29	35			1	tonnes		
		1000 t <u>o</u> ns	Р						15 2/5	15 507	27 942	32 322		P	1000 tonnes	Pierre calcaire	
	Limestone Pumice	1000 tons	r P						7 164					P	1000 m <sup>3</sup>	Pierre ponce	
	Sand-lime bricks	1000 m <sup>3</sup>	P						3 524		5 036		{	P	1000 m <sup>3</sup>	Briques silico-	
		1000 m	_											l .		calcaires	
	Concrete roofing	1000 units	P						7 537	8 940	14 241	24 172		P	1000 unités	Carreaux en béton	
	tiles															pour toitures	
	Lightweight building	million m <sup>2</sup>	P		23	23	26	24	28	30	35			P	millions m <sup>2</sup>	Panneaux en béton	
	plates		-	••			20								2	leger	
	Asbestos cement ware	million m <sup>2</sup>	P			· 4	6	9	8	11	14			P	millions m	Produits en	
																amiante-ciment	
	Glass	1000 tonsz	P						303	.375				P	1000 tonnes	Verre	
	Sawnwood	million m <sub>3</sub>	P						7	7	8			P	nillions m3	Bois scié Bois scié	
	Sawnwood	million m	AC				9	10	10	9	9	11		CA	millions m	DOIR RCIE	
Yugoslavia																	Yougoslavie
	Comment.	1000 tons	P	1 169	1 288	1 219	1 159	1 313	1 281	1 393	1 577	1 555	1 981	P	1000 tonnes	Ciment	
	Cement	1000 tons	A.C			1			1		834		1	CA	1000 tonnes	Ciment	
	Lime	1000 tons	P	321	329	334	302	291	327					P	1000 tonnes	Chaux	
	Bricks	millions	P	723	775	769	554	551						P	millions	Briques	
1	Roofing tiles	millions	P	216	212	228	191	190	186	177	177	186	191	P	millions	Tuiles	
	Construction ceramics	tons	P	5 473		5 941		7 149	6 896	9 225	13 349	10 933	22 582	P	tonnes	Céramique de	
								ŀ							2	construction	
	Stone and marble tiles	1000 m <sup>2</sup>	P	26	41	44	40	46	61	82	105	••	••	P	1000 m <sup>2</sup>	Carreaux de pierre	
		2													1000 m <sup>2</sup>	et de marbre Panneaux légers de	
	Lightweight panels	1000 m <sup>2</sup>	P	1 374	1 673	1 254	919	554	881	920	979	1 .709	1 011	P	TOOO W	construction	
		1000		A	10	1.77	1 10	1 16	1 75	1.6	- דר	Л. П. А.	17	P	1000 tonnes	Feutre bitumé	
	Bitumen felt	1000 tons_2	P P	14	16	17	19		15	1 10	17	14		P	millions m <sup>2</sup>	Verre	
	Glass Sawnwood	million n <sup>-</sup> 1000 m <sup>3</sup>		2 770	3 191	3 007	2 371	2 112	2 107	1 881	1 877	1 832	1 860	•	1000 m <sup>3</sup>	Bois scié	

(a) AC : apparent consumption C : consumption D : deliveries HD : home deliveries

I : imports P : production

(a) CA : consommation apparenteC : consommation

L : livraisons

LP : livraisons à l'intérieur du pays I : importations P : production

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#### Table 14 : Consumers' prices and Rents

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	Item <sup>(a)</sup>	1938	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Rubrique <sup>(a)</sup>	Pays
Country	Item				۵۰٬۱۰۰ میں ماہید پر میں میں میں میں ور ا	19	53 = 100							
Austria	Total Rent	14 30	50 <b>31</b>	64 32	72 37	92 53	106 100	100 100	104 100	105 100	108 102	111 103	Total Loyer	Autriche
Belgium	Total Rent	24 36	94 70	91 77	91 79	99 83	101 88	100 100	101 110	101 112	104 113	• • • •	Total Loyer	Belgique
Denmark	Total Rent	53 68	79 82	80 86	88 88	99 92	101 96	100 100	102 104	109 110	110 115	115 122	Total Loyer	Danemark
Finland	Total Rent	8 19	66 28	74 35	84 43	100 63	100 77	100 100	98 123	97 134	104 159	115 190	Total Loyer	Finlande
France	Total Rent	4 1	62 29	71 43	78 58	91 70	102 <b>8</b> 9	10C 100	99 112	100 124	102 138	106 147	Total Loyer	France
Greece	Total Rent	0.1	• •	••	91 27	99 43	101 57	100 100	113 103	115 146	119 154	117 174	Total Loyer	Grèce
Ireland	Total Rent	41	79 88	79 92	80 94	87 90	95 99	100 100	100 103	103 106	107 110	111 115	Total Loyer	Irlande
Italy	Total Rent	1 6	91 21	91 32	89 42	96 72	99 91	100 100	102 106	104 121	107 156	107 1.87	Total Loyer	Italie
Netherlands	Total Rent	34 87	76 87	81 87	89 38	100 100	100 100	100 100	104 120	106 122	108 126	113 136	Total Loyer	Pays-Bas
Norway	Total Rent	43 98	72 92	72 93	<b>77</b> 93	90 94	98 97	100 100	104 100	105 111	108 114	111 120	Total Loyer	Norvège
Portugal	Total Rent	••	97 121	1.00 121	100 107	99 99	99 100	1CC 100	99 101	100 112	103 116	104 118	Total Loyer	Portugal
Sweden	Tota <b>l</b> Rent	47 80	76 86	78 86	78 86	91. 87	100 93	100 100	102 102	105 105	109 114	113 118	Total Loye <b>r</b>	Suède
Switzerland	Total Rent	55 83	98 87	97 88	94 90	99 93	101 98 -	100 100	100 102	101 106	102 108	104 111	Total Loyer	Suisse
Turkey	Total Rent	23 73	••	99 88	94 87	91 87	98 87	100 100	108 145	114 188	130 218	3 e • e	Total Loyer	Turquie
United Kingdom	Total Rent	40 80	76 89	79 89	81 90	89 92	97 95	100 100	102 104	106 107	111 113	115 121	Total Loyer	Royaume Uni
Western Germany	Total Rent	56 <b>89</b>	101 93	100 93	93 93	101 95	102 97	100 100	100 100	102 103	104 109	106 111	Total Loyer	Allemagne occidentale

Sources : National statistics

- (a) The indices relative to the "Total refer to the total of the consumers' prices, excluding rent; the rent-index is the component of the general consumers' price index.
  - For some countries successive revisions of the consumers' price index have taken place in the course of the period for which figures are shown; for this reason it has been necessary to splice these successive series of indices.

Sources : Statistiques nationales.

- des prix à la consommation.
  - d'enchaîner ces séries successives d'indices.

HOU/WP.3/Working Paper No.24/Add.3 Table 14

page 1 Tableau 14 : Prix à la consommation et loyers

(a) - Les indices relatifs au "Total" se rapportent au total des prix à la consommation à l'exclusion du loyer; l'indice du loyer est un composant de l'indice général

- L'indice des prix à la consommation ayant été révisé dans certain pays au cours de la période pour laquelle des données sont fournies, il a été nécessaire

RESTRICTED

HOU/WP.3/Working Paper No.25 24 April 1958

Original: ENGLISH

#### ECONOMIC COMMISSION FOR EUROPE HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Tenth session)

#### QUARTERLY BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE

Note by the Secretariat

At its eighth session held in May 1957 the Working Party expressed the view that the definitive version of the Quarterly Bulletin covering the first quarter 1958 could be issued in the course of July 1958. The Working Party may wish therefore to review the Quarterly Bulletin covering the fourth quarter of 1957 and the whole of the year 1957, i.e. Vol. V, No.4. At the same time the Working Party may find it convenient to consider the results obtained from the Housing Quarterly Statistics Questionnaire by means of which statistics have been collected for this issue. Contents of the Quarterly Bulletin

The Working Party's attention is drawn to the following points:

(a) <u>Tables</u>:

(i) <u>Table 4</u>

At the request of the Working Party, figures on apparent consumption of cement have been substituted for those on production of cement. A certain number of countries having failed to supply the Secretariat with this kind of data, considerably fewer figures are shown in the table on apparent consumption than was the case with production of cement.

(ii) <u>Table 5</u>

This table shows the production of bricks expressed in indices, calculated on the basis of production in 1953 for the annual figures, and of the average quarterly production in 1953 for the quarterly figures. It has been suggested by one of the countries that the production during a given quarter should be compared with that of the corresponding quarter of 1953 instead of with the average quarterly HOU/WP.3/Working Paper No.25 page 2

production of that year. The Working Party may wish to consider this point. The Secretariat, however, is of the opinion that it would be preferable to continue the current practice in order to show, at the same time, seasonal variations in the production of bricks.

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The Working Party may also wish to consider whether this table is essential. As the relationship between house-building and brick production may vary widely from one country to another, such production may be an unreliable indicator of house-building activity.

(iii) <u>Table 6</u>

This table shows the employment situation expressed in indices, calculated by comparing the average annual or quarterly employment with the average employment situation for 1953 as a whole. Although this is believed to be the most suitable method, the Working Party may wish to consider others, for example, as one country has suggested, the comparison of the employment situation at the end of a particular quarter with the 1953 average.

(iv) <u>Table 7</u>

This table shows indices of the average level of unemployment in the relevant periods. One country has expressed the opinion that the use of indices in this particular case is an inadequate method of showing unemployment and would favour the resumption of absolute figures.

(b) Explanatory Notes and Sources:

In Volume V, No.4, of the Quarterly Bulletin (fourth quarter 1957) the notes relating to the tables on building costs and wholesale prices of building materials have been shortened by omitting the detailed explanatory notes for individual countries since it was believed that the scope of the statistics was shown sufficiently clearly by the general notes.

It will be recalled that at its ninth session the Working Party agreed that after an initial period during which further changes in the Quarterly Bulletin might be necessary, it would be possible to publish the explanatory notes and the notes on sources only in the first issue of each year and to include in subsequent issues only current changes and additions (HOU/WP.3/37, paragraph 23). It is proposed to adopt this policy henceforward,

#### Method of Collecting Statistics

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The Working Party decided at its ninth session that the statistics for the Quarterly Bulletin should in future be collected by means of a questionnaire on the contents of which it reached agreement. Both Nos. 3 & 4 of Vol. V have been mainly prepared on the basis of this questionnaire, although a number of countries failed to complete it. The Working Party may wish to remind countries that they should make every possible effort to submit the information required in due time, it having been agreed that the quarterly statistical returns should be rendered two months after the end of the quarter under review. The Secretariat also suggests that countries which supply information not previously published or make changes in one or another of the statistical series should on the same occasion supply this information for all the years and quarters shown in the Quarterly Bulletin and provide a short descriptive note relating to the new series or changes.

The Secretariat also has a number of questions relating to the information supplied and will take them up with those concerned in the course of the meeting.

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Item 6 of the provisional agenda of the tenth session)

#### THE USE OF PHYSICAL UNITS FOR MEASURING BUILDING ACTIVITY Note by the Secretariat

At its ninth session the Working Party considered a draft paper on indices of building activity prepared by Mr. P.J. Deneffe (Federal Republic of Germany) and Mr. J. Hirdes (Netherlands). As there appeared to be a need for further study of the use of the various physical units for the measuring of building activity, the Working Party invited the rapporteurs to prepare a paper analysing the value of the different physical units. The findings and the conclusions of the rapporteurs are given in the Annex.



#### PROVISIONAL TRANSLATION

HOU/WP,3/Working Faper No.26 Annex page 1

#### ANNEX

#### THE USE OF PHYSICAL UNITS IN BUILDING STATISTICS

1. Purposes of the establishment of physical units in building statistics

The physical units should be established in such a way that:

(a) They make possible the measurement of the volume of building output taken as a whole or divided up into individual sectors of the construction industry. In view of the variety of building activities in the different construction sectors, it is not possible to use physical units in a uniform way in all these sectors. It is therefore possible to use physical units only for individual sectors of the construction industry.

(b) They make possible the calculation of relations between different statistical data of building output. In this connexion reference is made, for example, to the calculation of the average size of buildings according to the number of cubic metres of building volume, to the average size of dwellings according to the number of square metres of living floor space, to the average building cost per dwelling or per cubic metre of building volume or per square metre of living floor space. This calculation of the relations existing between different statistical data of building output aim at a better analysis of building output during a given period.

2. Type and definitions of physical units

- (a) The following physical units can be considered:
  - (i) the "building"
  - (ii) the "dwelling"
  - (iii) the "cubic metre of building volume"<sup>(1)</sup>

(iv) the "square metre of floor space" (living or/and useful floor space)
(b) These units require a more precise definition. It will be very difficult
to obtain a uniform international definition not only because the definitions
existing in various countries are different but also because they are established
by legislation and are dependent on technical standards. These differences do not
hamper a comparison of data relating to building output over a certain period
within a given country but they complicate any international comparison of building
output expressed in physical units.

(1) in German: "umbauter Raum".

(i) The definitions of a "building" and of a "dwelling" have already been considered by the Working Party. In this connexion a definition for a "building" would hardly appear useful.

(ii) By "cubic metres of building volume" is generally meant the total space of a building, including the outer and inner walls. Attics and cellars are also included in the building volume. For the treatment of closed verandas there exist special means of calculation (in most cases only part of the space is taken into account).

(iii) By "square metre of living and useful floor space" is meant the total covered area measured within the outer walls of the building.

In the case of buildings of several storeys, the surface of the storeys are taken into account.

The definition of a square metre of living and useful floor space happens to differ according to the construction sector. As far as residential buildings are concerned the following distinction is often made:

- (a) floor space of the main rooms (strictly living floor space only)
- (b) floor space of the whole dwelling. (This means including the floor space of the accessory rooms.)

Another distinction of the floor space within residential buildings concerns:

- (a) the floor space of the rooms destined for dwelling purposes
- (b) the floor space of the rooms destined for business or professional purposes (shop, workshop, garage, etc.).

3. The possibilities of using physical units

The possibilities of using physical units have to be assessed differently according to the different construction sectors.

(a) In the case of residential building, the four types of physical units can be used. A combined use of physical units supplies statistical data which are different in scope.

(b) In the case of non-residential buildings, only the types mentioned above under paragraph 2 (a) (i), (iii) and (iv) are applicable. (1)

(c) As far as other building work is concerned (civil engineering), the square metre of floor space is only applicable to a limited extent. To can be applied for example to road construction, airfield construction and the like.

<sup>(1)</sup> Assuming that the building of technical installations and the like are not taken into account.

HOU/WP.3/Working Paper No. 26 Annex page 3

In the case of maintenance, repairs and conversions, measurement in terms of physical units is not possible.

#### 4. Problems relating to the use of physical units

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(a) It would appear to be impossible to express total building output for a certain period in physical units since:

(i) not all types of building projects can be expressed in physical units (see 3), and

(ii) there exists the difficulty, in the case of building projects which can be expressed in physical units, of expressing also in physical units those projects not completed. Particular reference should be made in this connexion to those building projects which, at the beginning of the period considered, are under construction and those not completed by the end of the period. Attempts to express such building projects, for example in terms of completed buildings (or in residential building, in terms of dwellings) lead to doubtful results. At any rate these computations (work done at all stages of production) require fairly detailed statistics (see paragraph 5). When the data are to be obtained from building firms, it may be particularly difficult to compile such detailed statistics.

(b) Physical units would also appear to be unfit for expressing building output since they do not reflect the qualitative changes. The volume of production activity on a building project is not only determined by physical size but also by quality of execution and by equipment. Building projects of similar size expressed in physical units may differ considerably in regard to execution and equipment. Pronounced differences in the execution and equipment of buildings are found when comparisons in time or between areas or countries are made. It would appear, therefore, that physical units are basically unsuitable for comparisons of building output in time and between different regions. The same would appear to be true as far as separate construction sectors are concerned.

5. Methods applied for the measurement of production in terms of physical units

(a) One method is to define certain arbitrary stages in the production process. Regular statistics are then needed on the number of units within each stage.

(i) Up to 1952 the above method has been applied in the United Kingdom for permanent house construction. By this method houses partly completed are expressed in terms of the equivalent of completed houses. (For a detailed description see Methods of Computing an Index of Building Activity (IM/HOU/WP.3/4).) HOU/WP.3/Working Paper No, 26 Annex page 4

(ii) In the Netherlands a quarterly check is carried out on the progress of all projects costing Guilders 10,000 or more and for which a building licence has been granted, (approximately 20,000 projects per quarter). The following phases are distinguished: not yet begun, begun, 20 per cent completed, 40 per cent completed, etc., and completed. (This check rests with municipal building inspectors, who regularly visit building projects under construction in order to see whether building regulations are being observed). The volume of production (work done) is calculated in terms of value. ß

Recently, however, in addition to the building costs, the volume in cubic metres is being asked for, in order to calculate prices per cubic metre, etc. (see 1 (b) ). It is intended - at present for internal use only - to calculate production also in terms of physical units (cubic metres) and to compare with the results expressed in constant prices. The Working Party may wish to be informed of the outcome of this method at a later stage.

(b) A more simple method is used in Denmark, where the output of new buildings is calculated in terms of square metres of gross floor space. On the basis of quarterly building statistics the amount of work begun and of work completed is known. By following the work begun in each quarter until it is completed, it is possible to estimate the building period for the work started in each quarter; the work begun in each quarter is then distributed over the quarter during which it has been under construction.

The Danish Department concerned mentions the following defects:

- the total value of construction for the work begun in a given quarter is not distributed evenly over the whole period of construction as the greater part of the investment is normally made at the beginning of the period; also weather conditions may affect the size of the investments in each quarter;

- from current estimates it is not possible to know the length of the building period for the work still under construction.

The problem of changes in the quality of the work is not mentioned. 6. <u>Usefulness of establishment of physical units</u>

From the foregoing it appears doubtful whether the use of physical units is the obvious way of measuring building activity. It should be emphasized, however, that for certain other purposes (see 1 (b) ), the collection of data on volume of construction in physical terms is very useful. PROVISIONAL TRANSLATION

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#### ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Item 6 of the provisional agenda of the tenth session)

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HOU/WP.3/Working Paper No.26 Annex page 1

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HoU/WP.3/Working Paper No. 26 Annex page 3

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

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#### Working Party on Housing and Building Statistics

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#### PROVISIONAL AGENDA

#### Sixth Session

to be held at the Palais des Nations, Geneva, from 14 to 16 May 1956, beginning at 10 h. 30 a.m. on 14 May

- 1. Adoption of the Agenda
- 2. Election of Officers
- 3. Activity of the Conference of European Statisticians (HOU/WP.3/Working Paper No.4)
- 4. Draft Annual Bulletin of Housing and Building Statistics for Europe (HOU/WP.3/Working Paper No.5)
- 5. Concepts and definitions of housing and building statistics (HOU/WP.3/21 and HOU/WP.3/Vorking Paper No.6)
- 6. Technical problems involved in the collection of current housing and building statistics.
- 7. Method for measuring the capacity of dwellings for family occupation (HOU/WP.3/26)
- 8. Work programme and method of work of the Working Party (HOU/WP.3/Working Paper No.7)
- 9. Any other business
- 10. Date of next meeting
- 11. Adoption by the Working Party of the report of the sixth session

#### NOTES ON THE AGENDA FOR THE SIXTH SESSION

#### Item 2: Election of Officers

According to the rules of procedure of the Economic Commission for Europe, officers of committees and working parties are elected at the first session of each year.

#### Item 3: Activity of the Conference of European Statisticians

At its third plenary session, held from 26 September to 1 October 1955, the Conference of European Statisticians considered, <u>inter alia</u>, the statistical activities carried out under the programme of the Housing Committee. A statement on the views and recommendations of the Conference in this field will be made by the Secretariat, together with a review of some other activities of the Conference which are, in a more indirect way, related to the Working Party's work programme (HOU/WP.3/Working Paper No.4).

# Item 4: Draft Annual Bulletin of Housing and Building Statistics for Europe

At its last session, the Working Party agreed on the final contents of the Annual Bulletin, which will be issued in addition to the four issues of the Quarterly Bulletin. A first draft of the Annual Bulletin has been drawn up by the Secretariat and will be circulated shortly (HOU/WP.3/Working Paper No.5). It will be noted that this draft appears with many gaps in the information supplied and that it may contain a certain number of errors. Countries are therefore invited to supply the necessary completions, corrections or whatever comments they may have, which would enable the Secretariat to prepare the final version of the Bulletin. Information for a few countries, not yet included in the draft, will be published later.

# Item 5: Concepts and definitions of housing and building statistics

At its previous sessions the Working Party has fully discussed the definitions of the following items: room, dwelling, households, occupant, completion of dwellings, residential and non-residential buildings, types of building activity. For each of these items a definition has been agreed upon by the Working Party. The basis of the discussion of these concepts was a report prepared by the Secretariat with the help of rapporteurs (HOU/WP.3/21). Owing to lack of time the definitions proposed in this report relating to the concepts "floor space" and "volume" have not been discussed and are therefore put on the agenda of the present session. The Working Party has, on various occasions, expressed the wish that certain basic statistics should be published on an all-European instead of a country-bycountry basis. The Secretariat has therefore undertaken a comparative study of statistics relating to the completion of dwellings, in view of the eventual publication of an all-European table on the number of dwellings completed annually (HOU/WP.3/Working Paper No.6).

# Item 6: Technical problems involved in the collection of current housing and building statistics

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The Working Party has expressed the opinion that, for studying the comparability of the statistics, underlying definitions and concepts should not only be considered but that also the way in which the statistics are collected and established is equally important. The Secretariat has therefore invited countries to supply information relating to the methods of elaboration of current housing and building statistics and will report on the results of the enquiries. Item 7: Method for measuring the capacity of dwellings for family occupation

At its fifth session, in May 1955, the Working Party heard a statement by the representative of the International Union of Family Organizations on a method of indicating the capacity of dwellings for family occupation. The Working Party considered that the method described in that statement merited study, and decided to place the question on the agenda for its next session, unless the Housing Committee preferred to refer it to one of its other working parties first. As the Housing Committee has not so decided, the question has been placed on the agenda for this session. A note by Mr. L. Wynen, of the International Union of Family Organizations, which may serve as a basis for discussion, has already been distributed (HOU/WP.3/26).

# Item 8: Work programme and method of work of the Working Party

In the course of its various sessions the Working Party has decided to include in its working programme a certain number of items. The Secretariat suggests that the time has come to review the whole of the work programme in order to establish an order of priority among the various items and to discuss the most suitable method for dealing with them. The Secretariat's review of the items together with some preliminary suggestions as to the priorities to be given and the method of work to be adopted are set out in Document HOU/WP.3/Working Paper No.7.

The Artices

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics (Tenth session)

# WORK PROGRAMME OF THE WORKING PARTY ON HOUSING AND BUILDING STATISTICS

Note by the Secretariat

At its minth session the Working Party agreed that it would review its work programme at the June 1958 meeting (Document HOU/WP.3/37, paragraph 27).

The Working Party's present work programme was agreed upon at its sixth session. During later sessions no new items were added to this programme but, on a number of items, work has been completed, or is likely to be completed at the tenth session. It appears that some of the remaining items on the programme give rise to statistical problems of a more general nature than most of the questions hitherto dealt with by the Working Party. It is suggested that the Working Party should consider whether these items could not be dealt with more effectively by other bodies, and if so referred to them. Other items on which further work remains to be done clearly belows to the Working Party's own field of competence or should at least be further considered by the Working Party before being referred to other bodies.

The Working Party may therefore wish to consider which of the items concerned it wishes to maintain in its programme, and how work can best be done on them. The guiding principle should be, it is suggested, that the Working Party should concentrate on current housing statistics of a primarily operational character.

The work programme drawn up by the Working Party at its sixth session is set out below under the three headings distinguished above. The results achieved at previous meetings, and suggestions for possible further work on some items are also given.

I. Items on which work has been completed by the Working Party

(a) <u>Concepts and definitions</u>

The following items were included in the Working Party's programme a

- Dwelling unit

- Room

- Household (private household and institutional household)
- Occupant
- Residential building and non-residential building
- Floor space (living floor space and useful floor space)
- Volume (gross)
- Types of building activity (new building, reconstruction repairs, extensions, conversions)
- Stages of building work (work authorized, begun, completed and under construction)
- Rural area and urban area
- Definition of the construction industry and its sub-divisions.

The Working Party has reached agreement on the definition of: dwelling, room, household, occupant, residential and non-residential building, floor space, volume, types of building activity and stages of building work. It also agreed that the definitions of rural area, of urban area and of the construction industry give rise to problems beyond its field of competence.

(b) Statistics on the value of building, and

(c) Index of building cost

The Working Party has reached agreement on the paper on both these subjects, prepared by rapporteurs (Mr. P. Deneffe, Federal Republic of Germany, and Mr. J. Hirdes, Netherlands) (HOU/WP.3/Working Paper No. 19), and concluded that, at present, no further work on these items was necessary.

II. Items on which further work is necessary

(a) Subjects of a general nature which might be referred to other bodies

#### 1. Statistics on housing finance

The Working Party, after considering the problems involved, agreed that statistics of this kind formed part of the broader question of financial statistics in general. Whilst the Working Party agreed that it might take up the special aspects of housing finance at a later stage, it felt that it would first be necessary that the general problem should be considered by an appropriate body. The Working Party therefore decided to refer this question to the Conference of European Statisticians for guidance (HOU/WP.3/31, paragraph 13). The Conference took note of the Working Party's suggestion and agreed that statistics of housing finance should not be discussed before the question of financial statistics in general had been considered by an appropriate body; it also agreed that any work in this field should be undertaken as part of the Conference's work on financial statistics.

#### 2. Sampling surveys of the housing situation

#### 3. Rent index

These two subjects form part of broader statistical subjects and involve many problems which fall beyond the competence of the Working Party. They could probably be dealt with more appropriately by general statisticians and it is therefore suggested that the Conference of European Statisticians should be invited to include these subjects in its own programme of work.

#### (b) Subjects which the Working Party might maintain in its own work programme

#### 1. Statistical bulletins

At its June 1958 meeting the Working Party will review the definitive version of the Quarterly Bulletin and a preliminary first version of the Annual Bulletin. Thereafter it might review from time to time the two statistical bulletins and, arising out of this, such statistical problems as might occur on current statistics.

#### 2. Index of building activity

The Working Party considered a draft paper prepared by two rapporteurs on indices of building activity (HOU/WP.3/Working Paper No.15/Add.1). It appeared that there was a need for further study on the use of the various physical units for measuring building activity. It decided therefore to consider this problem on the basis of a further paper to be prepared by the rapporteurs for consideration at the June 1958 meeting (HOU/WP.3/Working Paper No.26). It depends on the outcome of the discussion at that meeting whether the work on this item will be brought to an end or whether further work will prove necessary. If, in such further work, problems with broader statistical implications appear to arise the Working Party may consider whether this item should also be referred to another body.

# 3. <u>Method for the measurement of the capacity of dwellings for family</u> <u>occupation</u>

It should be recalled that this item was included in the Working Party's programme at the request of the International Uniom of Family Organizations, A discussion of this problem was initiated at an earlier session (HOU/WP.3/28, paragraphs 12 and 13, HOU/WP.3/31, paragraph 11) The Working Party agreed with a suggestion of the IUFO to postpone consideration of this item until a document which the IUFO was preparing on the practical application of the method proposed had been put before the Working Party.

4. <u>Problems of collecting current housing and building statistics</u> At its sixth session the Working Party agreed that the most immediate reason for HOU/WP.3/Working Paper No. 27 page 4

taking up this item was to exchange experience between countries on methods used and on problems of collection. It invited the Secretariat to prepare a consolidated document on national practice and for this purpose to ask for additional information from Governments (HOU/WP.3/28, paragraph 20). If the Working Party considers that this item should remain in its work programme it would be useful if the purpose of a study of this nature could be defined somewhat more precisely, and agreement on the broad contents could be reached. The Working Party may also wish to consider whether a rapporteur should be nominated to prepare the study.

5. Calculation of housing needs and shortages

For some time work on these subjects has been carried out by the Housing Committee itself and in the light of this the Working Party decided to reconsider its own activities in this field when the formulation work by the Housing Committee was completed (HOU/WP.3/28, paragraph 23). In this connexion reference should be made in particular to a study on the formulation of housing programmes included in European Housing Trends and Policies in 1956 as Part II and especially to Section 2 : The estimating of housing needs (E/ECE/HOU/69, pages 43 to 53).

6. Manpower statistics

7. Building materials

Work on these two points has not yet been done. There would appear to be a need for better and more complete statistics on building materials and components and on manpower in the building industry. It would be preferable, however, to refer these questions in the first instance to the Housing Committee. Thereafter the Working Party may wish to consider how the co-operation of other bodies responsible in the fields concerned could be secured.

#### Conclusion

1. The Working Party may wish to consider the various suggestions made above. 2. Since the greater part of the existing work programme has now been disposed of, other than certain items which it is suggested should be transferred to other bodies such as the Conference of European Statisticians, and provided the Working Party agrees to the transfer of these items, it would seem no longer necessary for the Working Party to meet as frequently as has been the case in the past. The Working Party itself agreed to consider whether in future it would be possible to hold meetings only once a year (HOU/WP.3/37, paragraph 27). The nature of the future tasks of the Working Party is such, however, that it is perhaps no longer necessary to hold meetings at regular and comparatively frequent intervals. The Working Party could in future be convened when the necessity arose.

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#### ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

(Sixteenth session)

# PROPOSED TIME-TABLE FOR FORTHCOMING HOUSING MEETINGS 12 to 20 June 1958

In accordance with its usual practice, the Secretariat is proposing the following time-table for the forthcoming meetings of the Housing Committee, the Working Party on Housing and Building Statistics, and groups of rapporteurs which are to be held during the period 12 to 20 June 1958. The meeting of the rapporteurs on the utilization of space in dwellings will take place in Brussels; the others will be held in Geneva, as usual.

The Secretariat is also suggesting an order in which the items of the agenda might be taken up.

Thursday and Friday, 12 and 13 June 1958; rapporteurs on the utilization of space in dwellings; the rapporteurs are: Mr. Blackshaw (United Kingdom), Mr. Blokhine (USSR), Mr. Lebegge (Belgium), and a representative from the International Union of Architects (UIA). The meeting will be held at the Institut National du Logement, 86, rue St. Lazare, Brussels.

#### Monday, 16 June

10.30 a.m.	<ul> <li>Working Party on Housing and Building Statistics</li> <li>Item 1: Adoption of agenda</li> <li>Item 2: Election of officers</li> <li>Item 3: Activity of Conference of European Statisticians</li> <li>Item 4: Annual Bulletin of Housing and Building Statistics</li> </ul>		
10.30 a.m.	- Meeting of rapporteurs on rural housing /Mr. Björk (Sweden), Mr. Charlier (Belgium), Messrs. Burroughs and Dodge (United States of America), Mr. Drogeanu (Romania), Mr. Ivantchenko (USSR)_/.		
3 p.m.	- Working Party on Housing and Building Statistics - Ttem 4: (continued)		

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<u>Monday, 16 June</u> (continued)			
3 p.m.	- Meeting of rapporteurs on particular questions of urbanization and town planning in relation to cost of building /Mr. Stefanovic (Yugoslavia) and a rapporteur from Sweden/.		
3 p.m.	- Meeting of rapporteurs on government policies and cost of building.		
Tuesday, 17 June			
10 a.m.	<ul> <li>Working Party on Housing and Building Statistics</li> <li>Item 5: Quarterly Bulletin of Housing end Building Statistics</li> <li>Item 6: The use of physical units for measuring building activity</li> </ul>		
10 a.m.	- Meeting of rapporteurs on housing developments in less industrialized countries <u>/Rapporteurs</u> from Greece, Turkey and Yugoslavia/.		
3 p.m.	<ul> <li>Working Party on Housing and Building Statistics</li> <li>Item 7: Work programme</li> <li>Item 8: Any other business</li> </ul>		
3 p.m.	- Meeting of rapportsurs on rural housing (continued).		
Wednesday, 18 June			
9 a.m.	- The Working Party on Housing and Building Statistics should be convened for one hour to adopt its report (Item 9 of the agenda).		
10 a.m.	- Meeting of rapporteurs on financing of housing /Mr. Datzkov (Bulgaria), Mr. Salaün (France), Mr. di Lorenzo (Italy), Mr. Seip (Norway), Mr. Andrzejewski (Poland), Mr. Burroughs (United States of America), and Mr. Robert (International Co-operative Alliance)/.		
10 a.m.	- Meeting of rapporteurs on standardization and modular co-ordination /Mr. Blachère (France) and Mr. Drogeanu (Romania)/.		
10 a.m.	- Meeting of rapporteurs on government policies and cost of building (continued)		
3 p.m.	<ul> <li>Housing Committee</li> <li>Item 1: Adoption of Agenda</li> <li>Item 2: Election of Officers</li> <li>Item 3: Matters arising from the thirteenth session of the Economic Commission for Europe</li> <li>Item 4: Financing of Housing</li> </ul>		
Thursday, 19 June			
10 a.m.	<ul> <li>Housing Committee</li> <li>Item 4: (continued)</li> <li>Item 5: European housing trends and policies in 1957</li> </ul>		
3 p.m.	- Item 5 (continued) - Item 6: Formulation of house-building programmes		

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10 a.m.	- Housing Committee
	- Item 7: Housing for the disabled
	- Item 8: Standardization and modular co-ordination
	- Item 9: Particular questions of urbanization and town-
	planning in relation to cost of building
3 p.m.	- Housing Committee
-	- Item 10: Other work in progress
	- Item 11: Technical co-operation and all-European contacts
	- Item 12: Any other business
	- Item 13: Date of next meeting
	- Item 14: Adoption of report of session

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# ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

(Sixteenth session)

#### PROPOSED TIME-TABLE FOR FORTHCOMING HOUSING MEETINGS

#### Addendum

The Secretariat has listed below for the convenience of delegates the rooms in which the various meetings of the Housing Committee, the Statistical Working Party and groups of rapporteurs will be held during the week 16 to 20 June 1958. At the same time a few changes of programme are to be noted.

#### Monday, 16 June

10.30 a.m.	- Working Party on Housing and Bailding Statistics	Salle V		
10.30 a.m.	- Meeting of rapporteurs on rural housing	C.3		
3 p.m.	- Working Parby on Housing and Building Statistics	Salle V		
3 p.m.	- Meeting of rapporteurs on particular questions of urbanization and town planning in relation to cost of building	D. 121		
3 p.m.	- Meeting of rapporteurs on government policies D. 119 and cost of building			
Tuesday, 17 June				
10 a.m.	- Working Party on Housing and Building Statistics	Salle V		
10 a.m.	- Meeting of rapporteurs on housing developments in less industrialized countries	Owing to illness this meeting will not be held		
3 p.m.	- Working Party on Housing and Building Statistics	Salle V		
3 p.m.	- Meeting of rapporteurs on rural housing	C.3		
Wednesday, 18 June				
9 a.m.	- Working Party on Housing and Building Statistics	Salle V		
10 a.m.	- Meeting of rapporteurs on financing of housing	Salle V		
10 a.m.	- Meeting of rapporteurs on standardization and modular co-ordination	D. 121		
10 a.m.	- Meeting of rapporteurs on government policies and cost of building	0. 3		
3 p.m.	- Housing Committee	Salle V		
Thursday and Friday, 19 and 20 June				
	Housing Committee	Salle V		

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#### ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

MAT 31 1950

# Working Party on Housing and Building Statistics

(Sixth session, from 14 to 16 May 1956)

#### REPORT OF THE WORKING PARTY ON HOUSING AND BUILDING STATISTICS ON ITS SIXTH SESSION

(as adopted on 16 May 1956)

1. The sixth session of the Working Party was held in Geneva from 14 to 16 May 1956.

2. Representatives of Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, the Federal Republic of Germany, Finland, France, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland, the Union of Soviet Socialist Republics, United Kingdom, Yugoslavia participated in the meeting. The following International Non-Governmental Organizations were present: The International Union of Family Organization, the International Statistical Institute and the International Union of Architects.

3. Mr. L. de JONGE (Netherlands) and Mr. VLCEK (Austria) were re-elected respectively Chairman and Vice-Chairman.

4. The provisional agenda (HOU/WP.3/27) was adopted.

#### Activities of the Conference of European Statisticians

5. The Working Party considered a note by the Secretariat on the activities of the Conference of European Statisticians (HOU/WP.3/Working Paper No. 4). During its third plenary session in September, the Conference had decided to refer the definitions drawn up by the Working Party to its own Working Group on Population Censusses for review in their relation to housing censuses. It was expected that this Working Group would meet in the course of 1956/1957 and would discuss, in addition to these concepts and definitions, the general problem of the relation of housing censuses to population censuses.

6. The Working Party noted that further progress had been made by the Conference in the field of statistics of gross fixed capital formation and that a programme for the collection of such statistics would soon be issued. Copies of this programme would be made available to the members of the working Party. The Working Party agreed that the work of the Conference in this field should be fully taken into account in its own work on statistics of investment and the value of building.

7. As regards indicators of short-term economic changes a group of Experts of the Conference had considered that the Working Party's attention should be drawn to the need for current (i.e. quarterly or more frequent) indicators on fixed capital formation and that the Working Party should be invited to pay special attention to this aspect in its future work. The Group had also suggested that the study of statistics which were useful forward-looking indicators in this field, such as on building authorizations, contracts placed and starts, should be referred to the Working Party. It was agreed by the Working Party to consider these questions in connexion with other items in its work programme to which they were closely related.

# Draft Annual Bulletin of Housing and Building Statistics for Europe

8. The Working Party considered a draft of the Annual Bulletin of Housing and Building Statistics prepared by the Secretariat in accordance with the recommendations made by the Working Party at its previous session (HOU/WP.3/Working Paper No. 5).

9. The Working Party agreed that an annual bulletin of this nature would be a unique source of statistical information on housing and building and would be of great value for many purposes. In its present form, however, the Bulletin was a voluminous document, the preparation and publication of which was expensive and time-consuming. Nevertheless it was believed possible to reduce the size of the bulletin without a corresponding reduction of the amount of statistical information shown and that other changes in the presentation both of the Annual and the Quarterly Bulletins should be made which would simplify their preparation and lower their cost. The Working Party made the following proposals:

- (a) the tables in the annual bulletin on the stock of dwellings and rooms, and on households and populations should, so far as possible, be combined into one single European table in a separate general section of the Annual Bulletin. In later issues of the Bulletin, when further progress on concepts and definitions had been made by the Working Party, the general section should be expanded by showing also other tables on a subject basis instead of a country basis.
  Similar changes might be made in the presentation of the Quarterly Bulletin;
- (b) the notes on national concepts and definitions should be combined in a separate section, or in a supplement, and should be presented on a subject basis. In this way, a considerable amount of repetition in the descriptions could be avoided. Similar arrangements could be made in the Quarterly Bulletin. It might also be envisaged to issue in one consolidated supplement, say once a year, the definitions used in the two Bulletins;
- (c) countries should supply the Secretariat with all the data to be included in the Quarterly and Annual Bulletins as soon as they were available.

10. During the discussions the view was expressed that it would simplify international comparisons if sub-divisions of certain totals, such as the breakdown of the total number of dwellings completed by type of builder, were shown as percentages instead of absolute figures. Such a change in the presentation would, however, delay the publication of the bulletin. It was, therefore, decided to reconsider this question at a later session. Also a suggestion that more reference series should be included, such as number of married couples and total investments, was referred to a later session of the Working Party.
11. It was agreed that Governments should be asked to submit the necessary completions (including data for 1955) and corrections to the draft tables of the Annual Bulletin for inclusion in the first issue, which was due to come out in the course of 1956. The Working Party took note that the deadline for the submission of this information was 1 June 1956 as previously announced.

#### Method for measuring the capacity of dwellings for family occupation

12. The Working Party considered a proposal by the International Union of Family Organizations to include the concept "capacity" in its general system of definitions and discussed the methods of measuring the capacity of dwellings on the basis of a document prepared by that organization (HOU/WP.3/26).
13. After thorough discussion the Working Party agreed that before a decision could be taken as to further procedure, it was desirable to review more systematically the views of countries on the proposed methods of measuring the capacity of dwellings. The Working Party therefore requested its members to send written comments on this matter to the Secretariat, and invited the Secretariat to prepare a working document on the basis of these replies for consideration at a later session.

#### Concepts and Definitions in Housing and Building Statistics

14. The Working Party continued its discussions on concepts and definitions in Housing and Building Statistics and considered the definitions of floor space and volume on the basis of the proposals made by the Rapporteurs appointed by the Working Party during its fourth session (HOU/WP.3/21).

15. The Working Party agreed with the principle that one single concept of floor space or volume might not prove adequate for the various purposes for which statistics of this kind are collected. The definitions proposed by the Rapporteurs were the following:

- (a) In respect of residential building
  - (i) "Gross floorspace is the floor area measured outside the surrounding walls. The area occupied by outbuildings detached from the building should be excluded. In the vertical plan the area of all storeys should be taken into account including cellars and attics, the latter, however, only insofar as they are designed for some useful purpose. In the case of common walls, the measurement should be made from the centre line of these walls. For the purpose of the measurement of gross floorspace of dwellings in multi-femily houses, common spaces should be proportionately allocated to the individual dwellings. The gross floorspace of detached rooms for habitation which are clearly intended to form a part of the dwelling should be included in the gross floor-space of the dwelling".

- (ii) "Useful floorspace is the floorspace of dwellings measured inside the surrounding walls, excluding cellars, non-habitable attics and, in multi-family houses, all common spaces".
- (iii) "Living floorspace is the total area of the rooms falling under the concept of "room" as defined by the Working Party."
- (b) In respect of residential and non-residential building

"<u>Gross volume</u> is the total volume of the space between the surrounding walls, the floor of the basement and the roof, measured outside. In the case of common walls the measurement should be made from the centre line of these walls. In the case of dwellings, gross volume is usually calculated as the product sum of the gross floor space of each storey (including cellars) multiplied by the height of that storey, account being taken of the angle of the roof".

16. The following points were raised in connexion with these proposed definitions:

(a) Gross floorspace

Divergent views were expressed on the usefulness of the concept of gross floorspace and on how it should be defined. It was decided to reconsider this concept at a later stage.

(b) Useful floorspace

(i) The term "multi-family" houses was considered ambiguous and the Working Party therefore decided that it should be replaced by "multi-dwelling" houses.

(ii) According to the definition proposed by the Rapporteurs, common staircases were excluded from the concept "useful floorspace", whereas other staircases were included. The Working Party considered that this point would not significantly affect the comparability of statistics and that moreover, since most countries had separate statistics for one dwelling houses and multi-dwelling houses it would be possible to assess roughly the quantitative significance of the difference in treatment.

(c) Living floorspace

(i) The proposed definition did not specify whether the surface of fixed cupboards and similar space should be included or excluded but it was agreed that this did not seriously affect international comparability.

(ii) It was pointed out that given the definition of a room adopted by the working Party, living floorspace should include the surface of kitchens. It was agreed that countries which normally excluded kitchens from their statistics in this field should provide for international use separate estimates of the floorspace of kitchens.

(d) Gross volume

(i) It was agreed that the last sentence of the proposed definition should be omitted since it did not belong to the definition proper but referred to a method of calculation.

(ii) According to the proposed definition the gross volume of detached outbuildings should be excluded. It was agreed that countries which normally include the volume of these outbuildings in their statistics should aim at providing separate data for this kind of premises for international purposes. 17. The Working Party, therefore, accepted the definitions of useful floorspace, living floorspace and gross volume proposed by the Kapporteurs with the amendments referred to in the previous paragraph. It was agreed that rountries supplying floorspace statistics in other terms than that of useful floorspace should be invited to make available coefficients for conversion of their statistics into that concept. These coefficients could be approximate if necessary.

Comparison between Standard Definitions and National Definitions 18. The Working Party discussed HOU/WP.3/Working Paper No.6 and reached the following conclusions:

- (a) It was desirable to publish in the near future in the Quarterly Bulletin (and later also in the Annual Bulletin) a table showing annual completion of dwellings for all countries for which statistics could be made available;
- (b) for the purpose of this table conversions and extensions should include only those building operations which lead to a change in the number of dwellings available;

- (c) the statistics should be expressed in terms of dwellings;
- (d) the statistics should include dwellings both in residential and non-residential buildings and should cover the whole territory of the country;
- (e) countries which were not able to supply statistics strictly in accordance with the agreed definitions should aim at making estimates of the quantitative significance of deviations.

19. The Working Party invited the Secretariat to consider whether in the tables statistics which did not accord with the agreed definitions could be indicated by a different letter type or an asterisk.

<u>Technical Problems of Collecting Current Statistics on Housing and Building</u> 20. The Working Party considered HOU/WP.3/Working Paper No. 8 and discussed the purpose for which a study of technical problems of collecting current statistics on housing and building was required. The Working Party agreed that the most immediate purpose was the exchange of experience between countries on methods used and problems of collection; it therefore invited the Secretariat to prepare a consolidated document on national practices in this field and to this purpose to ask for additional information from governments while indicating in which form this material was required.

21. The Working Party agreed to consider at a later stage whether further work on this problem was required.

Work Programme and Method of Work

22. The Working Party reviewed its work programme, considered methods of work and agreed upon the order of priorities to be allocated to each item on the basis of HOU/WP.3/Working Paper No. 7. The programme suggested by the Secretariat was accepted with the following amendments:

- (a) It was decided to include in the list of items for which concepts and definitions have to be defined the concept: built-up area of dwellings and buildings;
- (b) it was decided to maintain in the work programme the item relating to the measurement of the capacity of dwellings;
- (c) at the present stage no group of rapporteurs need be convened on the subject: problems of collection.

23. As regards the subject: housing needs and shortages, the Working Party considered that it would be desirable to avoid overlapping with related work done by the Working Party on the Development of Housing Policies. The latter Working Party had already made considerable progress and was expected to reach conclusions in the near future. The Working Party decided to reconsider its own method of work on this subject when the results of the work of the Working Party on the Development of Housing Policies were available.

24. The Working Party discussed whether new items should be added to the programme, in particular, questions relating to the 1960 housing censuses. It was decided, however, not to take up any new items before the Conference of European Statisticians had first considered the question.

25. The programme as adopted by the Working Party is attached as an appendix to the present report. It was understood that the order in which the items were shown did not necessarily correspond to their priority.

26. The Working Party invited Austria, Denmark, and Romania to nominate rapporteurs to take part in the further study on concepts and definitions. The Federal Republic of Germany and the Netherlands agreed to prepare together working documents for the items: indices of activity, indices of building cost and value of building.

#### APPENDIX

#### WORKPROGRAMME AND METHODS OF WORK

	Subject	Preparatory work by:	Priority <sup>(1)</sup>		
A.	Concepts and definitions				
	1. Drafting of standard definitions	Group of rapporteurs	<b>+                                    </b>		
	2. Comparative study of national and standard definitions	Secretariat and, perhaps later, group of rapporteurs	+ +		
B. Methodology					
	1. Index of activity	Rapporteur	+		
	2. Index of building cost	Rapporteur	+		
	3. Value of construction	Secretariat	+		
	4. Problems of collection (current statistics)	Secretariat	+		
	5. Rent index	Rapporteur	-		
	6. Manpower statistics	International Labour Office	-		
	7. Housing finance	(Two rapporteurs already nominated by the Working Party on the Development of Housing Policies)	To be considered when the reports of the rapporteurs are available		
	8. Calculation of housing needs and shortages	To be considered when the results of the work of the Working Party on the Develop- ment of Housing Policies are available	+		
	9. Sampling surveys of housing conditions	Secretariat and Rapporteur	-		
נ	0. Capacity of dwellings	Secretariat	+		
∠ī	1. Building materials (Consumption prices)	No proposals made	7		

(1) + + First priority. + Second priority. - Third priority.

HOU/WP.3/29 14 June 1956 ENGLISH only

#### ECONOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Sixth session, 14 to 16 May 1956)

#### LIST OF DELEGATES

Chairman: Mr. Laurentius DE JONGE (Netherlands) Vice-Chairman: Mr. Adolf VLCEK (Austria)

#### AUSTRIA

Mr. Adolf VLCEK

Mr. Ludwig RUTSCHKA

#### BELGIUM

Mme. Alice DE VESTEL-VERMEERSCH Directrice du Service d'information du Centre belge de Documentation et d'information de la construction

(CEDOC)

#### BULGARIA

Mr. Wassil STOILOFF

Mr, Wassil RAEV

Mr. Svetoslave SOTIROFF

CZECHOSLOVAKIA

Mr. Alois KREUZER

#### DENMARK

Mr. Torben KIRSTEIN FEDERAL REPUBLIC OF GERMANY Mr. Walter FEY Mr. Peter DENEFFE

#### FINLAND

Mr. Esko KULOVAARA

Vice-Ministre, Ministère de la Construction

Ingénieur en chef au Ministère des Travaux publics

Director of the Federal Ministry for

Trade and Reconstruction

Federal Statistical Office

Architecte, Comité d'Etat pour la Construction et l'architecture du Conseil des Ministres

National Committee for Construction

Statistical Department

#### Federal Ministry of Housing

Chief, Division of Statistics on Prices, Wages and Building, Federal Statistical Office

Director, Chairman of Building Production Committee (Arava)

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#### FRANCE

Mr. Eugène BROUILLARD

Mr. Pierre DELAIN

#### IRELAND

Mr. Emmet HUMPHREYS

#### ITALY

Mr. Ranucci GIOVANNI

Mr. Luigi PINTO

#### NETHERLANDS

Mr. Laurentius DE JONGE

Mr. Jan HIRDES

#### NORWAY

Mr. Carl ANONSEN

Mr. Jens SEIP

#### POLAND

Mr. Léon TOEPLITZ

Mr. Adam ANDRZEJEWSKI

#### ROMANIA

Mr. Pompiliu MACOVEI SPAIN

Mr. Luis VALERO BERMEJO

Mr. Victor FERNANDEZ GONZALEZ

#### SWEDEN

Mr. Lennart BJORK

Sous-Directeur au Ministère de la Reconstruction et du logement

Administrateur à l'Institut national de la statistique et des études économiques

Chief Housing Architect, Department of Local Government

Chef de la Division des Statistiques du logement et des travaux publics

Chef de Section du Service des Recensements, Institut central de statistique

Assistant Chief of the Division for Vital Statistics and Censuses, Central Bureau of Statistics

Central Bureau of Statistics

- Chief of Division, Statistical and Planning Office, Housing Board
- Deputy Director of the State Housing Bank
- Chef de Section, Institut de l'Urbanisme et de l'architecture

Directeur scientifique de l'Institut de l'habitat

Architecte en chef de la ville de Bucarest

- Directeur général de l'Institut national de l'habitation
- Inspecteur général du travail, Ministère du Travail

Deputy Chief of Section, Public Buildings Administration

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SWITZERLAND				
Mr. Ludwig HEINIGER	Chef adjoint de la Section de la statistique sociale à l'Office fédéral des arts et métiers et du travail			
Mr, Fritz BACHMANN	Adjoint au Bureau fédéral de Statistique			
UNION OF SOVIET SOCIALIST REPUBLICS				
Mr. Eugene ROUDKOWSKY	Engineer			
UNITED KINGDOM				
Mr. Ernest RUTLAND	Senior Research Officer, Ministry of Housing and Local Government			
YUGOSLAVIA				
Mr. Bogdan NIKOLAJEVIĆ	Chief of Division, Federal Statistical Office			
UNITED NATIONS SPECIALIZED AGENCIES				
INTERNATIONAL LABOUR ORGANISATION (ILO)				
Mr. E. HOWENSTINE	Economist, Economic Division			
Mr. Michael O'CALLAGHAN	Executive Secretary, Building Civil Engineering and Fublic Works Committee			
INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS				
INTERNATIONAL STATISTICAL INSTITUTE (ISI)				
Mr. J. NIXON	Adviser			
Mr. Ulrich ZWINGLI	Director, Statistical Office, Zurich			
INTERNATIONAL UNION OF ARCHITECTS				

Mr. Lucien DE VESTEL

)

Président de la Commission de l'habitat Mr. Jean-Pierre VOUGA Architecte, Délégué aux Commissions de travail de l'UIA

INTERNATIONAL UNION OF FAMILY ORGANIZATIONS (UIOF)

Mr. Lucien WYNEN Président de la Commission du Logement 

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# ECCNOMIC COMMISSION FOR EUROPE

#### HOUSING COMMITTEE

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# Working Party on Housing and Building Statistics

#### PROVISIONAL AGENDA

#### Seventh Session

to be held at the Palais des Nations, Geneva, from 29 November to 1 December 1956, starting at 3 p.m. on 29 November

- 1. Adoption of Agenda
- 2. Activities of the Conference of European Statisticians (HOU/WP.3/Working Paper No. 9)
- 3. Concepts and definitions of housing and building statistics (HOU/WP.3/Working Paper No. 10)
- 4. Indices of building activity and of building costs and value of construction (HOU/WP.3/Working Paper No. 11)
- 5. Data on financing in statistical bulletins (HOU/WP.3/Working Paper No. 12)
- 6. Method for measuring the capacity of dwellings for family occupation (HOU/WP.3/Working Paper No. 13)
- 7. Any other business
- 8. Adoption by the Working Party of the report of its seventh session

#### NOTES ON THE AGANDA FOR THE SEVENTH SESSION

#### Item 1: Adoption of Agenda

#### Item 2: Activities of the Conference of European Statisticians

The Working Group on Population and Housing Censuses of the Conference of European Statisticians will meet from 19 to 23 November. A statement on the activities of this Group as far as it is related to subjects dealt with by the Working Party will be given in HOU/WP.3/Working Paper No. 9.

#### Item 3: Concepts and definitions of housing and building statistics

The Working Party at its sixth session invited Austria, Denmark and Romania to nominate experts to act as rapporteurs who, together with the Secretariat, were asked to elaborate draft texts on concepts and definitions which remained to be considered (HOU/86, paragraph 26). The rapporteurs are expected to meet for a few days prior to the session of the Working Party and will in collaboration with the Secretariat draft definitions on "gross floorspace", "work authorized", "work begun", "work under construction", "built-up area", "rural and urban areas", and "building and civil engineering sectors". The texts recommended will be tabled at the meeting of the Working Party (HOU/WP.3/Working Paper No. 10).

# Item 4: Indices of building activity and of building costs and value of construcion

The Working Party at its last session invited the Federal Republic of Gormany and the Netherlands to nominate experts to act as rapporteurs for preparing a report on indices of building activity and of building costs and value of construction. The proposals of the rapporteurs and the Secretariat will be set out in HOU/WP.3/Working Paper No. 11.

#### Item 5: Data on financing in statistical bulletins

Following a request of this Working Party for advice on the inclusion of data on financing in the Annual Bulletins of Housing and Building Statistics, the Working Party on Development of Housing Policies appointed Mr. Fey (Federal Republic of Germany) and Mr. Anonsen (Norway) to put forward specific suggestions for consideration (HOU/WP.1/26, paragraph 13). Since the Working Party on Development of Housing Policies is being abolished, the proposal of the rapporteurs is being referred directly for consideration by the Working Party on Housing and Building Statistics (HOU/WP.3/Working Paper No. 12). Item 6: Method for measuring the capacity of dwellings for family occupation

The Working Party requested its members to send written comments on a proposal regarding methods of measuring the capacity of dwellings (HOU/86, paragraph 13), The Secretariat will prepare a working document on the basis of the replies received, for consideration by the Working Party (HOU/WP.3/Working Paper No. 13).

#### Item 7: Any other business

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Item 8: Adoption by the Working Party of the report of its seventh session

In accordance with established practice, the Working Party should agree on the report of its seventh session before concluding its work.

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ECONOMIC COMMISSION FOR EUROPE

## HOUSING COMMITTEE

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Working Party on Hosing and Building Statistics (Seventh session, 30 November and 1 December 1956)

> REPORT OF THE WORKING PARTY ON HOUSING AND BUILDING STATISTICS ON ITS SEVENTH SESSION

> > As adopted on 1 December 1956

1. The seventh session of the Working Party was held in Geneva on 30 November and 1 December 1956.

2. Representatives of Austria, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, France, Italy, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, the Ukrainian Soviet Socialist Republic, the Union of Soviet Socialist Republics, the Fastern Zone of Germany, the United Kingdom, the United States of America and Yugoslavia participated in this meeting. The following organizations were also represented: the International Statistical Institute (ISI) and the International Union of Architects (UIA).

3. Mr. DE JCNGE (Netherlands) and Mr. VICEK (Austria) were Chairman and Vice-Chairman, respectively.

4. The provisional agenda (HOU/WP.3/30) was adopted. It was agreed, however, that in view of the little time available only a preliminary discussion could be held on Item 4 (Indices of building activity, building costs and value of construction).

5. The view was expressed that the curtailment of the current session of the Working Party by half a day, decided on by the Housing Committee, was undesirable, since the Working Party had a heavy agenda and would be unable to make much progress in the time available; moreover, some participants had come especially for the session. The Working Party was informed that the decision of the Housing Committee had been taken reluctantly and only because of its own heavy agenda. Shortage of conference facilities in the Palais had prevented the two bodies from meeting simultaneously.

6. The Working Party heard a statement by the Secretariat on the supply of statistics from eastern European countries. Although some of these countries had recently made available information which could be used in various studies,

they had reported no current data for inclusion in the quarterly bulletin. The countries concerned were urged to submit the data required. 7. As regards the deadlines for submission of data by countries to the Secretariat for inclusion in the quarterly bulletins, the members of the Working

Party were requested to do what they could to observe the following dates:

first quarter: before 1 June
second quarter: before 1 September
third quarter: before 1 December

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- fourth quarter: before 1 March

8. It had not been possible to prepare and publish the first issue of the annual bulletin, since some countries had supplied no information or only fragmentary information. The Working Party invited these countries to send the information required to the Secretariat as soon as possible. It was hoped that the annual bulletin could be issued early in 1957.

9. The Working Party noted that a report on the formulation of house-building programmes (HOU/Working Paper No.49) was under consideration by the Housing Committee. Members of the Working Party were invited to submit comments on this report, in particular on Section II (The Estimating of Housing Needs) of Appendix I.

Consideration of housing statistics by the Conference of European Statisticians 10. The Working Party took note of HOU/WP.3/Working Paper No.9, which reported the views of the Conference of European Statisticians on its work. The views expressed by the Conference were dealt with under the various headings of the Working Party's agenda to which they related.

Capacity by dwellings for family occupation

11. The Working Party noted that the International Union for Family Organization was preparing a document on the practical application of the method proposed by that organization for measuring the capacity of dwellings. The IUFO had suggested that the Working Party should postpone consideration of this item until the document became available. The Working Party agreed with this suggestion, but pointed out that in view of the many other important and urgent items in its work programme, this subject might have to take a somewhat lower priority.

## Statistics on housing finance

12. The Working Party considered reports prepared by Mr. Fey (Federal Republic of Germany) and Mr. Anonsen (Norway) on the desirability and possibility of publishing statistics on housing finance. The Working Party agreed that such data were of great importance. However, in most countries, data were either not available or were available in a form not fully suitable for inclusion in an international statistical publication. Further study of methodological questions would therefore be required.

13. The subject of statistics on housing finance formed part of the broader question of financial statistics in general. Whilst the Working Party agreed that it might take up the special aspect of housing finance at a later stage, it felt that it would first be necessary that the general problem should be considered by an appropriate body. The Working Party therefore decided to refer this question to the Conference of European Statisticians for guidance.

14. The Working Party noted that under the programme of the Housing Committee, a group of rapporteurs on the financing of housing had been set up. This group would consider in particular the social and economic aspects of housing finance, on the basis of country monographs. The Working Party considered that the results of the work of that group would make it possible to define more precisely what type of information on housing finance would be required, and therefore proposed that these results should also be made available to the Conference of European Statisticians.

## Concepts and definitions

15. The Working Party noted that the Working Group on Censuses of Population and Housing of the Conference of European Statisticians had met and had discussed inter alia draft recommendations for the 1960 housing censuses. These draft recommendations included proposed definitions of "dwellings", "rooms", "residential buildings", "households", and "occupants". Apart from some slight differences in the definitions of "occupants" and "households" these definitions were identical with those drawn up by the Working Party. The definitions of "dwellings", "rooms", and "non-residential buildings" were adopted by the Working Group of the Conference without modifications. As a next step they will be considered by the Statistical Commission on the world level. As regards the definitions of "households" and "occupants", the Group considered that the population census aspect of these concepts still required further study before agreement could be reached.

16. The representative of the International Union of Architects proposed a number of amendments to the definitions adopted by the Working Party at its previous sessions. These proposed amendments are given in Annex I of the present report.

17. The Working Party was of the opinion that it would not be desirable to propose any amendments of substance to the definitions which had already been discussed and approved by the Conference of European Statisticians. Proposed amendments of the concept of "households" could be brought to the attention of the Conference of European Statisticians who might wish to take them into account when this subject was discussed further. The Working Party decided that the proposed amendments to other definitions (for "floor space" and "volume") should be considered at its next session.

18. The Working Party considered that it would be desirable that the same terminology be used by statisticians and by experts in other aspects of housing. The Working Party was therefore of the opinion that contact on this point with the International Union of Architects and other interested international organizations would be very useful,

19. The Group of Rapporteurs on Concepts and Definitions, set up by the Working Party at its sixth session, had met on 26 and 27 November 1956. It had discussed the following items: work authorized; work begun; work under construction; built-up area; urban and rural areas; and the definition and subdivision of the construction industry. The report of the Group of Rapporteurs is given in Annex II.

20. The Working Party made the following comments on the proposals of the Rapporteurs:

- (a) It was pointed out that the meaning of the first part of para.lo was not clear. The intention of the Rapporteurs was to state that since in some countries one simple permit was sometimes issued for projects containing several buildings, statistics of the number of permits issued should, if possible, also indicate the number of buildings and in particular the number of dwellings to which they referred,
- (b) It was suggested that a better formulation of the definition of "work begun" would be: "Work is begun when the first physical operations are undertaken on the building site after the planning

and designing stages. Examples are: site preparation; the delivery of materials and equipment to the site; the start of excavations or the laying of foundations".

- (c) The point was made that according to the definition of "work under construction" given in para.16, work which was temporarily interrupted or abandoned should also be included in the concept, although in a technical sense it was no longer under construction. The Working Party believed, however, that it would be difficult or impossible to give a sufficiently precise definition of "temporarily interrupted" or "abandoned". Moreover, it was not felt that such interruptions and abandonments were quantitatively so important that they would affect the statistics significantly. No change in the definition was therefore proposed.
- (d) The Working Party considered that the concept of the "completion of dwellings" agreed at a previous session was in principle also valid for non-residential building. The text should, however, be amended as follows: "Work is completed when the building is physically ready to be occupied".
- (e) The Working Party pointed out that the definitions of "work begun", "work under construction" and "work completed" only related to residential and non-residential building, but not to civil engineering. The latter sector of building offered some special problems which had first to be studied before similar concepts relating to that sector could be drawn up.
- (f) Some doubt was expressed whether the concept "gross floor space" should be defined in addition to the concepts of "useful floor . space" and "living floor space". This concept might be useful for the study of problems relating to cost. It might also be of some value since it permitted national statistics on different types of floor space to be classified under the appropriate headings. The Working Party was of the opinion, however, that further consideration should be given to this concept before final conclusions could be drawn on its usefulness and on the various points raised by the Rapporteurs in para,20 of the report.

(g) The Working Party considered that the term "area covered by a building" was to be preferred to "area built on" as used in para.23 of the report. The Working Party agreed with the proposals by the Rapporteurs that the Housing Committee should be asked for guidance before further work on this item is done.

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(h) It was pointed out that the question of the definition of the construction industry and of its sub-sections should be considered within the framework of national accounts. There were problems to be solved as regards the choice of the reporting unit (technical unit, establishment, enterprise). These problems were, however, of a general nature and had been discussed at various occasions by the Conference of European Statisticians and the Statistical Commission of the United Nations. The Working Party would, therefore, not be the proper body to deal with this matter. The Working Party could, however, make a useful contribution to the general revision of the United Nations which was being envisaged at present.

21. The proposals of the Rapporteurs had only been made available to the Working Party at the beginning of the meeting. The Working Party therefore decided to postpone a final decision on these proposals until the next session. It invited the Secretariat to collect further comments on the proposals from countries and interested international organizations and to prepare a working document on the basis of these replies for consideration at that session. Value of construction, building cost and building activity

22. A memorandum on statistics on the value of construction, building cost and building activity, prepared by Mr. Deneffe (Federal Republic of Germany) and Mr. Hirdes (the Netherlands), was submitted to the Working Party.
23. A statement on the scope of this memorandum and on the approach to the various subjects was made by the Rapporteurs. This statement is given in Annex III of the present report.

24. The memorandum was to be considered as a preliminary study. It was agreed that countries should submit comments on the paper in writing and that the Rapporteurs would prepare a further memorandum on the basis of these comments. This would be discussed at the next session of the Working Party.

# Programme of Work and Date of Next Session

25. The Working Party agreed to consider at its next session the possibility of publishing the Quarterly Bulletin on a subject basis instead of a country basis. The Working Party therefore invited the Secretariat to prepare a draft outline of such a bulletin, including detailed table headings.
26. It was also agreed that the other main items for discussion at the next session should be "Concepts and Definitions" and "Value of Construction, Building Cost and Building Activity".

27. The Working Party noted that the next session was scheduled provisionally to take place in May 1957.

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#### ANNEX I

# NEW DEFINITIONS PROPOSED BY THE INTERNATIONAL UNION OF ARCHITECTS (1)

## Room

Rooms are separate spaces bounded by vertical walls or partitions and intended for one or more dwelling purposes. The major area of the ceiling must be not less than 2 m from the floor. Bedrooms not less than 4 m<sup>2</sup> in area, dining-rooms, living-rooms, habitable attics, servants' rooms, and kitchens with not less than 6 m<sup>2</sup> of floor space, are counted as rooms.

For dwellings separate data should be obtained on rooms used only for professional or business purposes; these rooms should be included in calculating the number of rooms per dwelling but not in calculating the number of persons per room.

## <u>Household</u>

(b) "<u>Private households</u>". In the Frenzh text of the definition, the words "<u>composés de personnes vivant seules</u>" should be "<u>les ménages composés</u> <u>d'une personne vivant seule</u>".

# Residential and non-residential buildings

Instead of "(i.e. more than half)" read "(i.e. more than half of the floor space)".

# Types of building activity (in dwelling construction)

(a) <u>New building</u> means the erection of an entirely new structure, whether the site on which it is built has been occupied before or not.

(b) <u>Reconstruction repairs</u> mean the work required to constitute at least one dwelling unit by the use of substantial parts of existing walls above-ground.

(c) To be left unchanged.

(d) <u>Conversions</u>:

For the words "conversions of non-residential buildings into dwelling spaces" read "conversions or refitting of non-residential buildings for use as dwelling space".

<sup>(1)</sup> These remarks apply to the definitions given in the Quarterly Bulletin of Heusing and Building Statistics for Europe, Vol.IV, No.1

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Fleor space and volume

- (a) In respect of residential building:
  - (i) <u>Useful floor space</u> is the floor space of dwellings measured inside the outer walls, excluding cellars, non-habitable attics and the common spaces of multi-dwelling houses.
  - (ii) <u>Living floor space</u> is the total area of the spaces intended for dwelling: bedrooms with not less than 4 m<sup>2</sup> of floor space, dining-rooms; living-rooms, habitable attics, servants' rooms, together with any floor space of kitchens in excess of 6 m<sup>2</sup>. The major area of the ceiling of such spaces must be at least 2 m from the floor.
- (b) In respect of residential and non-residential building

<u>Gross volume</u> is the total cubic space enclosed by the outside surface of the surrounding walls, the level of the lowest floor, and the outside surface of the roof.

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## <u>ANNEX II</u>

DISCUSSION OF THE GROUP OF RAPPORTEURS ON CONCEPTS AND DEFINITIONS Report by the Secretariat on the Meeting held on 26 and 27 November

## Introduction

1. The Group of Rapporteurs on Concepts and Definitions set up by the Working Party on Housing and Building Statistics at its sixth session in May 1956 met on 26 and 27 November. Austria, Denmark and Romania participated in the meeting. The Group considered the following items: work authorized; work begun; work under construction; built-up area; urban and rural areas and the definition and subdivision of the construction industry. The Group of Rapporteurs also considered the draft definition for the concept of "gross floor-space" which had been proposed by the previous Group of Rapporteurs on Concepts and Definitions, but on which no agreement had been reached by the Working Party at its last session. The basic documentation for the discussions of the Group consisted of detailed descriptions of national concepts and definitions which had been submitted by countries. The Group's conclusions on the various items discussed are summarized below.

# Work authorized

2. The Group of Rapporteurs felt that for the purpose of the analysis of building activity at various stages a concept of "work authorized" broadly defined as: "building projects for the carrying out of which a permit has been issued" would be valuable.

The Group noted that many countries collected and published statistics of building permits issued. In all cases these statistics were the by-product of data obtained for administrative purposes, and their coverage and definitions depended mainly upon the existing system for granting building permits. They were often not entirely in accordance with the broad definition given above and were generally not fully satisfactory for statistical purposes. They also differed considerably from country to country. HOU/94 HOU/WP.3/31 Annex II page 2

3. The Group of Rapporteurs felt that in view of the close relationship between statistics and national administrative regulations, internationally comparable statistics could not be obtained. It would not, therefore, be desirable to draw up a rigid standard definition in this field for international use. The Group was of the opinion, however, that in spite of the lack of comparability and other deficiencies of statistics on work authorized, such statistics, if accompanied by detailed notes on their meaning, scope and coverage provided important indicators of the likely development of building activity in the near future. The Group also believed that, given the present systems of granting licences for building in the various countries, there was still room for certain improvements in the statistics which would make them more useful.

4. The Group of Rapporteurs therefore proposed that the Working Party should mainly consider two points: (a) the type of explanatory notes which should accompany statistics on building authorizations and (b) the kind of improvements which could be recommended within the framework of the existing systems of licensing. The Group's own conclusions on these points are given in the following paragraphs.

5. Since the problems relating to statistics on authorizations for residential building are rather different from those relating to non-residential building, the Group considered these two series separately.

6. As regards residential building the Group of Rapporteurs considered that statistical series should be accompanied by a detailed description of the type of authorisations issued, and of the purposes for which they were required. 7. The coverage of pational statistics on building permits **issued differed** considerably from country to country. Building permits were often required for only part of the construction activities, e.g. only for urban districts, for construction with government aid, for certain types of building projects, or for building projects above a certain value. The Group considered that it would be desirable that the exact coverage be indicated clearly in explanatory notes to the statistics and that if possible a broad indication be given of the proportion of total building activity covered.

8. A disadvantage of a statistical series on building permits issued during a given period was that it did not provide information on the permits expired

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but not used during that period. It would be difficult to get figures on any other basis at monthly or quarterly intervals. The Group of Rapporteurs considered that such statistical series could usefully be supplemented, say once a year, by data on the stock of outstanding permits, still valid but not yet used. In many countries these data could probably be provided from information already available. These supplementary data would provide a better link between statistics on permits and those on current building activity. Full particulars on the validity of building licences should be added to any published statistics in this field.

The Group considered that building permits which had expired and had been 9. renewed should not be included again in the statistics of permits issued but should, of course, be maintained in the data on the stock of outstanding permits. Countries which followed a different procedure, and where renewals of expired permits were rather frequent, should indicate this in their statistics. The Group of Rapporteurs was of the opinion that data on the number of 10. permits issued were of little economic use. It was noted that data on the number of buildings for which a permit was issued were available in some The Group was of the opinion that these data would be more valuable countries. if they were supplemented by data on the number of dwellings contained in these buildings. Other units, such as floor space, would also be extremely valuable, and countries who were able to provide such additional information should be encouraged to do so.

11. Some of the problems mentioned above were also encountered in statistics of authorizations for non-residential building. In these statistics also full particulars should be given on the type of projects for which licences are required, on the coverage and on the period of validity of authorizations. As regards the units in which statistics on authorizations in this field should be expressed, the Group considered that the minimum requirement should be the number of buildings. In view of the great differences between buildings for various purposes they should, in addition, be expressed in terms of volume. Statistics in terms of value were considered to be of less use in this field for international purposes.

#### Work Begun

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12. Data on work begun and work under construction were obtained in many countries by means of a follow-up action taken as a result of the granting of a permit and these two concepts were therefore related to the concept of work HOU/94 HOU/WP.3/31 Annex II page 4

authorized. The Group of Rapporteurs thought, however, that the time of recording these data and the way in which they were recorded were less affected by national legislation and administrative procedure than in the case of work authorized. The Group therefore considered that standard definitions for these concepts should be drawn up. Ł

13. As regards work begun, the main problem was the point of time to which the Different criteria were used in the statistics of different start referred. countries, for instance, the time of (a) the supply at the site of equipment and materials; (b) the start of excavation works; or (c) the start of work on the foundations. In practice these various stages probably coincided in time in the case of the construction of one-family houses, but considerable periods might elapse between them in the building of projects consisting of two or more blocks of flats. The Group of Rapporteurs was of the opinion that the concept of work begun should not be defined too precisely at the international level. The organization differed from country to country and, within countries, from project The Group therefore felt that the standard definition should to project of work. be based on a broad and rather simple criterion, the practical application of which should be left to the countries, according to national circumstances. 14. In the light of these considerations the Group proposed the following definition:

"Work begun" is defined as the stage when the first actual operations (as contrasted with planning and designing) are carried out, i.e. organization of the site; arrival at the site of materials and equipment; start of the excavations or start of the foundations.

# Work under construction

15. The Group of Rapporteurs considered that there were no special problems in defining"work under construction", since it followed logically from the definitions of work begun and work completed.

16. Work under construction could, therefore, be defined as work begun but not yet completed.

17. The Group of Rapporteurs noted that the concept of "work completed" had been defined by the Working Group only in respect of residential building. The Group considered, however, that this concept was in principle also valid for nonresidential building, and suggested that the definition should be amended in this sense.

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18. The Group of Rapporteurs also considered the question of distinguishing different stages in work under construction and defining these stages. The Group recognized that these additional data were of value especially for calculating the output of the construction industry in the short period. However it would be difficult to draw up precise definitions for these stages for international use and moreover, for the calculations referred to above, it was not necessary that the stages distinguished should be internationally comparable. It was, therefore, agreed not to make any recommendations in this field.

#### Gress floor space

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19. The Group of Rapporteurs agreed with the suggestion made by the previous group on Concepts and Definitions that, in addition to the concepts "useful floor space" and, "living floor space" a concept "gross floor space" should also be defined. This concept would link the other two concepts of floor space to the concept of "gross volume", and together with the latter concept, would be useful for the study of problems relating to building cost.

20. The Group considered the definition of "gross floor space" proposed by the previous rapporteurs and made the following suggestions for amendments:

- (a) According to the proposed definition, covered terraces would not be included in gross floor space. Such terraces, however, were of importance in some countries and, during a large part of the year, were used in the same way as normal living rooms. It was suggested that in countries where covered terraces had practically the same function as living-rooms they should be taken into consideration as gross floor space.
- (b) Outbuildings detached from the main building were not included in gross floor space as defined by the previous Group of Rapporteurs. Whilst the Group agreed that detached outbuildings which were of a non-permanent or semi-permanent nature should not be regarded as part of the building, it was considered that when these outbuildings are structurally similar to the main building (e.g. made of the same building materials) they should be included in gross floor space, since they are often used for the same purposes as parts of the main building.
- (c) It was proposed that the last sentence of the definition should be amended to read: "The gross floor space of detached rooms for habitation which are clearly intended to be used as part of the dwelling should be included in the gross floor space of the dwelling". This amendment world make the text consistent with the definition of the dwelling.

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21. The Group pointed out that if the first two amendments to the draft definition were adopted, the definition of "gross volume" would similarly have to be amended.

22. It was also suggested that because of the importance of the concepts of "gross floor space" and "gross volume" for studies on building costs, the proposed definitions should be considered by experts in the latter field.

#### Area built on

23. The concept "a built-on area" was used in a number of countries. By this concept is understood the area occupied by the building, or in other words, broadly the gross floor space of the ground-floor. This concept was mainly used in connexion with town and country planning and was also of use in connexion with studies on building cost. Since the concept had not much application in statistics, the Group believed that the Housing Committee should be asked for guidance before further work is done.

## Urban and rural areas

24. The Group of Rapporteurs considered that a classification of data on housing and building by urban and rural districts was important. Since, however, the question of the definition of urban and rural areas was not a special housing problem, but was more general in character, the Group considered that the Working Party should not go further in this field than expressing its views on those aspects which were of particular importance in respect of housing. The Conference of European Statisticians and the Statistical Commission of the United Nations were at present engaged in preparing the recommendations for the 1960 Population and Housing Censuses, and were discussing <u>inter alia</u> the question of urban and rural areas. Any views which the Working Party may have could be transmitted to these bodies.

25. The Group of Rapporteurs had some general discussion on the criteria on which an urban-rural classification might be based. The Group did not, however, make any specific proposals on this subject.

The 'efinition and sub-division of the construction industry

26. The Group of Rapporteurs was of the opinion that before an attempt was made to define the construction industry and its sub-sections it was desirable to consider in general terms the type of classifications which would be required for different purposes. The Group, therefore, confined itself to a general discussion on the question of such classifications and proposed that its views on these matters be discussed first by the Working Party before more detailed definitions were drawn up.

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27. The Group noted that the International Standard Industrial Classification (ISIC) of the United Nations was based on the criterion of kind of output or kind of activity. A sub-division of Division 4 (Construction) along the same lines would be possible and desirable, namely into (a) building, and (b) civil engineering.

28. As regards the sub-sector "building" two possible further sub-divisions might be considered, one based on the criterion "kind of activity", the other based on the criterion of "destination of output". The Group put forward the following sub-divisions for consideration:

#### (a) <u>By activity</u>

- (i) construction activities proper, e.g. laying of foundations, masonry, carpentry.
- (ii) installation work, e.g. installation of technical equipment, plumbing, installation of gas and water pipes.
- (b) By destination of output
  - (i) residential building
  - (ii) non-residential building

These sub-divisions constitute parallel classifications, and it would be desirable that cross-classification be made, i.e. that separate data on the two types of activities listed under (a) be made available separately for residential and non-residential building.

29. The Group of Rapporteurs noted that the terminology used in respect of civil engineering was confusing. The terms "civil engineering" and "public works" were sometimes used as identical concepts, sometimes as different concepts. The Group considered that at some stage of the work consideration should be given to this question.

#### Other points

30. The Group of Rapporteurs also discussed a few general points relating to the Working Party's work on concepts and definitions and submitted the following suggestions for consideration:

(a) Living conditions differ considerably from country to country. They are affected by the climatological conditions and other factors. The Group had already pointed out that in some countries covered terraces have in practice the same function as living rooms, whilst in other countries they do not since they can only be used during a short period of the year. Other examples of this type could be added. It was, therefore, felt that international recommendations for standard definitions should take into account such differences, and that countries should be left the possibility to apply such definitions in a way that fits their particular circumstances. (b) It should be recognized that some countries, for national purposes, have to apply definitions differing from the international recommendations. In such instances it would be desirable that countries make available additional data which would make it possible to shift from one concept to another.

HOU/24 HOU/WP.3/31 Annex III

## ANNEX III

# INTRODUCTORY STATEMENT BY THE RAPPORTEURS ON STATISTICS ON THE VALUE OF CONSTRUCTION, BUILDING COST AND BUILDING ACTIVITY

"In our report we treated the items "Value of construction" and "Indices of building costs" within the framework of national accounts. This is because the value of the construction work done is an important indicator of economic changes; also these two indices are needed for measuring changes in prices and for calculating real building activity, i.e. value of production at constant prices.

We have only considered the output side because, in our opinion, this is the primary need. The Working Party may wish to express its views, however, on future consideration of the input side.

Concerning indices of building costs, we wish to propose that neither the term "indices of building <u>costs</u>" nor the term "indices of building prices" should be used but, instead, the term "price indices for construction". We hope this proposal is not too revolutionary: there are good reasons for it; first, the term "indices of building <u>costs</u>" implies price indices of the cost elements of construction, while in fact the whole output should be indicated, <u>including</u> profits. Second, the term "building costs" may lead one to think of the changes in value including the changes due to changes in equipment, quality of work etc., which is not intended here. In this connexion we would like to refer to the terminology in the field of consumers' price indices, which were formerly known as "cost-of-living" indices.

As regards the term "building price index" it should be noted that such an index in fact refers to the prices found in the market for dwellings or buildings, which, of course, does not indicate the changes in prices for the erection of new dwellings or buildings.

Finally, we would like to emphasize that our report is provisional; there are many problems in this field we know we have not solved. We hope, however, that it may be useful as at least a framework within which, with the help of comments from the members of the Working Party, these problems can be worked out."

DEC 2

HOU/WP.3/32 28 March 1957

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ECONOMIC COMMISSION FOR EUROPE

## HOUSING COMMITTEE

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Working Party on Housing and Building Statistics (Seventh session, 30 November and 1 December 1956)

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Federal Ministry of Housing Federal Statistical Office HOU/WP.3/32 page 2

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Deputy Director of the State Housing Bank

Scientific Director of the Housing Institute

Chief Architect for the town of Bucarest

Deputy Chief of Section, Labour Market Board

Chef adjoint de la Section de la statistique sociale à l'Office fédéral des arts et métiers et du travail

Chief of Department, Central Institute for Planning

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Chief of Division of Building and Construction Statistics, Federal Statistical Office

## INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS

INTERNATIONAL STATISTICAL INSTITUTE (ISI)

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Delegate of ISI in Geneva

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Président de la Commission de l'habitat

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# ECONOMIC COMMISSION FOR EUROPE HOUSING COMMITTEE

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Working Party on Housing and Building Statistics

# PROVISIONAL AGENDA

#### Eighth Session

to be held at the Palais des Nations, Geneva, on 27 and 28 May, beginning at 10 a.m. on 27 May 1957

5. Statistics on the value of construction, building cost and building active (HOU/WP.3/Working Paper No.15)
6. Statistical Bulletins on housing and building

(HOU/WP.3/Working Paper No.16)

(HOU/WP.3/Working Paper No.14)

7. Any other business

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Adoption of agenda

Election of officers

8. Adoption by the Working Party of the report of its eighth session

Activities of the Conference of European Statisticians

Concepts and definitions of housing and building statistics

#### NOTES ON THE AGENDA FOR THE EIGHTH SESSION

## Item 1: Adoption of agenda

# Item 2: Election of officers

According to the rules of procedure of the Economic Commission for Europe, officers of committees and working parties are elected at the first session of each year.

#### Item 3: Activities of the Conference of European Statisticians

The Secretariat will make an oral statement on the activities of the Conference of European Statisticians, as far as they are related to subjects dealt with by the Working Party.

# Item 4: Concepts and definitions of housing and building statistics

At its seventh session the Working Party had a preliminary discussion on draft definitions for the concepts: "work authorized", "work begun", "work under construction", "gross floor space", "areabuilt on", "urban and rural areas", "construction industry and its sub-division" drawn up by rapporteurs from Austria, Denmark and Romania (see HOU/94, paragraphs 19 to 21 and Annex II). Since the report of the rapporteurs became available only at the beginning of the seventh session, the Working Party decided to postpone a final decision on the proposed definitions until the present session. It invited the Secretariat to collect further comments on the proposals from countries and interested international organizations. A working document, established on the basis of these replies will be drawn up and submitted to the Working Party (HOU/WP.3/Working Paper No.14). At the seventh session the representative of the International Union of Architect (UIA) proposed a number of amendments to the definitions adopted by the Working Party at its previous sessions (see HOU/94, paragraphs 16 to 18 and Annex I). The Working Party decided that these proposed amendments should also be considered at the present session.

# Item 5: Statistics on the value of construction, building cost and building activity

At the Working Party's seventh session rapporteurs from the Federal Republic of Germany and the Netherlands submitted a memorandum on statistics on the value of construction, building cost and building activity (HOU/Conf.Room Doc. No.21). The Working Party also heard a statement by the rapporteurs on the scope of this memorandum and on the approach to the various subjects adopted (HOU/94, paragraphs 22 to 24 and Annex III). It was agreed that countries should submit comments on this memorandum in writing and that on the basis of these comments the rapporteurs would prepare a revised version for discussion at the present session. This revised version, HOU/Working Paper No.15, will include proposals for an index of building activity, a subject not dealt with in the first memorandum.

Item 6: Statistical Bulletins on housing and building

The Secretariat will, in HOU/Working Paper No.16, inform the Working Party of its plans for the publication of the Annual Bulletin and of changes in presentation of the Quarterly Bulletin.

Item 7: Any other business

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# Item 8: Adoption by the Working Party of the report of its eighth session

In accordance with established practice the Working Party should agree on the report of the eighth session before concluding its work.

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#### ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Eighth session 27 to 29 May 1957)

## REPORT OF THE WORKING PARTY ON HOUSING AND BUILDING STATISTICS ON ITS EIGHTH SESSION

(As adopted on 29 May 1957)

1. The eighth session of the Working Party was held in Geneva on 27 to 29 May 1957. 2. Representatives of Austria, Belgium, the Byelorussian SSR, Czechoslovakia, Denmark, the Federal Republic of Germany, Finland, France, Hungary, Italy, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, the Ukrainian SSR, the Union of Soviet Socialist Republics, the Eastern Zone of Germany, the United Kingdom, the United States of America, and Yugoslavia participated in the meeting. Israel was represented in a consultative capacity in accordance with paragraph 11 of the terms of reference of the Economic Commission for Europe. The following organizations were also represented: the International Labour Organisation (ILO), the International Centre for Regional Planning and Development (ICRPD), the International Federation of Christian Trade Unions (IFCTU), the International Statistical Institute (ISI), the International Union of Architects (UIA) and the International Union of Family Organizations (UIOF). Mr. ANONSEN (Norway) and Mr. MACOVEI (Romania) were elected Chairman and Vice-3. Chairman respectively.

4. The provisional agenda (HOU/WP.3/33) was adopted.

5. The Working Party heard a statement by the Secretariat on the work undertaken by the Conference of European Statisticians relating to housing statistics. Since the last meeting of the Working Party no plenary session of the Conference of European Statisticians had been held. Some progress had, however, been made by a subsidiary body of the Conference on the problem of fixed capital formation; details are provided under item 5 of the agenda which deals <u>inter alia</u> with statistics of the value of construction. It was further stated that the UN Statistical Office would concern **itself** in the course of 1958 with problems relating to current housing statistics and housing surveys, and that the necessary co-ordination between these projects and the work undertaken by this Working Party would be secured.

# Concepts and Definitions

6. At its seventh session the Working Party had had a preliminary discussion on draft definitions of a number of concepts drawn up by a group of rapporteurs. The Working Party had also briefly considered proposals by the International Union of Architects for amendments of some of the definitions already agreed upon at earlier sessions. The Working Party had decided to postpone a final decision on these various points until its present session and had invited the Secretariat to collect in the meanwhile comments on the proposals from countries and interested international organizations.

7. The Working Party discussed this item on the basis of HOU/WP.3/Working Paper No. 14. The following comments were made and conclusions reached:

- (a) <u>Room</u>. This definition had already been adopted by the Working Group on Censuses of Housing and Population of the Conference of European Statisticians, and would be considered by the Statistical Commission of the United Nations at its session in April 1958, which would then agree upon the definition to be used in the 1960 housing censuses. Though a number of participants considered that the definition of the Working Party needed further clarification and could still be improved, it was agreed that the discussion on various points which had already been thoroughly considered at previous sessions should not be re-opened. The Working Party therefore decided not to propose a change in the definition. It was agreed, however, that a number of detailed comments submitted by the Belgian delegation on this definition (and definitions of other concepts) should be attached to this report (see Annex I, to be issued separately).
- (b) <u>Residential and Non-residential building</u>. For the same reasons as mentioned under the concept "Room", the Working Party decided not to amend the definition of residential and non-residential buildings.
- (c) <u>Household</u>. The Working Party agreed that the definition in French should be amended to read: "les ménages composés d'une personne vivant seule" instead of "les ménages composés de personnes vivant seules". The Working Party noted that the Conference of European Statisticians was still considering this concept, in particular, as regards its suitability for the purpose of population censuses. Apart from these amendments to the French text, no other change in the definition was proposed.

- (d) <u>New Building, Reconstruction Repairs, Extensions and Conversions</u>. The Working Party considered that the definition of these concepts should also be extended to non-residential building. It agreed upon the following definitions:
  - (i) <u>New Building</u> means the erection of an entirely new structure, whether the site on which it is built has been occupied before or not.
  - (ii) <u>Reconstruction repairs</u> mean repairs by which at least one dwelling or other structure is effectively reinstated and where substantial parts of the existing structure are used.
  - (iii) <u>Extensions</u> relate to the enlargement of buildings by which space is added.

The Working Party could not yet agree on the definition of "conversions" and therefore decided to come back to this question at its next session.

- (e) <u>Living Floor Space</u>. It was agreed that the definition previously adopted should be maintained.
- (f) <u>Useful Floor Space</u>. It was decided that the term "outer walls" should be substituted in the definition for "surrounding walls". The amended definition thus reads as follows: "Useful floor space is the floor space measured inside the outer walls, excluding cellars, non-habitable attics, and, in multi-dwelling houses all common spaces."
- (g) <u>Gross Floor Space</u>. It was considered that the definition of gross floor space was of relatively little importance for international statistics. The Working Party therefore decided not to draw up a definition of this concept.
- (h) <u>Gross Volume</u>. The Working Party agreed that the term "basement" in the definition should be replaced by "lowest floor". It was also decided to include in the definition an amendment proposed by the group of rapporteurs, namely that outbuildings, if of a similar structure as the main building, should be included in gross volume. The amended definition reads as follows:

> Gross volume is the total space between the outer walls, the lowest floor and the roof, measured outside. In the case of common walls the measurement should be made from the centre line of these walls. Outbuildings which are structurally similar to the main buildings (e.g. made of the same building materials) should be included.

- (1) Work Authorized, Work Begun, Work Under Construction and Work Completed The Working Party agreed with the proposals by the rapporteurs that these concepts should cover both residential and non-residential building, and adopted the following definitions which were already partly agreed upon at the Working Party's seventh session:
  - (1) <u>Work Authorized</u>: Building projects for the carrying out of which a permit has been issued.
  - (ii) <u>Work Begun</u>: Work is begun when the first physical operations are undertaken on the building site after the planning and designing stages. Examples are: site-preparation; the delivery of materials and equipment to the site; the start of excevations or the laying of foundations.
  - (iii) <u>Work under Construction</u>: Work begun but not yet completed.
  - (iv) <u>Work completed</u>: Work is completed when the building is physically ready to be occupied.
- (j) <u>Area Built on</u> (or <u>Area Covered by a Building</u>) The concept of a built-on area was used in a number of countries. By this concept is understood the area occupied by a building, or in other words, broadly the gross floor space of the ground floor. This concept was mainly used in connexion with town and country planning and was also of use in connexion with studies on building cost. Since the concept had little application in statistics, the Working Party believed that the Housing Committee should be asked for guidance before further work was done.
- (k) <u>Urban Areas and Rural Areas</u>. The Working Party agreed with the opinion of the Group of rapporteurs that a classification by urban and rural districts of data on housing and building was important, but that the question of the definition of such districts was not a specific housing problem. It was therefore decided not to attempt to draw up definitions of these concepts.

(1) <u>Definition of the Construction Industry and its Sub-Division</u>. The Working Party noted that the Statistical Office of the United Nations envisaged undertaking a general review of the International Standard Industrial Classification of all Economic Activities (ISIC) of the United Nations. The Working Party considered whether it was desirable to recommend amendments to the definition of the Construction Industry in the classification, or whether it should submit proposals for a further sub-division of that industry. This question gave rise to a number of problems relating to the definition of Civil Engineering, for which it did not consider itself sufficiently competent, and the Working Party agreed not to propose any changes.

# Statistics on the Value of Construction, Building Costs and Building Activity

8. The Working Party considered a draft programme for the collection of statistics on the value of construction, building costs and building activity prepared by Mr. P.J. Deneffe (Federal Republic of Germany) and Mr. J. Hirdes (Netherlands) (HOU/WP.3/Working Paper No. 15 and Add.1). A first draft of this programme had already been submitted by the Rapporteurs at the seventh session of the Working Party (HOU/Conf.Room Doc.No.21). The Rapporteurs had revised this draft in the light of comments received from countries. They had also added a new section relating to statistics of building activity, which subject had not been dealt with in detail in the original document.

#### Value of Construction

9. The Working Group on Statistics of Fixed Capital Formation, of the Conference of European Statisticians, had drawn up a draft programme for the collection of statistics on fixed capital formation, and had reached agreement on the major sections of this draft programme, except for the sections relating to the treatment of land and used assets. The latter subject had been discussed by a Group of Rapporteurs of the Conference, who had also reviewed the programme as a whole. It is expected that the programme will be adopted by the Conference at its fifth plenary session in June 1957.

10. Though the subject considered by the Working Party and that of fixed capital formation were closely related they were not identical. On the one hand, the output of the building industry consists not only of capital goods, but also includes intermediate goods (e.g. repairs) which do not enter into the capital formation of the industry buying them; on the other hand, part of the capital formation in buildings and other works is produced not by the building industry but by other industries, as an ancillary activity.

11. The Working Party considered that its main task was to agree upon a programme for statistics on the value of construction. It was recognized, however, that consistency should be sought with existing international recommendations regarding statistics of fixed capital formation, and in particular with the statistical programme in this field drawn up by the Conference of European Statisticians. This could be achieved (a) by extending statistics on the value of construction to building also carried out as an ancillary activity; and (b) by providing for adequate statistical sub-divisions so that the various elements of capital formation could be separated.

12. The Working Party agreed that the purpose of a programme for statistics on the value of construction (and on other subjects discussed during this session) was to provide a general framework for countries wishing to develop their national statistics in these fields. Such a framework would not only be useful for the countries concerned, but would also contribute to a further improvement of the international comparability of statistics.

13. It was pointed out that for different purposes, different concepts may be needed. The concepts defined in the programme were adequate for certain cases, e.g. in connexion with the construction of national accounts, but they might not meet all purposes for which statistics on the value of construction might be required. 14. As regards the text of the proposed programme the following conclusions were reached:

- (a) Thereference to the treatment in national accounts of building carried out as an ancillary activity at the end of paragraph B was not necessary and should be deleted.
- (b) The proposed sub-division by sectors should relate to the sectors of purchase, instead of use. The classification by industry, however, should be based on the criterion of the <u>user</u> of the buildings. This amendment was necessary in order to make the programme consistent with the existing international recommendations for national accounting. In this connexion it was pointed out that the classification by sectors of purchase was important for national accounting in general, but that it was of little interest in so far as the building industry is concerned.
- (c) A separate sector for producers' co-operatives could be added to the classification by sectors of purchase in countries where this form of organization was important.

- (d) As regards the additional sub-divisions of the value of construction mentioned in paragraph 7(b) of the draft programme, it was pointed out that in some countries a sub-division of residential buildings by small houses (i.e. oneand two-family houses, and terrace houses) and blocks of flats was more suitable than the sub-division proposed. It was agreed to add this sub-division as an alternative distinction.
- (e) It was difficult to make international recommendations as regards the methods by which statistics should be collected. In most countries the data had to be obtained from many different sources. The most appropriate methods of collection depended on national circumstances and statistical and administrative systems. It should therefore be made clear in the introduction of Section (Methods of Collection) of the programme that the purpose of that section was to describe two methods which were frequently used, and to indicate certain advantages or disadvantages of these methods, but that at least part of the data could be obtained, and was in fact in many countries obtained, by other methods and from other sources.
- (f) The definitions of the sectors of purchase, types of capital goods etc., were at present available in various international documents relating to national accounting and fixed capital formation. The Working Party considered that in a later draft the programme should be made a self-contained document and that these definitions should be quoted in full.

15. The Working Party invited the Rapporteurs to prepare, in consultation with the Secretariat, a final document for consideration at the next session, taking into account the various conclusions reached at the present session.

#### Index of Building Costs

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16. The Working Party had a brief discussion on the type of indices of building costs and building prices required, and on the methods by which they could be collected. Some different views were expressed as regards the practical possibilities of applying the two methods of collection mentioned by the Rapporteurs.

17. The Working Party considered that statistics in this field should be collected at least annually. Countries should, however, make an effort to collect such data at more frequent intervals.

18. The Working Party did not propose any changes in the programme drawn up by the Rapporteurs.

#### Index of Building Activity

19. The Working Party did not have time to consider the proposals by the Rapporteurs on the subject of building activity. It was agreed that countries should submit comments on these proposals in writing, and that the Rapporteurs would prepare a revised memorandum on the subject on the basis of these comments, for consideration at the next session of the Working Party.

## Statistical Bulletins on Housing and Building

20. The Working Party heard the statement by the Secretariat regarding its plans on the Quarterly and Annual Bulletins of Housing and Building Statistics for Europe. Since statistical information had of late become more amply available and in view of the progress made on concepts and definitions, it was thought that the time was ripe for a change in the Quarterly Bulletin from a country-by-country basis to a subject The Secretariat would prepare the October 1957 issue of the Bulletin in this basis. form and would submit it for discussion to the Working Party's ninth session. It was expected that the definitive version of the Bulletin, covering the first Quarter of 1958, could be issued in the course of July 1958. The Secretariat has collected a considerable amount of statistical material for the Annual Bulletin. An outline of the Annual Bulletin would be submitted to the Spring 1958 meeting of the Working Party and the first issue, preferably in a printed form, would be published around It was also agreed that the Working Party would consider the final August 1958. contents of both the Quarterly and Annual Bulletins at its next session.

#### Programme of Work and Date of Next Session

21. The Working Party agreed to devote the major part of its next session to the review of the Quarterly Bulletin on a subject basis. In so far as time permits the Working Party will also deal at that session with the questions which remain to be discussed regarding the subject: Value of Construction, Building Cost and Index of Building Activity.

22. The Working Party noted that the next session was scheduled provisionally to take place in November 1957.

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ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

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Working Party on Housing and Building Statistics (Eighth session, 27-29 May 1957)

#### REPORT ON THE EIGHTH SESSION

## Annex

# COMMENTS SUBMITTED BY THE BELGIAN DELEGATION ON THE DEFINITIONS TO BE USED IN HOUSING AND BUILDING STATISTICS

## I. INTRODUCTION

The present report and the changes it proposes relate to Housing Committee document HOU/Working Paper No.62, entitled "Review of Definitions of Housing and Building Terms prepared by the Working Party on Housing and Building Statistics".

The housing and building terms are examined in the order in which they appear in the document mentioned above.

The need for the proposed changes was most clearly apparent when the question of the utilization of the space in dwellings was considered.

# II. <u>DWELLING</u>

(a) The definition proposed by HOU/Working Paper No.62 excludes temporary dwellings.

The aim of the Working Party was no doubt to exclude temporary or makeshift dwellings from the total established for each country. Accordingly, the definition given is rather a definition of a dwelling (<u>logement</u>) than of housing (<u>logement</u>) in general. To avoid ambiguity, we propose the use of the expression "permanent dwelling" (<u>logement permanent</u>), since national housing censuses certainly include all dwellings, whether temporary or not, and therefore cannot dispense with the use of the word "housing" (<u>logement</u>) in the general sense.

What the Working Party would desire is that future censuses should distinguish between permanent dwellings and others in countries where that distinction has not been made.

Proposal:

In paragraph 1 on page 1 of document HOU/Working Paper No.62, read: "Permanent dwelling: Permanent dwellings are rooms ...". HOU/96/Annex HOU/WP.3/34/Annex page 2

(b) Like the authors of document HOU/Working Paper No.62, we believe that normal rooms used for business or professional purposes should be included in calculating the number of rooms per dwelling, and that their area should be taken into account in calculating the living floor space.

We think it should be decided that rooms used for professional purposes should not be regarded as living rooms if they have been built for professional purposes, or if they have undergone "basic" changes, i.e. changes which have affected the main structure (e.g. where an ordinary window has been replaced by a shop window). The same applies to rooms situated in outbuildings or in a separate building. These rooms are "professional in kind" and cannot be included in housing. Proposal:

Add the following at the end of the last paragraph on page 1:

"Rooms which have been built for professional purposes, or which, with a view to such purposes, have undergone basic changes affecting the main structure, are not living rooms".

# III. <u>ROOMS</u>

# A. <u>Comments</u>

The proposed definition actually describes a <u>habitable room</u>, since the living floor space is defined further on as the total area of the rooms. It seems logical, therefore, to explain that the object of the definition is the "habitable room". This definition calls for some observations.

# 1. <u>Dimensions of habitable rooms</u>

The requirement that a room should have a minimum area of  $4 \text{ m}^2$  in order to be regarded as a habitable room would seem to need some qualification with respect to the minimum dimensions of the sides. Without such qualification, a room 4 m long and 1 m wide could be regarded as habitable.

2. Lighting of habitable rooms

A room with no direct opening to the outside cannot be regarded as habitable. The presence of a window in a room, and of a large enough open space in front of the window, would appear to be necessary conditions for regarding the room as habitable.

B. <u>Proposed definition of a habitable room</u>

By habitable room is understood a room

(a) partitioned off from floor to ceiling;

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- (b) with a free space between floor and ceiling of not less than 2 m over more than half the area;
- (c) with an area of not less than 4 m<sup>2</sup>, provided that no dimension is less than 1.80 m;
- (d) which receives light through an upright window of not less than 1.20 m<sup>2</sup> facing a sufficiently large open space or air shaft;
- (e) which is used for one of the following purposes:-
  - bedroom, dining room, living room, kitchen, office or library, drawing room, games room or study, or for some other residential purpose; and which is designed and equipped for such use, especially in the matter of thermal insulation and interior finishing.

The following are excluded from the category of habitable rooms: passages, lobbies, bathrooms, lavatories, toilets, cloak-rooms, sculleries, wash-houses, boxrooms, etc.

Provided they have an area of not less than  $4 \text{ m}^2$  and are not less than 1.20 m in width, verandas and covered terraces may be included in the category of habitable rooms, if the climate and national habits are such that they are used as a kind of living room.

# IV. RESIDENTIAL AND NON-RESIDENTIAL BUILDINGS

The proposed definition does not seem adequate, since the proportions of floor space used for residential and professional purposes do not provide a sufficient basis for placing a building in either category without risk of arbitrary judgment.

In town-centres, the ground floors are often used for shops, the lower floors for offices and the upper floors as apartments. The buildings are of mixed type and must be enumerated as such if an exact idea of the residential floor space is to be obtained.

We propose four categories of buildings for census purposes.

1. Buildings used exclusively for residential purposes

(If rooms are used for professional purposes, this need not prevent the building from being placed in this category, provided the rooms in question form part of a dwelling within the meaning of paragraph II(b) above).

2. Buildings used for both professional and residential purposes

A building is placed in this category if it contains at least one set of premises designed for professional use (shop, workshop ....), or if it contains offices not forming part of a dwelling.

3. <u>Buildings designed for professional use and containing one or more dwellings</u> for a janitor or caretaker.

4. Buildings used exclusively for professional purposes

In the case of buildings in categories 1, 2 and 3, particulars should be taken of:

the number of dwellings;

the number of habitable rooms;

the useful floor space.

In the case of buildings in categories 2 and 3, particulars should also be taken regarding the useful floor space devoted to professional use. V. HOUSEHOLDS

We share the opinion of the authors of document HOU/Working Paper No.62 that "pensions" and boarding houses, etc., should be regarded as institutional households. A distinction should, however, be made between boarding houses and hotels, which are buildings used for professional purposes.

For obvious practical reasons, the distinction cannot be based on the length of stay of the boarders. Proposal:

The boarders in an establishment constitute an institutional household. Furthermore, to distinguish boarding houses, which constitute households, from hotels, which are buildings used for professional purposes, the criterion to be applied will be whether or not the establishment sells drinks and meals to transient customers.

# VI. <u>OCCUPANTS</u>

The Working Party's proposal is not acceptable as it stands, since it would result in the double enumeration of persons with two residences.

Consequently, the figures obtained for the number of households and the number of persons per household would be inaccurate and, multiplied together, would yield totals not tallying with the total population figure provided by the census. On the other hand, we approve the desire of the authors of the note to take double residences into account in the occupancy census.

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It would be a mistake to enumerate as a vacant dwelling a second residence which is unoccupied on the day of the census, or to regard as under-occupied a dwelling of which certain rooms are customarily used as a second residence by persons absent on the day of the census (e.g. students). Proposal:

The inhabitants should be enumerated according to their principal residence. Subsidiary residences are sub-divided into:

(a) dwellings for use during holidays;

(b) subsidiary residences used for purposes other than holiday-making.

For the sole purpose of calculating the number of persons per room and dwelling, customary occupants who have their principal residence elsewhere must be taken into account for each dwelling, but such persons are not included as members of the household at their subsidiary residence.

### VII. FLOOR SPACE OF DWELLINGS

Preliminary remark: In residential buildings or buildings of mixed residential and professional type, floor space seems to us to be the most valuable measurable dimension. It is also the most widely used.

Contrary to the Working Party's proposal, we believe that the idea of measuring the volume of these buildings should be abandoned, since it involves large expenditures without serving any real purpose.

, In buildings for professional use, on the other hand, volume will often be the only possible common measure. We therefore propose that two different measurements of space should be adopted. We shall discuss here only the method applicable to dwellings, i.e, measurement of floor space.

A. <u>Comments</u>

1. Scope of the concepts of useful floor space and living floor space

We feel that before defining these concepts we should ascertain what purpose they are to serve, particularly for studies of space utilization, comparisons of cost and measurement of the volume of production.

The total area of the premises, including cellars, attics, outer walls, sheds, etc., does not take into account the intrinsic usefulness of the space and consequently cannot be used for comparisons of cost or volume of production (statistics) or for comparisons of space utilization. Living floor space, on the other hand, which includes only the area of the habitable rooms properly so-called, and excludes service premises and passages, is not a common measure enabling the general dimensions of a dwelling to be evaluated, especially in comparison with other dwellings of a totally different design.

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It follows that no useful relation can be established between building costs and total floor space, since effective usefulness per square metre is too variable; and a cost comparison based on living floor space between various types of dwellings of different design is of very doubtful value.

For this reason, most countries use an intermediate concept, termed useful floor space, which excludes cellars, ættics and sheds, but includes passages and service premises.

The actual purpose of the definition of useful floor space is to provide expressions of the cost per square metre which are as comparable as possible, particularly between the two commonest types of dwellings - single family houses and apartment houses.

On the other hand, we do not see any need for dividing the notion of useful floor space into "gross floor space" and "useful floor space".

2. Exclusion of the "gros murs" (surrounding walls) from useful floor space

For this reason, the bearing walls, which, in stone and brick buildings, are thicker on the lower floors, may legitimately be excluded from the useful floor space. It was doubtless for this reason that the Working Party adopted the notion of "gros murs".

We should like to replace this imprecise notion by the concept of outer walls for the following reasons:

- (a) light bungalows and buildings with a "clothed" framework do not have "gros murs";
- (b) in stone and brick buildings, more than 80 per cent of the thick bearing walls are usually front and common walls, which fit in with the notion of outer walls; there may be cases where a bearing wall traverses an apartment, but no simple criterion is perfect, and in this case the sacrifice made for the sake of simplicity seems slight.

# 3. <u>Treatment of apartment-house staircases and terraces in calculating</u> <u>useful floor space</u>

Document HOU/Working Paper No.62 excludes apartment-house staircases and terraces from the useful floor space but includes them in the gross floor space (page 4).

We should like to eliminate this confusing duality and include the areas in question in the useful floor space for the following reason:

Belgian public-assisted housing statistics have excluded staircases since 1950. Experience has shown, however, that this method has the defect of excluding most of the area taken up by passages, in the case of apartments, and of including that area in the case of single family houses (see 1. above). The result is that the average cost per square metre for apartments is shown as higher than that for houses, even when the buildings are of the same structure and quite comparable from the point of view of the building techniques employed.

# <u>Example</u>

Average cost per square metre of useful floor space: (public-assisted housing, Belgium, first half of 1956)

> single-family houses: fr.2,940 stone and brick apartment houses with 3, 4 or 5 floors: fr.3,518.

This difference is almost wholly due to the fact that common entrance halls and staircases are excluded from the calculation of useful floor space in the case of apartments.

Contrary to the Working Party's proposal, we therefore propose to eliminate this anomaly in future by including the common entrance halls and staircases in the private floor space of the apartments on a <u>pro rata</u> basis.

# Proposal:

Discard the expression "gross floor space"; include staircases and terraces in the useful floor space.

# 4. Floor space of attic rooms

In determining utilization of space in the roof, exact criteria must be applied in order to determine:

- 1. what is meant by a habitable attic;
- 2. what proportion of the area of rooms, landings or service premises situated at this level can be included in the useful floor space.

We propose the establishment of criteria relating to:

- (a) accessibility (exclusion of ladders, trapdoors, etc.);
- (b) thermal insulation and finishing of surfaces, which must be as carefully executed as in other rooms;
- (c) unobstructed height;
- (d) lighting (cf. B below).

Proposal: see definition below.

5. Floor space in basement or semi-basement premises

Criteria should be established for the inclusion or exclusion of rooms below ground level.

Proposal: cee definition below.

6. <u>Storage areas</u>

We agree with the Working Party that garages, sheds, non-communicating outbuildings, cellars, attics, workshops, premises to be used for agricultural purposes, etc., should be excluded. On the other hand, some storage spaces (cupboards, box-rooms, store-rooms, sculleries) situated on the same level as the habitable rooms and communicating with them or with the interior halls or staircases, should, in our opinion, be included in the useful floor space on the grounds that they have the same degree of finish, and are insulated and heated to the same extent, as the rest of the dwelling. We should like this to be made clear in the definition of useful floor space.

Proposal: see definition below.

7. Facilities for common use

The definition should specify the treatment to be given such facilities in calculating useful floor space.

There is no doubt that in buildings designed for institutional households such facilities should be regarded as forming part of the useful floor space.

In apartment buildings for private (or family) households, some of these facilities serve purposes which can be and often are met by non-residential facilities situated outside the building - restaurants, meeting rooms, children's nurseries, etc.

If this is so, the floor space occupied by these facilities should not be added to the useful floor space of the apartments.

On the other hand, toilets, shared bathrooms, etc., situated on the same floor as the apartment and reserved for the use of the tenants on that floor may be included in the useful floor space.

Proposal: see definition below.

# 8. <u>Definitions proposed</u>

# Useful floor space

The useful floor space of the dwelling is measured inside the outer walls and includes the space occupied by halls and staircases and by inner and partition walls.

In the case of a multi-dwelling house containing halls and staircases for common use, the area occupied by these and by the walls separating them from the apartments is included in the useful floor space of the apartments proportionally to the area of useful floor space in each apartment. The same applies to toilets, bathrooms, etc., supplied for the common use of the tenants and situated on the same floor as the apartment. On the other hand, restaurants, meeting rooms, children's nurseries, wash-houses, etc., provided for common use, are excluded from the useful floor space.

The following are to be excluded from the useful floor space:

1. Outbuildings detached from the main building;

- 2. Garages, sheds, premises, wherever situated, used for agricultural purposes, and premises specially built or converted <sup>(1)</sup> for professional use (shops, workshops, etc.);
- 3. Cellars and other areas below ground level, except the parts of such areas defined below;
- 4. The space in the roof, except such parts as are defined below;
- 5. Adjoining outbuildings, unless they are as carefully finished as the other rooms, heated like the other rooms and communicate directly with the habitable rooms or the interior halls or staircases of the dwelling. The following are to be included in the useful floor space:
- 1. Habitable attics, staircase landings and sanitary installations situated in the roof space which satisfy the following conditions:

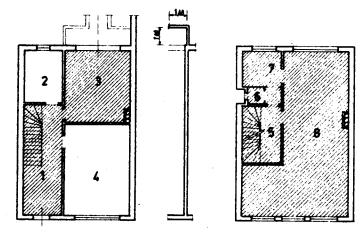
(1) If the conversion affects the main structure of the building.

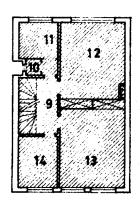
- (a) access is by means of a staircase and not a ladder, trapdoor, etc;
- (b) the thermal insulation, interior finishing and heating are of the same standard as in the other rooms of the dwelling;
- (c) the unobstructed height under the ceiling is not less than 2 m in the centre of the rooms and landings; and all areas of which the unobstructed height is less than 1.50 m are disregarded;
- (d) any habitable room in the roof space is lighted by one or more upright windows with a total surface area of not less than 1.20 m<sup>2</sup>;
- 2. Rooms under ground level which satisfy the following conditions:
  - (a) the walls through which light is supplied are unencumbered down to their base; no sunken area alongside these walls must be more than 1 m in depth or less than 1 m in width;
  - (b) the other walls may not be in contact with the soil unless they are protected against damp by a drained outer wall or a drained courtyard;
- 3. Closed verandas and covered terraces, as well as open galleries used as staircase landings in some apartment houses;
- 4. Habitable rooms used for professional purposes by one or more occupants of the dwelling, unless they are specially built or converted for such use (shops, workshops, etc.).

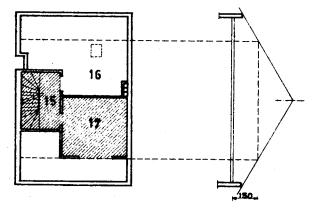
# Living floor space

The living floor space is the sum of the floor spaces of the habitable rooms as defined above (III.B.).

METHOD OF MEASURING THE USEFUL FLOOR SPACE OF A ONE-FAMILY HOUSE METHODE DE MESURAGE DE LA SURFACE UTILE D'UNE MAISON UNIFAMILIALE СПОСОБ ИЗМЕРЕНИЯ ПОЛЕЗНОЙ ПЛОЩАДИ ОДНОСЕМЕЙНОГО ДОМА





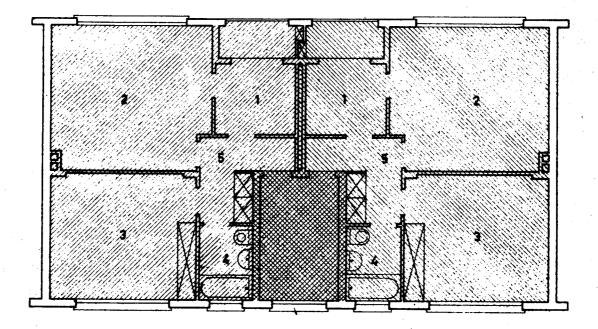


- HALL ENTREE ПЕРЕДНЯЯ
- 2. CELLAR CAVE HOPPEE
- 3. PLAYROOM SALLE DE JEUX КОМНАТА ДЛЯ ИГР
- GARAGE
   GARAGE
   ΓΑΡΑΧ
- 5. COMMUNICATION SPACE DEGAGEMENT KOPUDOP
- 6. W.C. W.C. УБОРНАЯ

- 7. KITCHEN CUISINE KYXHH
- 8. LIVING-ROOM LIVING KOMHATA <u>ДНЕВНОГО</u> ПРЕБЫВАНИЯ
- 9. COMMUNICATION SPACE DEGAGEMENT KOPMAOP
- 10. W.C. W.C. УБОРНАЯ
- 11. BATHROOM SALLE DE BAINS BAHHAFI KOMHATA
- 12. BEDROOM CHAMBRE CHAILBHFI

- 13. BEDROOM CHAMBRE CIIAJISHA
- 14. ВЕДКООМ СНАМВКЕ СПАЛЬНЯ
- COMMUNICATION SPACE DEGAGEMENT КОРИДОР
- 16. ATTIC BEDROOM CHAMBRE MANSARDEE MAHCAPAHAЯ Комната
- 17. ATTIC BEDROOM CHAMBRE MANSARDEE MAHCAPДHAЯ КОМНАТА

METHOD OF MEASURING THE USEFUL FLOOR SPACE OF A FLAT METHODE DE MESURAGE DE LA SURFACE UTILE D'UN APPARTEMENT СПОСОБ ИЗМЕРЕНИЯ ПОЛЕЗНОЙ ПЛОЩАДИ КВАРТИРЫ



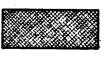
1. KITCHEN CUISINE KYXHЯ

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2. LIVING - ROOM LIVING КОМНАТА ДНЕВНОГО ПРЕБЫВАНИЯ

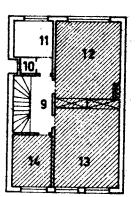
3. BEDROOM CHAMBRE CIIALLHЯ 4. BATHROOM BAIN BAHHAT KOMHATA

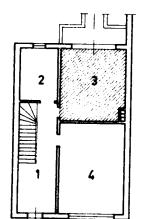
5. COMMUNICATION SPACE DEGAGEMENT KOPULOP



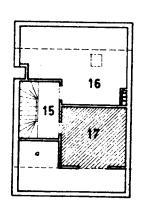
Area to be assigned proportionately to the private floor space of the flats. Surface à imputer proportionnellement à la surface privée des appartements. Эта площадь должна распределяться пропорционально площади отдельных квартир. METHOD OF MEASURING THE DWELLING SPACE OF A ONE-FAMILY HOUSE METHODE DE MESURAGE DE LA SURFACE HABITABLE D'UNE MAISON UNIFAMILIALE CIIOCOB ИЗМЕРЕНИЯ ЖИДОЙ

ПЛОЩАДИ ОДНОСЕМЕЙНОГО ДОМА





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2. CELLAR CAVE ΠΟΓΡΕΒ

3. PLAYROOM SALLE DE JEUX КОМНАТА ДЛЯ ИГР

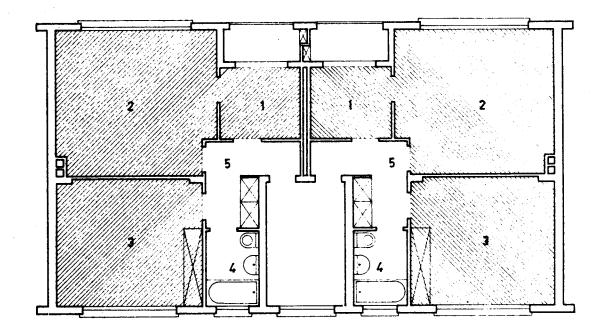
4. GARAGE GARAGE F**APAX** 

- 5. COMMUNICATION SPACE DEGAGEMENT KOPULOP
- 6. W.C. W.C. УБОРНАЯ

- 7. KITCHEN CUISINE K**YXHH**
- 8. LIVING-ROOM LIVING KOMHATA ДНЕВНОГО ПРЕБЫВАНИЯ
- 9. COMMUNICATION SPACE DEGAGEMENT KOPUAOP
- 10. W.C. W.C. УБОРНАЯ
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- 13. BEDROOM CHAMBRE СПАЛЬНЯ
- 14. ВЕДКООМ СНАМВКЕ СПАЛЬНЯ
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METHOD OF MEASURING THE DWELLING SPACE OF A FLAT METHODE DE MESURAGE DE LA SURFACE HABITABLE D'UN APPARTEMENT СПОСОБ ИЗМЕРЕНИЯ ЖИЛОЙ ПЛОЩАДИ КВАРТИРЫ



- 1. KITCHEN CUISINE KYXHЯ
- 2. LIVING -ROOM LIVING КОМНАТА ДНЕВНОГО ПРЕБЫВАНИЯ
- BEDROOM
   CHAMBRE
   СПАЛЬНЯ

- 4. BATHROOM BAIN BAHHAR KOMHATA
- 5. COMMUNICATION SPACE DEGAGEMENT KOPULIOP

HOU/WP.3/35 11 July 1957 English only

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HOUSING COMMITTEE

Working Party on Housing and Building Statistics (Eighth session, 27 to 29 May 1957)

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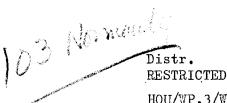
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Architect, Member of the Swiss Committee of UIA

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Mr. Lucien WYNEN

Président de la Commission du Logement de l'UIOF



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HOU/WP.3/Working Paper No.35/Add.3 17 October 1961

Original: ENGLISH

# ECONOMIC COMMISSION FOR EUROPE HOUSING COMMITTEE

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OFFICE OF THE ADNING

## Working Party on Housing and Building Statistics

(Item 2 of the provisional agenda for the twelfth session)

# SURVEY OF THE HOUSING SITUATION IN EUROPEAN COUNTRIES SUBJECT IV: FUTURE HOUSING REQUIREMENTS

Report prepared by Mr. E.H. Rutland (United Kingdom), Rapporteur

1. To formulate a bousing policy which can be expressed in a realistic building programme it is necessary not only to measure the existing shortage of houses as in Subject III but also to estimate what number of houses will be required at various dates in the future. It is desirable to assess these future requirements as objectively as possible and therefore to lay down realistic norms and methods for making assessments which are appropriate to the circumstances of each country. 2. Future housing requirements should be estimated from the size and composition. of the probable future population, but the unit of demand for housing is the household, and methods of estimating the future number of households from the population are discussed below. As a rule each private houshold should have its own conventional dwelling, but since standards and social usages differ even between European countries some differences in the provision made for different types of household will have to be accepted. It is, however, essential that the assumptions made by each country in calculating housing requirements and the methods and norms adopted should be set out so that a clear picture may be conveyed both within each country and also for outside comparison. Only on this basis is it possible to form an idea of the housing problem confronting each country.

3. When calculating future housing requirements, the main factors to be taken into account are:

- (a) the need to replace housing lost from stock;
- (b) changes of a demographic nature.
- A. Replacement of Housing Losses
- 4. Such losses are likely to arise through:
  - (a) the demolition of dwellings unfit for habitation;
  - (b) demolitions to make way for redevelopment such as road widening;

- (c) fire, subsidence or other catastrophes;
- (d) the conversion of two or more dwellings into one large one or of houses to non-residential use.

The census does not, as a rule, provide a good basis for forward estimates of these items. Other methods must be employed.

(a) Unfit houses

5. Where the census includes questions concerning the age and equipment of dwellings and the materials of which they are built, some inference may be drawn about the future rate of obsolescence by a cross-analysis of these data. Age alone is not always a reliable guide since many old houses are likely to have survived because they were originally built very soundly or because they possess architectural merit and have therefore been maintained to a high standard. They may still have a long useful life before them. On the other hand some recent houses may be so inadequate in quality, design or equipment that their early replacement is desirable.

6. A more reliable assessment can be derived from periodic surveys of the condition of houses, preferably by qualified architects, surveyors, etc., working to mutually agreed standards. Some subjective bias may still be inevitable and some allowance will also have to be made for changes in the character of a district. Where adequate personnel is not available in sufficient numbers or time does not allow a full analysis, much can be done by carrying out sample surveys.

7. Existing replacement requirements are represented by houses declared unfit for habitation. In addition to these there will be a constant stream of houses deteriorating into a state of unfitness. The common procedure to measure this stream is to estimate the useful life left to a house taking into account the possibility of lengthening this life by improvements. Such estimates are likely to be even less precise in the absence of strictly objective criteria but it is still preferable to attempt an estimate rather than be satisfied with measuring only the accrued crop of unfit houses and disregarding future unfitness. The methods and assumptions used in estimating both the existing and accruing unfit dwellings should be specified.

8. The next step is to decide how much replacement is possible. This figure should always exceed the stream of houses currently becoming unfit since the housing position will otherwise be deteriorating. Some inroad must be made into accumulated arrears. In the light of the resources available a statement is required to show how much clearance can be accomplished per year. If this is set against accumulated and future arrears the magnitude of the current problem can be assessed.

9. To sum up, a statement is required to show:

- (a) the number of dwellings actually inhabited but considered unfit for habitation and in need of replacement as soon as possible;
- (b) the number of inhabited dwellings likely to become unfit and to need replacing during the next 20 years;
- (c) the number of dwellings that it is in fact proposed to replace during the same period.

For preference this statement should be broken into quinquennial periods.

(b) - (d) <u>Redevelopment</u>, catastrophes, conversions

10. Losses from these causes do not as a rule constitute a large proportion of the national housing stock though their incidence may be severe locally. They are mentioned here largely for the sake of completing the assessment of future replacement requirements. Where detailed town plans exist they are of great help in forecasting redevelopment and some forms of conversion. Other losses can be projected on the basis of past information. Where this is incomplete information can be collected through surveys.

B. <u>Demographic Requirements</u>

11. According to the principles stated in paragraph 2, above, forecasts of the future requirements of conventional dwellings, other than those for replacement, involve forecasting the future number of private households. Population forecasts alone are not sufficient since the numbers of households and of persons do not change in the same way. Apart from migration, of which more will be said, a population increase consists of children who do not require more houses. Conversely there can be a marked increase in the number of households in a population static in size. A closer correlation exists between changes in the numbers of married couples and of households, since in European countries between 70 and 80 per cent of all households are headed by married couples. The remaining households consist of a great variety of combinations of persons including many one-person households and they increase and decrease at different rates from those of married couples. For the sake of simplicity it is best to exclude throughout, households voluntarily living in collective units or in institutions.

12. In forecasting the number of households, however, the definition of households agreed by the Conference of European Statisticians must be adjusted. This necessity arises from two causes:

- (a) Many existing households contain more than one married couple, but it is generally accepted that each married couple should normally have a separate dwelling. It is therefore necessary to forecast the number of married couples as part of the general household forecasts. One complication arises from the fact that some married couples share dwellings voluntarily (particularly in rural areas) whilst others do so from necessity because the right type of dwelling is not available in the right place or at the right cost. Some countries may therefore prefer to forecast both on the basis of existing households (i.e. on the assumption that the same proportion of married couples will require separate dwellings as at present) and also on the basis of married couples, taking into account all secondary families. This would give a minimum and a maximum forecast and define the limits within which action is required. Each country should state precisely on what assumptions its forecasts are based in this respect.
- (b) The accepted definition of households is inappropriate also in its treatment of lodgers. These are usually lone persons sharing a dwelling and often receiving some services but not sharing common living rooms or meals or household management, with the rest of the occupants. While they are therefore rightly treated as separate households, most of them do not require a separate dwelling. They need to be eliminated partly or wholly from forecasts, and again the extent to which they are eliminated will vary from country to country and should be clearly specified.

13. These two adjustments may be based on survey information or on a knowledge of national circumstances acquired in other ways. They amount to making forecasts only for such private households (i.e. both single persons and groups of persons) as can be reasonably expected to require separate dwellings but disregarding any limitation imposed by cost or by a shortage of houses. For convenience these households could be termed "potential". They can be defined either as married couples plus households not containing married couples or as households plus secondary families, adjusting in each case for families voluntarily

sharing a dwelling and for lodgers. Though the approach in these two definitions is slightly different the result should be much the same. 14. The period for which forecasts are made must be long enough to provide warning, adequate for administrative action, of the magnitude and timing of demographic changes. One cannot, however, look too far ahead since forecasts must clearly be less reliable the longer they are. Household projections(1) have this great advantage over those of population, that they remain unaffected by births for a period of at least 15 years, since, in Europe at any rate, no households are set up by people under 15 years of age. Even up to 20 years ahead the effect of changes in the birth rate on household projections is very small. The most useful procedure would seem to be to forecast for twenty years with quinquennial subdivisions.

15. The choice of method used in forecasting will depend largely on the statistics available. It will be necessary to forecast the number of married couples with some care, since they constitute by far the largest proportion of potential households. Projections of married couples can be made from the age and sex structure of the population. The male and female population at each age is usually recorded in a census and it is therefore possible to foretell with some accuracy what the population at each age over 15 years will be 5, 10, etc. years hence. It is only necessary to advance each age group by 5, 10, etc. years and to diminish it by the mortality appropriate to that age group. For projections beyond 15 years it is also necessary to estimate the number of births for these extra years. In countries where international migration is important it will also be necessary to adjust these projections for such migrants as are likely to form private households.

16. A simple way of estimating the future number of married couples from age and sex projections is to assume that the marital composition of each age group will be the same as it is in the census year and the total of married couples will only vary as the size of each age group. To simplify the calculation it is assumed that the number of married females equals the number of married couples. If then the ratio of married females to total females in each age group is

The convention is here used of referring to future estimates involving natural changes in the population by births, deaths and marriages as "projections"; estimates involving also migration and other changes are "forecasts".

 $= \frac{1000 \text{ F}_{i}^{(m)}}{\text{F}_{i}}$ m;

where  $F_i^{(m)}$  is the number of married females aged i years and F is the total number of females aged i years i (i relating to a quinquennial group).

we can express the number of married females (and hence of couples) n years later as the sum of products of the number of females living in each age group after n years multiplied by the proportion of married females relevant to that age group i.e.

$$N_{mf}^{(n)} = \frac{1}{1000}$$
  $F_j \cdot m_j$   
where  $N_{mf}^{(n)}$  is the number of married females after n years

j = 15-19, 20-24, 25-29 ..... years of age.

17. This simple method may suffice in most cases but for the sake of greater realism it will be desirable to abandon the underlying assumption that the proportion of married people at each age will remain constant. For instance, if the above calculation is repeated for the male population, it is quite likely that a somewhat different result will be obtained. To estimate the number of married couples, this difference should be halved, for it is reasonable to assume that if the projected number of married of one sex exceeds that of the other, at least part of the deficit will be made up by an increase in the proportion married among the sex showing a deficit and a decrease in the m ratio of the sex that has a surplus.

18. It is also desirable to adopt for purposes of projections slightly different m ratios from those in the census base year where there has been a distinct trend in marriage rates. In several European countries there has recently been an increase in nuptiality and some further increase in the married part of the population must be expected. The marital composition of each age group in the future should be assessed in the light of the present marital composition of the age group that will form it and in the light of recent trends in nuptiality. 19. Next, it is necessary to exclude all married couples voluntarily living in institutions or communally, or voluntarily sharing a dwelling. These couples will not require conventional dwellings. It may be possible to make a close estimate of their number from the census, supplemented if necessary by a survey. The simplest procedure is to assume that their number will change in proportion to that of all married couples. National circumstances may, however, warrant a higher or lower rate of change; for instance, owing to a drift of population from rural areas where they shared dwellings, to urban areas; or owing to the ageing of the population, which may result in more couples being accommodated in other than conversional dwellings. Here again the assumption used should be specified.

20. It now remains to project the number of potential households which will not be headed by married persons. The simplest assumption is that their number will vary in proportion to the non-married private population in the household-forming age groups from which the heads of these households will in fact be drawn(1) i.e.

$$H^{n} = \frac{H^{c} (P^{n} - M^{n})}{P^{c} - M^{c}}$$

Where

H = number of private households with non-married heads

M = number of married persons in private households

P = total population aged over 15 years in private households

c = census year

n = year to which the projection relates.

In the above equation the quantity M<sup>n</sup> is derived from the calculations outlined in the preceding paragraphs and it is assumed that population projections by age groups are available; also that the census will have provided information about the number of private households not headed by a married person  $(H^{c})$ . 21. If lodgers have been treated as separate one-person households in the census the correction mentioned in paragraph 12(b) can conveniently be applied here. They should be wholly or partly excluded from  $H^c$  in the above equation or, if it is desired to estimate their number in the future, the equation will provide a basis, if the number of lodgers is substituted for the term H. If lodgers have not been counted as separate households no further correction is necessary, unless it is desired to make a provision of separate dwellings for some of them in the future. In that case a survey would be required to establish the basis for a projection. Similar treatment would be required for any other special groups, e.g. grown-up children living with their parents but wishing to have a separate dwelling. The assumptions made about the future housing of lodgers and such other groups need to be specified.

It does not seem admissible to assume that they will vary at the same rate as married couples. If the proportion of married couples in the population aged over 15 years increased it could do so only at the expense of the unmarried.

22. The method described above is simple and can be expected to give only approximate results for households not headed by a married person since no account is taken of changes in the structure of this group. This may introduce significant errors since there is evidence that such changes are in fact taking place on a considerable scale in most European countries. There is also the disadvantage that the method provides information for two broad groups only, namely, those headed by a married person and those not so headed. More detailed analyses and projections for individual age and sex groups of households are desirable but cannot easily be made. Another method is therefore outlined below. It has the advantages that analysis is possible in any detail and that estimates for all groups of households are made in one operation by the same method. 23. The procedure is on the basis that counting the chief earner or senior member of a household, i.e. its head, is equivalent to counting the number of households and that much useful information may be derived from grouping these heads by age, sex and marital status. Estimates and forecasts of households by this method are, however, only possible if both the total population and the heads of households are analysed in the census by the same age/sex/marital groups and if population projections by these groups can also be prepared.

24. The groups can be selected according to their importance or special interest. For instance, households headed by young married men might be considered worthy of special attention in countries where the age of marriage is declining and more such households are likely to come into being. Conversely households consisting of or headed by an old person will become more numerous where longevity is increasing. Both types of household represent demands for very different kinds of accommodation.

25. The number of groups selected will depend on the kind of housing problem it is considered important to elucidate and on the statistical resources and information available. As a minimum it might be considered sufficient to select three broad age groups, such as under 40, 40 to 59, 60 years and over; each group being divided into those with married heads and those not with married heads. The corrections described above will have to be applied; namely the married heads of households will have to be augmented by the difference between their number and that of all married couples in each group, an allowance being made, if considered necessary, for married couples sharing a dwelling voluntarily; persons and households living in institutions or in communal units, and a specified proportion of lodgers will have to be excluded throughout. The aim of these adjustments is to establish as realistically as possible the number of units requiring dwellings, and to do so moreover in terms of heads of households.

26. The next step is then to establish the ratio of these adjusted heads of households to the total population in their particular age/sex/marital group, the so-called headship rate. Projections can then be worked out by applying constant headship rates to the projected groups, i.e.

$$\mathbf{K}^{\mathbf{n}} = \frac{\mathbf{P}^{\mathbf{n}} - \mathbf{H}^{\mathbf{c}}}{\mathbf{P}^{\mathbf{c}}}$$

where H is the number of households and P the number of persons in any one age group.

c and n are the years of the census and of the future population projections respectively.

27. The headship rates of potential households are less subject to change than those based on census households which partly reflect changes in the housing situation. The latter rates have recently increased in many countries simply because the supply of houses has improved. On the basis of potential households, requirements are measured independently of supply. Also the structure of households is more homogeneous (there are no multi-family units) and comparisons between the base year and the projections are therefore more valid, since they indicate the actual growth in demographic requirements. There is some evidence that the number of potential households varies predominantly in accordance with the age/sex composition of the population, and less in accordance with economic circumstances and changes in social attitudes. The current crop of censuses will provide new information on such matters.

28. For preparing a housing programme it will be found desirable to analyse future requirements in terms of each major group of households. It may for instance emerge that households with young and old heads will increase in number whilst those with middle-aged heads are likely not to change much. This fact would not emerge from a presentation of total requirements only and the type of housing required by each group differs. It is suggested therefore that the requirements of each group for which the above calculations have been made should be stated, giving:

 (a) the number of actual and of potential households in it at census date and

(b) the projected number of actual and potential households.

The potential households could be given as maxima and minima, as mentioned in paragraph 12(a).

# C. Other Requirements

29. For a more complete assessment of future requirements two additional factors need to be mentioned here because they can to some extent be measured objectively: Migration

30. The most troublesome adjustment is for external and internal migration. To deal with the former first, even appreciable net emigration is likely to cause less of a housing problem than large scale immigration. It should ease demand for housing and result in a transfer of houses between the remaining residents in such a way as to leave the most obsolete houses empty. There would then be no need to replace them. In other words, a country with a net emigration loss will export some of its replacement needs. Substantial net immigration on the other hand will cause an immediate increase in the demand for houses. Unless immigration is controlled and directed the number of houses to be built for immigrants can only be estimated approximately. It is first necessary to separate permanent migrants from temporary visitors and to determine how many of the former will require conventional dwellings. As a rough approximation it is suggested that a count of married females among permanent migrants would provide an assessment of the potential households containing a married couple. A margin of 30 per cent could then be added for non-family households. It would probably be desirable to keep this margin large, as among migrants there is usually a large proportion of people who have not yet formed households but will soon be doing so. Closer estimates could no doubt be derived from surveys among recent immigrants. The figures so obtained could be expressed as a proportion of the total permanent immigrants and this proportion could be applied to estimates of the numbers of future immigrants.

31. Internal migration will similarly result in a transfer of demand from exporting to receiving areas, reducing both the demographic and the replacement need in the former and increasing them in the latter. Migration on a moderate scale should not cause more than a geographical redistribution of the total national housing construction required. If migration is on a larger scale it might lead to an anticipation of the replacement need through houses becoming empty in the exporting areas before they would normally be replaced, whilst additional new houses would still have to be provided for their former occupants in the areas

to which they had migrated. The net result would then be an increase in national construction and in the national housing stock above that estimated on the projections alone, but since the empty houses would have to be cleared away for replacement at some time in any case, the increase would only be temporary.

32. It is difficult to estimate the housing provision to be made for future migrants because not only the number but also the composition of migrant populations affect housing demand and these cannot be known precisely unless complete control is exercised over migration. Estimates are frequently based on recent trends and on assessments of the capacity of each area to provide employment, housing, water, cultural, social and other services, communications etc. The total migration is then phased over a period since it rarely proceeds at a constant rate over any length of time or continues indefinitely. When these estimates have been made they can be used to prepare separate population and household projections for each area. It is necessary to do this since migrants will take their own appropriate number of births, deaths and marriages with them and provision will have to be made for these as well as for the original migrants. Different provision will obviously be required, e.g. in expanding industrial towns attracting young and growing families, as compared with amenity towns attracting retired people with few children. In countries where migration is mainly of one kind, such as from rural to urban areas, it may be possible to generalize and to assess the extra houses required over the projected period on a national scale by preparing separate projections for urban areas and rural areas as a whole. All such projections presuppose fairly detailed information about the characteristics of migrants. Information about these characteristics has been collected in several of the current censuses. Further study and comparison of the results and of the methods used in applying them should prove useful. Meanwhile all countries should be requested to specify to what extent provision for external and internal migration is taken into account in preparing future housing programmes, and by what methods such provision is estimated. Vacant Dwellings

33. In forecasting future requirements account must also be taken of the fact that somewhere between 1 per cent and 3 per cent of houses stand unavoidably empty at any time for a variety of reasons, e.g. between tenancies; houses used seasonally or occasionally; houses undergoing repair. This proportion varies; it is for instance higher in holiday resorts during the off-season than in central residential areas and it also varies inversely with the unsatisfied housing demand. For forecasting

purposes the aim should be to provide just sufficient vacant dwellings to make possible a free functioning of the housing market. The present censuses may provide a basis for such an assessment and countries should be asked to state what proportion they would consider adequate for this purpose and why.

#### D. Summary and Conclusions

34. The preceding sections can now be summarized by saying that the number of dwellings to be provided in any future period can conveniently be analysed into those required:

- (a) to make good the existing quantitative shortage of dwellings as assessed under Subject III;
- (b) to replace losses from the existing housing stock that can be expected in the future from slum clearance, catastrophes, redevelopment and other causes outlined in A (paragraphs 4 - 10);
- (c) to provide accommodation for any increase in the number of households as determined according to B (paragraphs 11 - 28);
- (d) to provide (i) additional accommodation in areas of immigration
  (ii) the necessary vacant dwellings as discussed in C (paragraphs 29 33).

All these represent new construction, but only items (a), (c) and (d) will increase the total housing stock, (part of (d) only temporarily).

35. The purpose of setting out future requirements under these headings is to provide more accuracy in forecasting and more flexibility in  $adaptin_{\mathbb{S}}$  development to requirements. Each of the constituent parts of the programme will need to be kept under review; it should then be easier with the lapse of time to measure actual progress against the forecasts; to pinpoint the causes of any shortfall and adjust the programme accordingly; and to take the most appropriate remedial action. 36. The period over which forecasts of requirements are made and the phasing of construction to meet these requirements deserve some consideration. The demographic requirements and those arising from migration, catastrophe, etc. represent current demands, to neglect which means that housing provision is actually deteriorating. Most countries will therefore be anxious to keep construction abreast of these requirements. On the other hand, the speed with which arrears in slums are liquidated will be determined in large part by the economic circumstances and the resources available at the time. Countries may feel that there is some latitude in this respect and that progress may well be faster in some years than in others. Social changes are now taking place at a rapid rate; they and the rising standard

of living are strongly reflected in housing demand. Housing norms regarded as tolerable now are likely to be thought impossibly low within a few decades. The housing problem is therefore likely to grow even in spite of considerable clearance, construction and replanning. The precise time by which the total housing problem will be solved may be quite indeterminate and it is therefore desirable to eliminate the shortages which exist and which can be foreseen within the 20-year period referred to in paragraph 14. If all countries work to this period the relative gravity of their housing problems can be compared. Where the existing problem is too great to be solved within this time countries should at least attempt to specify both the total problem and the part which can be tackled within the next twenty years.

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ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

Working Party on Housing and Building Statistics

(Item 3(d) on the provisional agenda for the twelfth session)

## PUBLICATION OF THE QUARTERLY BULLETIN OF HOUSING AND BUILDING STATISTICS FOR EUROPE

#### Note by the Secretariat

1. The Housing Committee at its twenty-first session held in June 1961 heard an oral statement by the Secretariat which proposed that this Working Party should be requested to consider whether it was necessary to continue the publication of the Quarterly Bulletin of Housing and Building Statistics for Europe. It was noted that some delegations were not in favour of a discontinuation. The Housing Committee agreed to request the Working Party to consider the possible discontinuation of the Quarterly Bulletin and consequential matters arising therefrom and authorized the Working Party to take a final decision in this matter (E/ECE/HOU/95 paragraphs 10 and 11 (d)).

2. Two statistical publications on housing and building are regularly issued by the Secretariat. The first is the Quarterly Bulletin of Housing and Building Statistics for Europe and the second the Annual Bulletin of Housing and Building Statistics for Europe. The Quarterly Bulletin was published for the first time at the beginning of 1953 and the first Annual Bulletin in 1957.

3. At its very start the Quarterly Bulletin was a rather bulky publication in which statistical data and explanatory notes had to be presented country by country owing to the absence of comparability. The efforts made by the Working Party, mainly in the field of concepts and definitions and in the improvement of knowledge about available national statistics, have made it possible to achieve

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HOU/WP.3/Working Paper No.36 page 2

a better presentation of statistical information together with a greater degree of international comparability. This in turn has led to a steady improvement in the Quarterly Bulletin's contents and presentation.

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4. The experience gained with the Quarterly Bulletin made it possible to launch the Annual Bulletin, which now enjoys a wide circulation. The issue of the Annual Bulletin and its subsequent development has led to a considerable reduction in the scope and size of the Quarterly Bulletin.

5. The Executive Secretary would now like the Working Party seriously to consider taking a further step in the direction outlined above and to envisage the discontinuation of the Quarterly Bulletin. The main reason for this is that experience has shown that the needs of users of statistics in the field of housing and building are now almost entirely met from the material shown in the Annual Bulletin. It would seem that a few series only, especially those relating to current house building activities, would be worthwhile publishing at shorter intervals than a year, and it was clear from the discussion at the last session of the Housing Committee that the publication of such limited statistical series was considered desirable.

6. The Secretariat would therefore like to propose that the Working Party should agree to the discontinuation of the Quarterly Bulletin as such, but to continue however, the collection and publication by the Secretariat of quarterly statistics on the number of dwellings begun, dwellings under construction and dwellings completed. The questionnaire used so far for the collection of data for inclusion in the Bulletin should be adapted for this purpose. HOUSING AND MOME FINANCE AGENCY. OFFICE OF THE ADMINISTRATOR LIBRARY.

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#### ECONOMIC COMMISSION FOR EUROPE

## HOUSING COMMITTEE

Working Party on Housing and Building Statistics

#### PROVISIONAL AGENDA

Tenth Session

to be held at the Palais des Nations; Geneva, on 16 and 17 June, beginning at 10.30 a.m. on 16 June 1958

- 1. Adoption of the agenda
- 2. Election of officers
- 3. Activity of the Conference of European Statisticians
- 4. Annual Bulletin of Housing and Building Statistics for Europe (HOU/WP.3/Working Paper No. 24)
- 5. Quarterly Bulletin of Housing and Building Statistics for Europe (HOU/WP.3/Working Paper No. 25)
- 6. The use of physical units for measuring building activity (MOU/WP.3/Working Paper No. 26)
- 7. Work programme (HOU/WP.3/Working Paper No. 27)
- 8. Any other business
- 9. Adoption of report to Housing Committee (HOU/WP.3/40)

HOU/WP\_3/39 Page 2

#### NOTES ON THE AGENDA FOR THE TENTH SESSION

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#### Item 1: Adoption of the agenda

#### Item 2: Election of officers

According to the rules of procedure of the Economic Commission for Europe, officers of Committees and Working Parties are elected at the first session of each year.

# Item 3: Activity of the Conference of European Statisticians

The Secretariat will make an oral statement on the activities of the Conference of European Statisticians, so far as they are related to subjects dealt with by the Working Party.

# Item 4: Annual Bulletin of Housing and Building Statistics for Europe

The Working Party at its ninth session in November 1957 considered that it would be useful to "have another session in about six months' time, to discuss a draft of the Annual Bulletin for 1957" (HOU/97, paragraph 27). A draft of the first Annual Bulletin of Housing and Building Statistics for Europe is being prepared by the Secretariat and will be circulated as HCU/WP.3/Working Paper No. 24. The Secretariat will revise and complete the Annual Bulletin in the light both of comments received in writing and of discussion during the session, and will issue the final version for general distribution. The Working Party at its last session also "confirmed its view, expressed at previous sessions, that the publication of an Annual Bulletin of Housing and Building Statistics was highly desirable, and expressed the hope that the Bulletin would be issued each year in printed form" (HOU/97, paragraph 26). The Secretariat will make an oral report on this question.

# Item 5: Quarterly Bulletin of Housing and Building Statistics for Europe (HOU/WP.3/Working Paper No. 25)

This item has been put on the agenda to give delegates and the Secretariat an opportunity to review the results obtained from the housing quarterly statistics questionnaire to discuss any difficulties that may have been encountered in completing it and to establish the definitive version of the bulletin (HOU/97, paragraphs 23 to 25).

# Item 6: The use of physical units for measuring building activity

At its ninth session the Working Party discussed the subject of indices of building activity and considered that further study was needed of the use of the various physical units for measuring building activity. Countries were invited to supply the Secretariat with data from which the rapporteurs might prepare a paper analysing the value of the different physical units (HOU/97, paragraphs 10 to 12). This paper will be circulated as HOU/WP.3/Working Paper No. 26.

# Item 7: Work programme

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The Working Party decided at its ninth session in November 1957 to "review its work programme ..... /and? ..... consider in particular whether it would be possible, in future, to have meetings once a year". (HOU/97, paragraph 27). A paper on this subject prepared by the Secretariat will be circulated as HOU/WP,3/Working Paper No. 27.

# Item 8: Any other business

Item 9: Adoption of the report to the Housing Committee (HOU/WP.3/40)

In accordance with established practice the Working Party should agree on the report of its tenth session before concluding its work.

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#### ECONOMIC COMMISSION FOR FUROPE

#### HOUSING COMMITTEE

#### SIXTEENTH SESSION

#### Position Paper

## <u>Working Party on Housing and Building Statistics</u> (HOU/WP.3/39)

#### PROBLEM

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The Working Party on Housing and Building Statistics has been convening twice yearly for two or three days preceding the meeting of the Housing Committee. Membership of the Working Party usually consists of the same countries which attend the meeting of full Committee though the individuals representing individual countries sometimes change at least in part between the two gatherings. USDELEGATIONS usually have adopted more the role of observers than of active participants in this Working Party, though at times USDELS have participated in a limited way. The statisticians of European governments are highly competent and frequently their representation at the Working Party consists of statisticians who have an intimate knowledge of housing statistics and social accounts in their own countries.

The tendency of the Working Party has often been to become involved in methodology rather than in reviewing areas on which statistics are necessary. It also has sometimes concerned itself with subjects which are more important to social accounting than to how ing statistics. Heretofore the U. S. has remained neutral despite its misgivings.

Consideration is now being given to less frequent meetings of the Working Party, annually or on call, in view of the virtual completion of much of the intended work or because many of the problems are more appropriately the responsibility of the Conference of European Statisticians. As this Position Paper is being drafted, Working Papers Numbers 24 and 26 have not yet been received. If necessary, supplemental instructions will be prepared at a later date.

#### POSITION ON EACH AGENDA ITEM

1. Adoption of Agenda: USDEL may join in approving.

2. Election of Officers: See supplementary instructions.

3. Activity of Conference of European Statisticians: Information is to be given by Secretariat. Probably no action will be required.

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4. Annual Bulletin (See HOU/WP3/Working Paper No. 24): When Working Paper No. 24 is circulated, USDEL may examine it and offer constructive observations but leave most of the discussion to the others. USDEL will usually find that the suggestions and judgments of the Secretariat on statistical matters merit support.

5. Quarterly Bulletin (See HOU/WP.3/Working Paper No. 25): If data on production of bricks are discontinued because they do not adequately reflect house production, USDEL may inquire whether the same limitation does not apply to data concerning production or consumption of cement. USA would prefer retention of both series whether or not they are considered significant as indices of housing output. They have significance in other ways and reveal capacity for production of building material.

6. The use of physical units for measuring building activity: Working Paper No. 26 must be studied by USDEL when it becomes available. While leaving the burden of discussion to others, USDEL may contribute its views within the field of its own competence in such matters.

7. Work Program (See HOU/WP.3/Working Paper No. 27): Though remaining relatively inactive during the discussion, USDEL may support the views of the Secretariat that the Conference of European Statisticians is the appropriate body to undertake the next work on such subjects as statistics on housing finance, sampling surveys of the housing situation, and rent index. Problems of methodology are primary in each such case. In the U. S. view all matters of methodology should be referred to the Conference.

It also seems likely that after Working Paper 26 has been examined, further work on the index of building activity could be left to the Conference of European Statisticians. Likewise, there would seem to be merit in referring manpower statistics and statistics of building materials to the Conference though this matter evidently is to be left for decision of the Committee rather than the Working Party.

This leaves for continuing work by the Working Party an occasional review of the Statistical Bulletins (Quarterly and Annually) and other problems usually not involving extensive statistical methodology including: problems of collecting current housing and building statistics; and calculation of housing needs and shortages.

Also pending is discussion of a method for measurement of the capacity of dwellings for family occupation. The International Union of Family Organizations will ultimately provide a document on this subject. It is believed tenable to consider that little can be contributed on a topic so influenced by varying value judgments of

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various cultures. Possibly health requirements could be subjected to objective tests but so far this has proven too difficult of attainment. Very little valid research on the relation of space to health has been done. Felt needs of people may or may not be related to health requirements. The USDEL may express misgivings about this study should there be considerable discussion of this topic. It is anticipated, however, that there will be little if any discussion of the topic at this meeting.

USDEL may join in a decision to hold future Working Parties on Housing and Building Statistics either annually or on call. If there appears to be considerable variance among the delegations on whether the Party should convene annually or on call, USDEL should concert with Western Governments, particularly the UK, and support whatever position they may take.

## DISCUSSION

None.

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HOUSING COMMITTEE

Working Party on Housing and Building Statistics

STATISTICAL COMMISSION AND ECONOMIC COMMISSION FOR EUROPE

CONFERENCE OF EUROPEAN STATISTICIANS

Ad hoc Group of Experts on Current Housing and Building Statistics

(Item 4(b) of the provisional agenda)

#### INDEX NUMBERS OF CONSTRUCTION

Report prepared, by Mr. O Lukács (Hungary), Rapporteur<sup>(1)</sup>

I. PURPOSES OF INDEX NUMBERS OF CONSTRUCTION

1. It is particularly important to determine the volume of output of the construction industry as well as the output index expressing the changes of this volume. This importance should be stressed with regard to the following factors:

2. Construction activity plays an important part in a country's economy. It is evident that by defining construction activity and, within this the volume of construction investments, and by evolving methods of calculating the volume of output, it will be possible to observe more closely the changes occurring in a national economy's fixed funds. It should be noted that a close observation of the volume of dwelling construction will make possible a better assessment of the population standard of living.

3. The defining of productivity of construction work has its inherent difficulties. A more accurate assessment of productivity changes will be possible once the volume of construction output and the output index have been determined.

4. So far, there has been no satisfactory international comparison of construction activity. Such a comparison calls for a comparison, on the one hand, of national output indexes and, on the other, of the volume and level of construction activity,

(1) An earlier version of this report was submitted to the rapporteur from the Netherlands on this subject, Mr. J. Hirdes. His comments are taken into account in the present version.

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both in comparable units of measurement. This method would also make it possible to compare the productivity levels in the various countries.

II. COVERAGE OF INDEX NUMBERS OF CONSTRUCTION

5. The construction industry's output index may be defined in two ways. If the index is defined as part of the social product, the gross output index is obtained. If, however, nothing but the changes in net value or in "value added" are to be measured - i.e. that part of production which increases the national income - the result is a net output index (or "value added" index).

6. Both the gross output index and the net (or "value added") output index may be determined either directly or indirectly.

7. First of all, it is necessary to establish what fields should be covered by the construction industry's output index. This entails two steps:

(a) the definition of "construction"

(b) the choice of a statistical unit

(a) Definition of construction

8. The most expedient method would be for all countries to take as their basis the International Standard Industrial Classification of All Economic Activities, issued by the Statistical Office of the United Nations (see Annex I). However, in a number of countries construction activity is classified quite differently.
9. Different methods are applied especially for activity connected with mining construction and open-cast mining. In Hungary, the so-called "technological mounting" is now included within the scope of construction activity. Thus, any country using a classification other than the ISIC, should note this fact separately, together, if possible, with an indication of the percentage of divergence.

(b) The choice of a statistical unit

10. The UN Classification includes under "construction industry" only those construction activities performed by enterprises whose main activity is construction. It does not include construction work on one's 'bwn account", i.e. secondary construction activity. This gives rise to certain difficulties in international comparison, as in certain countries - e.g. Hungary - a relatively large amount of construction is performed within the framework of "own account" activity. Nevertheless, owing to the difficulties involved in collecting the relevant data, these activities should be omitted. If, however, some countries still include it, this fact should be clearly indicated in each case, if possible in terms of the percentage of the total volume.

11. According to the ISIC the output of every enterprise concerned mainly with construction should be covered, regardless of whether the enterprise is privately or state owned. The data of construction co-operatives may also be included. Data on the industrial output of auxiliary building plants should be excluded, however, to avoid double-counting in the value indexes.

12. The data necessary for computation of output index can only be collected by the larger enterprises having an adequate administrative staff. Thus, in this connexion, only data on those undertakings employing, say, ten or more workers need be collected. This would not greatly distort the value as a whole, since the overwhelming majority of construction activity is in all countries performed by the larger undertakings. For Hungary, this would mean that for the purposes of international comparison only data on the state and co-operative undertakings - and not those on the private construction industry - would be elaborated, i.e. 85 per cent of the total output of the construction industry. Undertakings employing ten or more workers represent a similar proportion in a number of western countries.

13. However, the omission of enterprises with less than ten workers may affect the value of the general index, if repairs and maintenance are being performed mainly by small enterprises and these activities do not change proportionally with new construction. If group indexes (e.g. for new dwelling houses, other buildings, repairs and maintenance, etc.) are being calculated this influence could be eliminated by weighting, assuming that repairs and maintenance performed by large enterprises do change proportionally with the total of activities in this field.

14. The recommendation made in paragraph 12 above might be applied by those countries for obtaining their data direct from the enterprises. However, in some countries there may be other possibilities of obtaining data on construction. For example, in the Netherlands, data on output value are obtained "through building permits, combined with periodic progress checks" (see Annex II). In such cases the definition of the statistical unit has to be adjusted according to the applied methods of collection of statistics concerned.

III. GROSS OUTPUT INDEX

15. Calculation of the gross output index makes it possible to observe changes in the social product. In principle, the gross output index may be determined by either direct or indirect methods.

## Direct methods

16. There are two such methods:

- (a) adjustment, by a price index, of the output value considered at actual prices (i.e.: the total sum of invoices submitted to the builders)
- (b) the application of an unchanged price system.

## Indirect method

17. The most appropriate indirect method of calculating the gross output index of construction would appear to consist in determining the volume of materials and its changes and, on the basis of these, in drawing conclusions concerning the gross output index.

Calculation of the gross output index with the aid of a price index

18. The general formula according to whether the Laspeyres or the Paasche formula is used for the price index would be:

$$I_{b} = \frac{\xi q_{1} p_{1}}{\xi q_{0} p_{0}} : \frac{\xi q_{0} p_{1}}{\xi q_{0} p_{0}} = \frac{\xi q_{1} p_{1}}{\xi q_{0} p_{1}} \text{ or }$$

$$I_{b} = \frac{\xi q_{1} p_{1}}{\xi q_{0} p_{0}} : \frac{\xi q_{1} p_{1}}{\xi q_{1} p_{0}} = \frac{\xi q_{1} p_{0}}{\xi q_{0} p_{0}}$$

(Experience in Hungary shows that it is immaterial which of the two formulae is used. The divergence over a few years is extremely small). In the abovementioned formulae:

1 <sub>b</sub>	=	gross output index
{ <sup>q</sup> 1 <sup>p</sup> 1	н	output value at current prices of the period under review
{q₀p₀	=	output value of the base period, at current prices
<sup>≤q</sup> ₀ <sup>p</sup> 1 <sup>≤q</sup> ₀ <sup>p</sup> ₀	-	price index calculated with the weights of the base period
$\frac{\xi^{q}_{1}p_{1}}{\xi^{q}_{1}p_{o}}$	=	price index calculated with the weights of the period under review

 19. The symbol "q" in the above formula varies from country to country and also within the construction industry. It may stand for materials, for structures (parts) of buildings, working processes or, if the time of construction is short, even for

whole buildings, expressed in physical units of measurement. Accordingly "p" stands for the price of materials, structures, etc., per physical unit of measurement. 20. It is preferable to take into account principally only the work performed in the period under review. This means that the output value ( $\leq qp$ ) should not include the work done in previous periods which might be of lower or higher price. If the production value were calculated on the basis of work completed it would be necessary to take into account not only the price level of the period under review but also that of previous periods, since the work completed in the period under review dates not only from works started in that period but also from works started in previous periods at lower or higher prices.

21. The formulae for calculating the gross output index, outlined in paragraphs 18, may be transformed as follows:

$$\mathbf{I}_{\mathbf{b}} = \frac{\xi^{\mathbf{q}} \mathbf{1}^{\mathcal{P}} \mathbf{1}^{\mathcal{P}} \mathbf{1}^{\mathcal{P}}}{\xi^{\mathbf{q}} \mathbf{0}^{\mathcal{P}} \mathbf{0}} \quad \text{or} \quad \frac{\xi^{\mathbf{q}} \mathbf{1}^{\mathcal{P}} \mathbf{1}}{\xi^{\mathbf{q}} \mathbf{0}^{\mathcal{P}} \mathbf{0}^{\mathcal{X}^{\mathcal{P}}} \mathbf{1}}$$

where  $P_1 = price$  index.

In some countries both  $\leq q_1 p_1$  (output value of the current period) and  $\leq q_0 p_0$ (output value of the base period, at current prices) are available, or can be determined. The problem in this method consists in determining  $P_1$ , i.e. the price index. Theoretically, more than one method may be used to determine the price index, and experiments in this connexion have been or are being made in certain countries.

22. In the United Kingdom and in Hungary the price index is calculated on the basis In the former country three price indexes are calculated: one of the cost indexes. for the construction of new buildings, one for other types of work and another for The price indexes of the separate groups are calrepairs and renovation works. culated from index numbers expressing the changes in prices of materials and in average wages. The index of the price of materials is computed from the wholesale price indexes of the materials used, while that expressing the changes in average wages is based on changes in hourly wages. The index expressing the changes in average wages takes account also of changes in productivity. The changes in productivity are reflected in the changes in the per capita consumption of materials. (For particulars, see below). It is assumed in the calculations that the profits, depreciation and other costs form a constant ratio of the final price, i.e. that they change proportionately with the price.

In Hungary, the price index has been established on a similar basis but with 23. The indexes of material prices and the changes in more detailed calculations. average wages were calculated as described in the preceding paragraph. The global cost index has been determined by a cumulative weighting of the individual indexes of the single price factors. The price index was obtained by readjusting the cost index, taking into account the profits index, the cost-level index and the productivity This method was applied only in the case of minor price changes; for more index. important changes the method mentioned in paragraph 16 (b) was used. 24. In Yugoslavia, the price index is obtained through the so-called "index-house" This means, in practice, that a price offer is requested of a construction method. undertaking for a typical building. Since such offers recur from year to year a fairly reliable price index can be established. If these offers are requested for a sufficiently large number of typical buildings, a price index for the whole construction industry may be obtained by cumulative weighting (For instance in Hungary, the price index of a three-storey building of thirty-seven flats was first calculated on the basis of 1939, 1949, 1952 and 1959 prices).

25. Similar experiments have been made in the Federal Republic of Germany, although there have been recent attempts to establish a price index on the basis of price fluctuations of individual technological processes (e.g. construction of ceilings In 1958, data were collected on 120 types of processes, and floors, masonry, etc.). from approximately 1,200 construction enterprises, and the construction price indexes of dwelling houses were determined by a cumulative weighting of the indexes of the Experiments are also being made to determine the price individual processes. indexes of other groups and types of building; however, it will be possible to calculate a global price index by this method only if these experiments prove successful. In the Netherlands a building price index has been calculated by comparing actual 26. construction costs per cubic metre with those of the base period. This is done for the so-called "Housing Act dwellings" (social dwelling construction) which are comparatively uniform. Moreover, the Ministry of Housing and Building are now making available detailed data on these dwellings and these data can be used for eliminating the most important differences in "quality". It may be assumed that, within limits, these series are also applicable to other buildings. 27. A certain amount of inherent inaccuracy should be allowed for when applying the Thus, an incorrect assessment of productivity changes - or methods discussed above.

changes in the composition of construction works - may result in inexactitude in a price index calculated from the cost index. Changes occurring in the specific consumption of materials (materials used per physical unit of measurement) are not reflected in this index. A parallel application or a combination of these methods may produce the best result.

Calculation of the gross output index based on fixed prices

28. In certain socialist countries a fixed price method is used to express the change in the volume of construction, i.e. to determine the gross output index, according to the following formula:

$$\mathbf{I}_{\mathbf{b}} = \frac{\leq \mathbf{q}_{\mathbf{1}} \mathbf{P}_{\mathbf{v}}}{\leq \mathbf{q}_{\mathbf{0}} \mathbf{P}_{\mathbf{v}}}$$

where "q" stands for the individual types of work effected (which may mean a working process, or a structural element or even materials), and " $p_v$ " stands for the officially fixed unchanged price.

29. Planning and accounting are likewise based on fixed prices. In practice, this means that independently of the changes occurring in the prices of materials and wages and in other costs, the building firm may only charge the builder with the expenditure incurred in connexion with the work actually performed. Prices are usually fixed for a period of five to seven years.

30. During this period, however, there will inevitably be changes in certain prices - or in certain sectors of the price system - owing to changes in technology, to the application of new materials or, last but not least, to reasons of economic policy. Thus, even when dealing with a fixed price system, the price index must be determined yearly. Nevertheless, since in the period of five to seven years, these changes will generally be restricted to small sectors, the price index will be far simpler to calculate.

31. In the case of more extensive changes in fixed prices, the problem of comparability has again to be faced. In Hungary, the fixed prices introduced on January 1952 were replaced by a new system and new prices on 1 January 1959. The extent of the change was considerable, reaching beyond 70 per cent. A chain index for the year 1959/1958 had to be calculated in order to secure the index series.

32. The chain index was calculated on the basis of the price index and the latter was computed by two methods other than those so far described. The price index was

determined by converting the prices quoted in the budget for each building. In the course of these conversions the budget items concerning constructions to be finished after 1 January 1959, and all budget items for construction to be started after 1 January 1959 were determined at both the old (1958) and the new (1959) prices. 33. Another, similar method, consists in collecting - at both the old and the new prices - data for the year during which the price changes occur. This method assumes that the budgets have been prepared at both prices. The most exact price index is certainly arrived at by a total conversion of budget prices.

34. On account of the expense and work involved in connexion with these conversions, an operation as big as this could only be justified for price changes of the extent experienced in Hungary in 1959.

35. Even in order to determine the extent of price changes during the period of fixed prices, it is rarely necessary to apply the method mentioned in paragraph 16 (a) since the changes mostly affect only a few materials or a few working processes. It is sufficient to consider these changes in the light of the weight of the respective materials and working processes as represented within the whole of the construction industry.

# Determination of the gross output index by the indirect method

36. The gross output index may be obtained by the indirect method, by means of the index of the volume of materials calculated at fixed prices. In this case, the best gross output index is obtained if:

- calculations are based upon the largest possible number of materials used
- the highest possible breakdown can be secured within the individual groups of materials
- the specific consumption (materials used per physical unit of measurement) has not altered significantly
- no essential shift has occurred in the structure of the construction activity.

37. The formula for the calculations is:

$$A_1 = \frac{\xi^a l^p v}{\xi^a o^p v}, \quad \text{where}$$

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= the index of the material volume

- a<sub>1</sub> and a<sub>o</sub> = quantity of materials used in the period under review and the base period, respectively
- <sup>p</sup>v

A,

= fixed price of the individual materials; this may be equal to the price in force in either the period under review or the base period.

38. It is quite impracticable to collect consumption data on each of the many thousand types of material used by the construction industry. Moreover, it is not necessary, since 70 - 80 per cent of total material consumption is made up of the 100 - 150 essential materials; and of this figure, 40 - 50 per cent concern not In practice, therefore, consumption data on more than fifteen or twenty types. about 200 materials will suffice for the calculation; data on the rest may be either totally disregarded or collected only for the larger groups. 39. The most detailed possible breakdown of the essential groups of material is Cement consumption, for instance, should be broken down into the various required. (In Hungary, data are reported separately for "600" cement, "S 54,500" types. Portland cement, "500" Portland cement, "400" blast furnace slag cement and "300" blast-furnace sleg cement; the other types are reported as a single group. The same applies to other materials.) Shifts in ratio within the groups of materials should be watched, as they may affect the volume, although it may not always prove feasible to collect very detailed statistics: for example, there are at least a dozen types of prefabricated concrete beams in use, but it must suffice to concentrate upon the most widely used types and to include the rest in any kind of grouping that seems reasonable.

40 The method just described can be applied only to those countries in which statistics on a sufficient number of building materials are available and if the conditions for using the method mentioned in paragraph 36 are met.

IV. NET OUTPUT INDEX

41. From the net (or value added) output index it is possible to determine that part of the national income produced by the construction industry, i.e. changes in the new values produced. The net output index can also be determined by either direct or indirect methods.

Direct method

42. The general formula of the index is:

$$I_{n} = \frac{\xi^{q_{1}p} - \xi^{a_{1}}\pi}{\xi^{q_{0}p} - \xi^{a_{0}}\pi} - \frac{\xi^{e_{1}}}{\xi^{e_{0}}},$$

or, in the case of value added:

$$I_{n} = \frac{\xi q_{1} P - \xi a_{1} \Pi}{\xi q_{0} P - \xi a_{0} \Pi}, \text{ where}$$

 $\xi q_1 p$  and  $\xi q_0 p$  = gross output value of the period under review and of the base  $a_1$  and  $a_0$  = quantity of materials used in the period under review and in the base period respectively  $\pi$  = unit price of materials used

In these formulae, prices are assumed as fixed, both for materials and for total production.

43. Taking into account the changes in prices, the formula for calculating the net (value added) output index will be as follows:

$$I_{n} = \frac{\xi^{q_{1}p_{1}} : P_{1} - \xi^{a_{1}}\overline{n_{1}} : P_{a1} - \xi^{e_{1}} : P_{e1}}{\xi^{q_{0}p_{0}} - \xi^{a_{0}}\overline{n_{0}} - \xi^{e_{0}}}$$

where: P<sub>1</sub> = producer's price index

P<sub>él</sub>

 $P_{al} = material price index$ 

- = Index expressing the change in the price level of amortization costs (as, in practice, this may generally be neglected,  $P_{\beta 1}$  is approximately = 1).
- $\Pi_{o} =$  the unit price of the different materials used in the base period

$$\overline{\mathcal{H}_1}$$
 = the unit price of the different materials used in the period under review.

In the case of value added the formula changes in so far as amortization ( $\xi \epsilon$ ) is not to be deducted.

44. The computation of the producer's price index has already been discussed in connexion with the determination of the gross price index. The price index of materials is determined by the following formula:

$$F_{a1} = \frac{\leq a_0 \pi_0 \frac{\pi_1}{\pi_0}}{\leq a_0 \pi_0} \text{ where }$$

 $\frac{\overline{\Pi_1}}{\overline{\Pi_0}}$  price index of the different materials used.

The material price index is not intended to be fully representative: it is sufficient if the changes affecting 150 - 200 of the most important materials are recorded and the result related to total material consumption.

45. This way of calculating the net output index may be subject to distorting influences exerted by the use of substitute materials (For particulars in this respect see the UN publication: <u>Index Numbers of Industrial Production, page 21</u>, Studies in Methods Series 1950).

#### Indirect methods

46. The net output index may be approached through two data:

(a) the volume of output measured in physical units of measurement;

(b) the number of working hours performed.

47. The following formula may be used in the construction industry to approach the net production index (value added):

$$I_{n} = \frac{\sum_{i=1}^{n} \frac{q_{1}}{q_{o}}}{\sum_{i=1}^{N} \frac{q_{i}}{q_{o}}}$$

where q = construction work measured in physical units of measurement  $N_{c} = weight$  expressing the ratio of the net output value

48. Difficulty arises in connexion with the choice both of the physical unit of measurement and of the symbol N. Both factors must be characteristic and the relevant data must be available. There are two possibilities:

- (a) to observe the "finished products" issued by the construction industry,i.e. the increase in volume of finished buildings;
- (b) to consider the activity of the construction industry itself, i.e. the change in volume of the various technological processes of construction (types of work).

49. In the first of these methods, the finished buildings will be considered on the basis of the most characteristic units of measurement, e.g. floor space in dwelling houses, cubic metres of air in stables, square metres of roads, running metre of railway tracks, etc. As the construction industry covers a number of individual technological processes, as many groups as possible should be formed. Buildings in Hungary are broken down, according to a "Classification of Buildings" now in force, into eighteen main sections, sixty sections, several hundred sub-sections and more The Classification is also concerned with physical units than a thousand types. of measurement, the same unit generally being used within one group of buildings. In calculating output indexes it would seem reasonable to determine the volume. indexes  $(\frac{q_1}{1})$  for sixty sections and, within these, possibly for further sub-<sup>9</sup>o The sixty sections of the Hungarian Classification are listed in sections. It would be useful if all countries could accept a uniform breakdown of annex III. building types.

50. There are some constructions for which no physical unit of measurement can be determined; these are mostly renovation and repair works. Since, however, these works represent no more than 20 - 25 per cent of construction volume, they may be disregarded, though it would be preferable if indexes could be established for these also. Such indexes are determined either from the value data (taking account also of price changes) or from changes in the number of working hours performed. 51. A more difficult problem is likely to arise in connexion with the determination of N, i.e. of the weights. In principle, the weight corresponds to the net output value (or value added), but its definition is complicated. Therefore, the number of working hours performed, the wages paid or the sum of similar costs and amortization may be used as weights. While these data may be collected for the entire construction industry without any great difficulty, it is more difficult to collect them separately for the different types of buildings referred to above. Accordingly. it will be advisable not to attempt to collect these data but to assess them by

means of theoretical calculations. In Hungary a Reference Book has been compiled for establishing budgets for the construction industry, and for planning; it indicates, for example, the number of working hours required to construct the various types of building.

52. The method discussed above can provide an index of changes in the "output of finished products". Although, in the long run, the changes in the actual level of construction are adequately reflected by their index, it might not provide an accurate comparison of two particular years, especially if in one of the years a large volume of construction is completed.

53. A more accurate result can be obtained, if, as in industry, the change in unfinished work is taken into account, i.e. the balance of stock of unfinished buildings, expressed in physical units is deducted from - or added to - the volume The stock of unfinished buildings would not be determined in of finished buildings. physical units but through conversion according to the degree of advancement. (Example: a road of a surface of 1000  $m^2$  is planned; in the first year only the foundations are laid, but the degree of advancement can be assessed at around 50 per cent. and the figure of 500m<sup>2</sup> may thus be taken for purposes of calculation). 54. The second way to obtain more accurate results is the following: the volume covered by the various technological processes, the types of work expressed in physical units of measurement, is taken as a basis for an approximate net output The representative collection of data made in the Federal Republic of index. Germany on 120 working processes has already been mentioned. Had these data been comprehensive they could have formed the basis of the net output index. 55. Two questions are to be decided in connexion with the collection of data. One is: the types of work for which data should be collected, or, the breakdown of the individual groups of work (e.g. earthwork). The other : the units to be used for measuring the output. Similar to the preceding method, the problem of selecting the factor N, i.e. of weights, arises here also. Either factual figures or theoretical data may be used.

56. This method cannot be expected to give exhaustive results but the types of work selected should cover 80 - 90 per cent of the total construction work. (In Hungary data on four or five types of work only are collected).

57. It should be noted that both methods disregard changes in quality (e.g. the change in the equipment of dwellings, etc.).

58. The second approximation method of the net output index is based on the number of working hours, according to the following formula:

$$I_n = \frac{\frac{1}{1 \cdot 1}}{\frac{1}{1 \cdot 0}}$$

where  $M_0$  and  $M_1$  = sum of working hours performed in the base period and the period under review respectively

 $t_1 =$ productivity index.

59. This method can only give approximate results for the net output value realised during one working hour will almost certainly differ according to the quality of the work done.

60. Another difficulty is again the determination of the productivity index (as already pointed out in the discussion on cost indexes for the calculation of price indexes). Since there is an interaction between the output index and the productivity index (i.e. an output index is essential for the determination of an adequate productivity index), productivity also can only be approximately calculated by the method described here. The "index-house" productivity method can also be applied by calculating as a basis the annual requirements in working hours for certain building types according to the preventing technological conditions.

V. INTERNATIONAL COMPARISON

61. With the aid of the output index methods discussed in sections III and IV, it is possible to compare the rates of development and the dynamics of the construction industry on an international level. But the comparison should be between indexes devised by the same method, since the direction of the gross output index and of the net output index may differ even within a single country.

62. It is far more difficult to compare the volume of the various construction industries over a given period, for want of a comparable unit of measurement which is acceptable from every point of view. In principle, the following units could be considered:

- (a) unit of measurement expressed in value
- (b) number of working hours performed

(c) physical unit of measurement

(d) volume of consumption of materials

63. Most countries have a way of expressing the output of their construction industry in their national currency. It should therefore be feasible to convert this data into a uniform currency. But it is extremely difficult to arrive at an acceptable conversion factor: the official rates of exchange used by the banks are quite unsuitable for this purpose since they fail to reflect actual parities. Therefore a construction price index should be calculated which expresses the relation between the construction prices of different countries. In principle, this price index should be determined on the same way as the normal price index applied within one country.

64. When comparing the number of working hours performed, the distorting effect of diverging levels of productivity should be eliminated. The "index-house" method described in Section IV paragraph 60 would appear the most suitable for this purpose. If this can be practically solved, comparable data should be obtainable. If the needs in working hours can be assessed for one or more typical buildings, it may be possible to derive a relatively adequate picture of the differences prevailing in production levels.

65. If physical units of measurement are used, they should be based on those described in paragraph 48 of Section IV. Whether data on building groups of finished constructions, or data on types of work expressed in physical units of measurement are taken as a basis, difficulties will arise when totalling them. The data clearly cannot be totalled in physical units. Two methods remain possible - the pattern of calculations is:

qp or Sqm

where q = the quantity measured in physical units of measurement of finished buildings (or types of work) in the individual groups of buildings,

p = some kind of uniformly determined value, meaning the "price" per physical unit of measurement in the individual groups,

m = uniformly determined working time necessary for producing the volume expressed in physical units of building (or type of work) in the individual groups.

66. The gross output value will be closely approached, when counting in unit prices (p) and the net output value when counting with working hours (m). Obviously when selecting the p and m values the fact that the indexes differ greatly

from country to country must be disregarded. In theory, the prices of any one country may be chosen as a basis for calculation. The problem lies rather in the fact that the price ratio (and the ratio of working hour needs) may differ among various groups of buildings within the individual countries. For example, in Hungary, the price per cubic metre of industrial buildings is approximately twice as much as the price per square metre of macadam roads. It is not at all certain that a similar ratio prevails in the other countries. Similarly, depending on whether, in the respective country, a higher level of productivity is attained in building construction or in civil engineering, the working hour ratios may be different. However, this difficulty appears to be easier to surmount, e.g. by calculating the volume in relation to ratios of several prices (types of work) and calculating their mean value.

67. The quantitative comparison of materials consumption may be used for an approximative international comparison of the levels of construction. This has already been discussed in paragraph 36 et seq. There are, however, certain problems. Thus, the determination of the "volume of materials" may prove difficult on account of the materials selected since, beside the materials generally used, such as cement, bricks, reinforced concrete, they are sometimes supplemented by others. Widely different rates of consumption of prefabricated constructions may also raise problems; similarly variations in quality of a given material will preclude quantitative deductions being made from figures on value.

VI. CLASSIFICATION AND PERIODICITY

68. The following would seem to be the most suitable grouping of the construction industry when calculating the output index or making international comparisons:

- (a) Residential buildings (excluding repairs and maintenance)
- (b) Non-residential buildings (excluding repairs and maintenance)
- (c) Civil engineering (including maintenance)
- (d) Repairs and maintenance

69. A more detailed classification is available for the methods discussed in Section IV and V.

70. In view of the difficulties involved, the calculation of output indexes and the comparison of data as outlined above should not be attempted for any period under one year. From a national point of view it would appear desirable to collect more frequant data, e.g. quarterly data, even if these index numbers have only a partial coverage, e.g. residential and non-residential buildings (new construction).

#### ANNEX I

## EXTRACT FROM THE INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION OF ALL ECONOMIC ACTIVITIES(1)

Division 4. Construction

Major	
Group	Group

40

400 Construction

Construction. repair and demolition of buildings, highways, streets and culverts; heavy construction of such projects as sewers and water mains, railway roadbeds, railroads, piers, tunnels, subways, elevated highways, bridges, viaducts, dams, drainage projects, sanitation projects, aqueducts, irrigation and floodcontrol projects, hydro-electric plants, water power projects, gas mains, pipelines and all other types of heavy construction; marine construction such as dredging, under-water rock removal, pile driving, land draining and reclamation, construction of harbours and waterways; water wells; airports; athletic fields; golf courses; swimming pools; tennis courts; parking areas; communication systems such as telephone and telegraph lines; and all other construction, whether undertaken by private bodies or governmental Special trade contractors in the field of construction, authorities. such as carpenters, plumbers, plasterers and electricians are also included in this group.

This division does not include construction, repair and demolition work undertaken as an ancillary activity by the staff and for the use of an enterprise classified in any other division of the classification. Excavating, overburden removal, shaft sinking and dredging, when undertaken in connexion with mining, are classified in the appropriate group of division 1 (Wining and quarrying).

<sup>(1)</sup> Statistical Papers, Series M, No. 4, Rev.1, issued by the Statistical Office of the United Nations, New York, 1958, page 14.

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## ANNEX II

## BUILDING STATISTICS IN THE NETHERLANDS

Building statistics in the Netherlands date from 1947 and were until 1 January 1954 compiled by the Ministry of Reconstruction and Housing. During this period they were based on the authorizations granted by the Government. Since 1 January 1954 they have been compiled by the Central Bureau of Statistics on the basis of licences granted by the municipalities under the Housing Act of 1901 (building regulations). Consequently, the informants are the municipalities. It should be noted that, in general, a municipal building licence is needed for all works, excluding normal maintenance.

As soon as a municipality has granted a building licence for a work (or commissioned own work) a questionnaire is filled up in duplicate, one copy of which is sent to the Central Bureau of Statistics. These questionnaires are placed at the disposal of the municipalities in the form of blocs and are provided with a running number.

For each work the following data are stated:

- Municipality and province;

- Date of issuance of the building licence;

- A detailed description of the nature and destination of the work (e.g. extension of an elementary school, new building for the manufacturing of textile goods);
- Location of the work (street, etc.);
- Building costs and volume in m';
- Name of the principal;
- If one or more dwellings are built:
- The number of dwelling-units;
- The method of financing;
- The method of building (prefabricated or traditional).

In view of the scope of the building statistics the following works are excluded: all works of a building sum of less than 2,000 guilders, works chargeable to the ordinary service of budgets of public corporations (usually maintenance work) and, for special reasons, works carried out by the Department of Public Works (civil engineering).

The questionnaires are coded by the Central Bureau of Statistics. Subsequently, the data of each work are recorded on a punch-card.

## "Progress-check"

As the data on works for which a building licence has been granted do not give details of the actual building activity, every three months the progress of each work of a building sum of 10,000 guilders or more is checked. For this purpose the essential information from the afore-mentioned punch-cards are reproduced on lists. These lists are sent every three months to the informants, who indicate the phase of each work by a code-number as well as the number of manual workers working on it, according to their occupation. Regarding the progress of the work the following phases are distinguished: not yet begun, 5 per cent finished, 20 per cent finished, etc., and completed.

It should be noted that the progress-check rests with municipal building inspectors, who regularly visit building works under construction in order to check on the observance of the building regulations.

When all lists are returned the data of each work are recorded on punch-cards. Thus, quarterly data are available on building activity (in terms of value) in relation to production, work begun, work completed, work under construction, distinguished by nature and destination of the works, by phase, by size of the works, etc.

Moreover, these data offer the possibility, for instance, of calculating the time required for the construction of blocks of dwellings by size.

Since 1960 the above data have been tabulated (calculated) by means of a computer.

As mentioned before, the "progress-check" refers only to works of a building sum of 10,000 guilders and over. Since 1950, the progress of the works of a building sum between 2,000 and 10,000 guilders is no longer checked because there are a large number of these works and their importance in terms of total volume is comparatively small. Moreover, from the progress-check in 1947-1950 and samples in later years it appears that almost all of these works are finished within a quarter of a year and are started quite soon after the licence has been granted; consequently, the statistical series on production, etc. include the works of a building sum of 2,000 - 10,000 guilders. The data on the number of manual workers also refer only to works with a building sum of 10,000 guilders and over.

## Check on completeness

The completeness of the reporting by the municipalities is checked as follows:

1. Residential building

For about 90 per cent of the new dwellings at least, some financial assistance is received from the State. Copies of the documents relating to the grants made are placed at the disposal of the Central Bureau of Statistics by the Ministry of Reconstruction and Housing. Thus it is possible to check the statements made by the municipalities.

## 2. Non-residential building

For most works a government licence is still needed. Copies of the forms in question are also at the disposal of the Central Bureau of Statistics. If after about three months no municipal building licences have been received for certain works, an inquiry is made. Furthermore, sample checks are made regularly on the basis of data on contract work published in certain trade journals.

## ANNEX III

## CLASSIFICATION OF GROUPS OF BUILDINGS

#### 11. RCADS

- 111. Main roads
- 112. City, settlement, village roads
- 113. Approach and by-roads
- 114. Industrial plant and farm roads
- 115. Footpaths, alleys, bicycle roads
- 116. Supplementary constructions to roads
- 117. Airports and take-off runways.

## 21. RAILWAYS

- 211. Public railways
- 212. Electric tramways
- 213. Industrial plant and farm railways
- 215. Gravity, incline railways, track railways, funicular lines, cableways
- 216. Supplementary constructions to railways
- 217. Construction of shunts

#### 31. WATER CONSTRUCTIONS

- 311. Navigation, intersecting, flood plain, irrigation, soil-draining channels
- 312. River, brook, groove regulation and canalization
- 313. Dams, banks, piers, river walls, ramparts
- 314. Hydro-electric power stations
- 315. Artificial harbour basins, ponds, retteries
- 316. Wells, catchments (springs), intake works, catchment shafts
- 317. Water towers and reservoirs
- 318. Buildings for sewage purification
- 319. Other water constructions

#### 41. BRIDGES

- 411. Vehicular bridges
- 412. Railway bridges
- 413. Culverts, railway or vehicular over-and under-crossings
- 414. Suspension railway bridges
- 415. Footbridges
- 416. Supplementary buildings to bridges

#### 51. INDUSTRIAL BUILDINGS

- 511. Plant and factory buildings
- 512. Furnaces, combustion furnaces, smelting furnaces, drying furnaces, baking ovens.
- 513. Cooling towers, funnels
- 514. Sulphuric and nitric acid towers

#### 52. AGRICULTURAL BUILDINGS

- 521. Buildings for animal husbandry
- 522. Buildings for plant cultivation
- 523. Agricultural machine sheds, repair shops

#### 53. TRAFFIC BUILDINGS

- 531. Traffic, telecommunication, service and watchman buildings
- 532. Vehicle sheds (depots)

## 54. COMMERCIAL AND STORAGE BUILDINGS

541. Commercial and catering buildings

542. Storage buildings

## 55. EXECUTIVE BUILDINGS

551. Executive and office buildings

552. Institute buildings

- 56. BUILDINGS OF CULTURE AND EDUCATION
  - 561. Buildings of culture
  - 562. Buildings of education

563. Churches, oratories, other religious buildings

57. SOCIAL BUILDINGS

571. Social and sanitary buildings

- 58. DWELLING HOUSES
  - 581. One-storied houses
  - 582. More than one storied houses
- 59. OTHER BUILDINGS
  - 591. Other buildings
- 60. DUCTS AND LINES

611. Power lines and weak current cables

612. Pipelines

- 71. TUNNELS AND UNDERGROUND CONSTRUCTIONS
  711. Tunnels, shafts, pits, cellars and underground rooms
  81. MINE EXCAVATION BUILDINGS AND MINE BUILDINGS
  811. Mine excavations, mine buildings
  812. Soil mechanical drillings
  91. OTHER BUILDINGS
  911. Other buildings
  912. Frames, tribunes, carpenter's works
  - 913. Open-air stages

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- 914. Radio and television towers, relay transmitters
- 919. Breakdown of buildings, constructions
- 99. Technological mounting works.

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CONFERENCE OF EUROPEAN STATISTICIANS

STATISTICAL COMMISSION AND ECONOMIC

Ad hoc Group of Experts on Current Housing and Building Statistics

(Item 4(b) of the provisional agenda)

INDEX NUMBERS OF CONSTRUCTION

Note by the Secretariat Addendum

The report on Index Numbers of Construction (HOU/WP.3/Working Paper No.39; 1. Conf.Eur.Stats/WG.18/3) prepared by Mr. O. Lukács, Rapporteur from Hungary, and revised in the light of comments received from Mr. Hirdes (The Netherlands), the second Rapporteur on this subject, has been circulated to countries together with a request for advance comment and a description of national practices in this field, in order to facilitate the discussion at the joint meeting.

The Secretariat has received replies from the following countries: Belgium, 2. Denmark, Federal Republic of Germany, Finland, France, Ireland, Italy, the Netherlands, Romania, the United Kingdom and Yugoslavia. These replies are appended to the present note in the language in which they were submitted to the Secretariat. Most countries mentioned above apply a definition of construction which, in 3. principle, is in accordance with the International Standard Classification of All Economic Activities, issued by the Statistical Office of the United Nations. Nowever, a number of countries also include under "construction" the construction of mines, the operation of open-cast mines as well as construction work carried out as secondary activity on own account by non-construction enterprises.

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Working Party on Housing and Building Statistics

ECONOMIC COMMISSION FOR EUROPE

HOUSING COMMITTEE

COMMISSION FOR EUROPE

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4. It was felt in some cases that the data needed to compute the output index should be collected from almost all undertakings and not only from large ones, since the share of small enterprises in the total output may be quite high, e.g. in France the output of enterprises employing less than ten persons accounts for 40 per cent of total construction output. On the other hand, some countries confine the collection of data to larger enterprises, especially for the computation of short-term index numbers of output (e.g. monthly).

5. All countries apply in principle one or more of the methods of calculating index numbers of construction mentioned in Mr. Lukác's paper, but the ways in which these methods are applied vary somewhat from country to country.

6. From the questions raised in the country replies, it is evident that Mr. Lukác's report should provide a satisfactory basis for consideration of this subject at the first joint meeting, since it describes a number of methods used for calculating index numbers of construction. The questions raised in the paper could be discussed in the order in which they are presented there, with special consideration being paid to the computation of the price indexes and to the necessary coverage in this respect. The methods mentioned in the Finnish reply (see annex IV), of eliminating differences in the standards of dwellings when calculating index numbers of output relating to house-building, may be another question for discussion.

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#### INDEX NUMBERS OF CONSTRUCTION

## ANNEX I

#### BELGIUM

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1. J'ai l'honneur de vous faire savoir que nos services établissent deux indices mensuels pour l'industrie de la construction. Le premier, dénommé indice de l'emploi, est basé sur le nombre d'ouvriers occupés; le second, indice de l'activité, sur le nombre d'heures de travail réellement prestées.

2. Il s'agit d'indices simples, calculés sur la base 1953 = 100, à partir de renseignements fournis par les établissements occupant soit 20 ouvriers ou plus, pour les travaux de génie civil, les travaux routiers et les travaux de bâtiment (gros oeuvre), soit 10 ouvriers ou plus pour les travaux de parachèvement. On distingue encore, pour chacune de ces deux grandes catégories, les travaux privés des travaux publics.

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HOU/WP.3/Working Paper No.39/Add 1 Conf.Eur.Stats/WG.18/3/Add 1 Annex II

# INDEX NUMBERS OF CONSTRUCTION

## ANNEX II

#### DENMARK

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1. The Statistical Department publishes no proper value statistics for building and construction.

2. At present this Department has the following aids for a possible compilation of value statistics (or output index):

a) Quarterly (partly semiannual) statistics of the building activity in terms of square metres, distributed by types of buildings, and in terms of number of flats, partly distributed by size of flats (number of rooms);

b) an index of building costs with constant weights, calculated each quarter;

c) statistics of the numbers employed in building and construction, broken down by new buildings, repairs of buildings and construction, and also by industrial groups and the qualifications of the employees (skilled, unskilled, apprentices).

Within this Department these aids, among others, are used in making estimates for the purpose of the national income estimates.

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#### INDEX NUMBERS OF CONSTRUCTION

# ANNEX III FEDERAL REPUBLIC OF GERMANY

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1. The output index of the construction activities constitutes one part of the production index of the Federal Republic of Germany such as used for keeping the net values of production 1950 up to date with eliminating the changes of prices. With a net value of production amounting to 1.2 milliards, the construction industry in 1950 occupied a proportion of 2.5 per cent in the net value of production of the total industry. No directly obtained data on the net output of the construction industry are available for keeping this series up to date, but only

<u>monthly</u>: Turnovers and manhours worked at establishments employing 10 and more persons, <u>annually</u>: Turnovers, and for the month of <u>July</u>: the manhours worked at all establishments in the <u>total major lines of the construction</u> industry.

- 2. The major lines of the construction industry cover the industrial and handicraft establishments of the following branches: Building, civil and constructional engineering including road construction; special construction; stucco, gypsum and plastering industries. Since separate monthly data on the construction <u>industry</u> - discernible from the construction handicraft - cannot be obtained from the present construction statistics, the net production value of the construction industry is kept up to date together with the development of the total major lines of the construction industry. Eut in order to maintain the character of the index as one of the <u>industrial</u> production to the widest possible extent, only the net value of production of the construction industry is used for weighting the total index.
- 3. The data obtained monthly from the establishments employing 20 and more persons are re-evaluated in the light of the results available once a year for all establishments, so that the monthly series (turnover and manhours worked) reflect the development of all establishments. The monthly series on turnover is, however, not suitable for keeping up to date the own performances

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> of the major construction industry, since this is the point of payment receipts, the monthly development of which is, naturally, differing frequently from that of the actual output of the construction industry. On the contrary, the short-ran variations are more multably reflected by the series on manhours worked.

For a longer run observation, it prover, however, to be a disadvantage in the 4. case of manhours worked, not to reveal the increasing productivity per manhour worked (in this context, productivity is to be regarded as the net value of production at constant prices per manhour), which is due to an ever-growing use of capital and increasing rationalization. In order to take into account the development of productivity, the monthly index numbers of the manhours worked in each of the reference years in course are multiplied with a socalled 'provisional productivity factor'. The calculation of these monthly factors is based on the rectified productivity factors of the preceding year which are obtained from the ratio Mernover values adjusted for price changes per manhour" (according to the annual total survey conducted in the major construction industry). The adjustment is made with the aid of the index of prices of westdential buildings. The resulting trend of the productivity is carried on to the subsequent year (extrapolation) but scarcely modified in consideration of the tendency to be expected. After the end of the year order review, the provisional productivity factors are rectified in the light of the final results evailable then for the corresponding data (manhours, values of turnovor adjusted for price changes). The final monthly values are obtained with interpolation of the annual productivity factor.

5. Thus, it is assumed that the short-run development of the net value of production of the construction industry is nearly the same as that of the manhours worked, whereas its longer run development follows that of the volume of turnover, whereby it is necessary, at size distanced intervals, to collect direct information on the net value of production.

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## INDEX NUMBERS OF CONSTRUCTION

## ANNEX IV

#### FINLAND

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1. The calculating of index numbers of construction activity.

11. Gross output indexes of building construction.

Before starting a construction project the builder has to apply for building permit with the authorities supervising construction activity. These authorities supply information concerning all construction undertakings about to be started in Finland. The progress of the construction work is checked by dividing the work into three stages:

- groundwork (until the ground walls are cast),

- framework (until the roof is built),

- fitting-up (until the building is finished).

The municipal authorities supply these building statistics on a basic form containing the following items:

1. Builder ...

2. Authority to check construction ....

3. No. of construction licence ...

4. County

5. Municipality R-No

6. Village, lot, part of city or town, number of block and lot

7. Name of region

8. Size of lot or block

9. Stage of ground plan

(a) plan

(b) prescriptions in building project

(c) building ban

(d) scattered dwelling

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- 19. Equipment
  - (a) drain
  - (b) water conduit
  - (c) WC
  - (d) hot water
  - (e) none of preceding
- 20. Heating
  - (a) stoves
  - (b) central heating
- 21. In common use
  - (a) Finnish bath (sauna)
  - (b) shower room
  - (c) laundry
  - (d) hobby room

22. Dwellings with own

- (a) bath
- (b) shower
- 23. Garages

for ... cars

24. By enlargement or fundamental repair Number of rooms built to old dwellings

25. Number of apartments, area of apartments and type of apartment

The quantity of buildings completed constitutes the base of the calculation of volume which is amended by the alterations in the quantity of buildings under construction. The calculation formula is

 $v_t + (K_t; prs - K(t-1); prs)$ 

 $V_t$  being = the amount of buildings completed

K = " " under construction

p; r; s = stages of construction

The cubic metre is used as the unit of measurement. By multiplying their total number with the cost per cubic metre in the basic year the value of building at fixed prices is obtained. The same practice is followed as to every type of building (dwelling houses, factories, schools etc.). All building construction HOU/WP.3/Working Paper No.39/Add.1 Conf. Eur. Stats/WG.18/3/Add.1 Annex IV page 4

undertakings carried out in Finland are thus included in the calculation. In addition the larger construction enterprizes are asked for balance information yearly. Such information supplies the basis for an estimate of the extent of the construction activity in Finland that is of the kind referred to in Mr. Lukács's report (point 12). The balance studies also supply for an estimate of the yearly amount of repairs.

## 12. Other work in construction activity

The value and volume of other work in construction activity is obtained by an indirect method. The most important sources of information are the value information from various authorities and the statistics of employment.

## 13. Net output indexes.

In Finland the calculation of these is at the stage of development. At present the values are calculated on the basis of gross output values as well as that of the balance studies.

#### 2. Cost indexes of construction activity.

#### 21. Definitions.

As a result of the cost index studies carried out in Finland three indexes of different level have been established.

## - The price index of construction activity

is calculated on fixed quantities of material and work used. This index, therefore, is affected only by the fluctuations in wages and material prices.

#### - The cost index in the construction activity

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expresses the relative cost of buildings of the same standard level constructed at different times, as per some suitable unit of measurement (cubic metre, square metre or a whole building). Concerning, say, dwelling houses the standard of accommodation of the houses to be compared should be the same. Type of building, ground-plan solution and methods of work applied are determined according to the respective advantages they offer at the time. This index is influenced by changes in the prices mentioned above as well as by fluctuations in the productivity of labour.

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- <u>Construction total cost index</u> (by Ragnar Frisch Byggesum index) includes the rise of the standard of buildings, otherwise its bases of calculation are those of the cost index.

The following two formulae may elucidate the definitions:

construction total cost index cost index = building standard index

22. Use of cost indexes in the field of construction.

To change the cost information obtained during the period of review into those of the basic period so as to make it correspond to values obtained by the fixedprices application method, the total cost of each type of building should be divided by the corresponding construction total cost index.

If the changes in the standard of buildings are eliminated when gathering information during the period of review the cost index may be applied.

23. Calculation of the construction cost index.

Regarding the use and calculation of construction cost indexes Finland has adopted a method resembling that applied in the Federal Republic of Germany. The price indexes calculated for single structure units (square metre of outer wall, of floor etc.) constitute the basis of the index structure. Different index houses may be built on the basis of such structure units by suitably weighting the structure units. For the present, such a price index has been established for dwelling houses only. The development of this index is compared with that of another price index laid down for highway construction. The comparison decides whether price indexes are needed for other kinds of work of construction as well.

By altering the structure units of the price index and renewing the supposed working methods, new price indexes may be computed later and a construction cost index be established on the basis of their joint effect; it should, however, be applied fairly closely to a specified type of building (say, dwelling-apartment house). The changes in the construction (dwelling) standard are taken into account by establishing, later, a separate cost index for each standard of dwelling house. The corresponding construction total cost index is calculated on the basis of these. Figure 1 illustrates the method used.

In Finland approximately 30 per cent of the production of residential buildings is supported by state loans. Fairly exact information is available concerning these buildings. Figure 2 shows the differences in cost development of these state-financed residential buildings as compared with the price index. The state authorities have ensured a fairly steady standard for these dwellings during the whole of ten years. The average apartment area has shrunk and the building cost per square metre therefore has dropped less notably than the real cost development in construction activity. The difference, however, is small, about 2-5%.

3. International comparison of construction activity.

#### 31. Residential buildings.

Some attempts have been made to compare construction activity, mainly as regards dwelling houses, in Finland and in the other northern countries. The unit of measurement has been either a dwelling or the area of an apartment. Experience has proved both these units of measurement to be too rough. The comparison should include indications of standard differences between the dwellings. The most ambiguous indication of the standard of a dwelling seems to be the total of its construction costs.

311. Method of eleiminating the standard difference in dwellings.

In Finland Professor P-O. Jarle in 1955 published a study (P-O Jarle: Kerrostalojen kustannuksista "Some Facts About the Cost of Apartment Houses", Helsinki 1955) giving a formula concerning the construction costs of dwellingapartment houses:

- (1) B = Xa + Yr + Z
- B = construction cost mk/dwelling
- a = area of dwelling
- r = number of rooms

This formula indicates the cost of apartments in a specified building provided that the equipment of the dwellings is uniform. A generally valid formula for the construction costs of dwelling apartment houses is obtained by adding the corrective figures resulting from the size, form, equipment level etc. of the building to the standard factors of the basic formula.

Some specified type of building should be taken as a basis for the calculation. The table below indicates the basic type selected and its equipment (points where the corrective factors = 0). The relation of the constants of the basic type selected, according to the study of Prof. Jarle, is: z = 3.7 Y = 41.4 X

The formula (1) may now be given the form

(2) B =  $\frac{X}{100}$  (100  $\frac{+}{-100}$   $\frac{x \cdot 100}{X}$ ) a +

+ 3.7 ° r . (100  $\frac{+}{Y}$   $\frac{y \cdot 100}{Y}$ ) + 41.4 (100 +  $\frac{z \cdot 100}{Z}$ )

The factors  $\frac{x}{X}$ ,  $\frac{100}{X}$ ,  $\frac{y}{Y}$ ,  $\frac{100}{Z}$ ;  $\frac{z}{Z}$  appearing in this formula are obtained from the following table.

x . 100 X	19-20-20-20-20-20-20-20-20-20-20-20-20-20-	<u>y . 100</u> Y		<u>z . 100</u> Z
X <u>No. of floors</u> 2 3 4 4 5 6 7 8 <u>Width of buildin</u> 9 m bathroom with window 10 m "	+ 29 $\pm 0$ - 14 - 2 - 10 - 15 - 19 - 22 g + 7 + 4	Y <u>Wardrobes</u> 2.0/room 1.0/room 0.5/room <u>Lighting points</u> 4/room 3/room 2/room <u>Window size</u> Large (2.5 m <sup>2</sup> )	+ 16 $\pm 0$ - 8 + 6 $\pm 0$ - 6 + 5	Flats/staircase planTwo-part $\pm$ CThree "- 7Four "- 10Five "- 12Six "- 14BalconyLarge $\pm$ 0Normal- 1Small- 2Lacking- 9
10 m bathroom without window 11 L " 12 m " <u>Room height</u> 250 cm 260 cm 270 cm 280 cm 290 cm <u>No. of blocks</u>	+ 4 + 3 $\pm 0$ - 2 - 4 - 2 $\pm 0$ + 2 + 4	Normal (1.9 m <sup>2</sup> )	± 0	Kitchen equipmentVery good+ 4Normal± 0Kitchenette- 4Sanitary equipmentExtra WC withtiled walls+ 13Extra WC,painted+ 11Bathroom withbidet+ 6Bathroom;tiled+ 2
<pre>1 block (s) 2 " 3 " 4 " 5 " 6 " 7 " 8 "  Floor covering oak parquet birch " cork " linoleum varnished wood</pre>	$\begin{array}{r} + 15 \\ + 6 \\ + 2 \\ \pm 0 \\ - 2 \\ - 3 \\ - 4 \\ - 4 \\ + 7 \\ + 4 \\ + 3 \\ \pm 0 \\ - 4 \end{array}$			Bathroom, painted ± 0 <u>Refuse disposal chute</u> Fitted ± 0 Lacking - 1

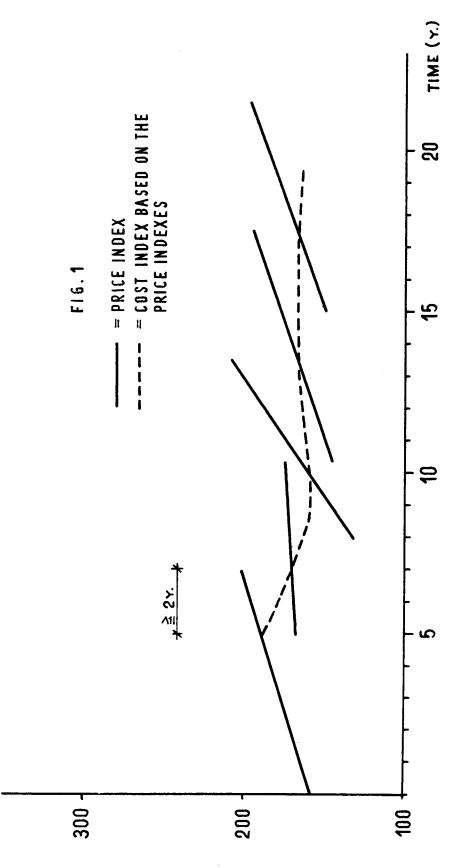
The formula obtained may be thus reduced:

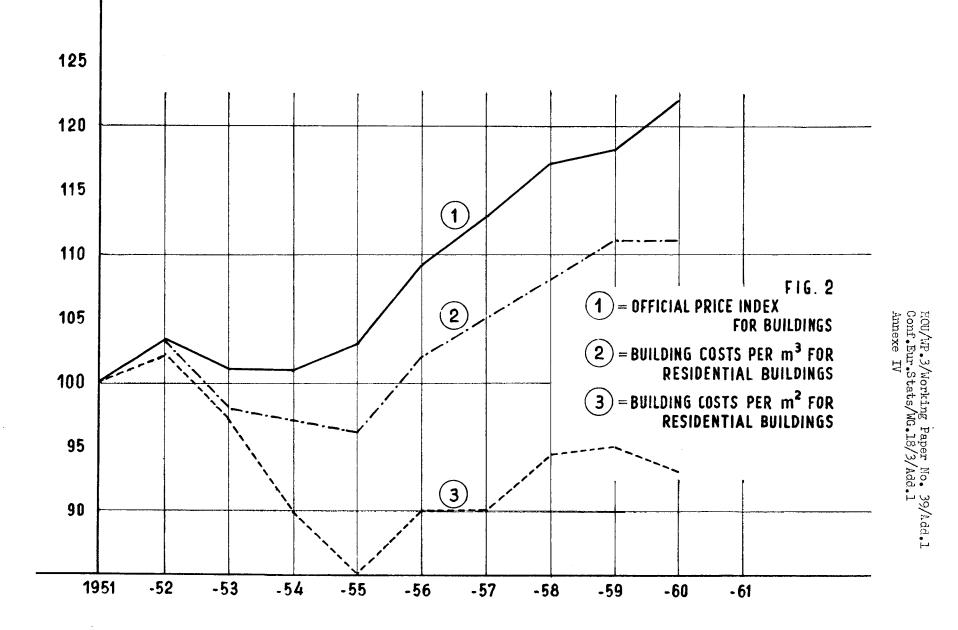
 $B = K \circ V$ K being = cost level prevailing =  $(\frac{X}{100})$ 

V being = value of the clause in brackets of formula (2).

Here the term V, in short represents the relative value of the volume of the dwelling. By calculating V for buildings finished during a specified period of time a comparable value of the quantity of dwelling house building activity is obtained.

The formulae and tables given above hold good for the comparison of dwelling apartment houses only. Their applicability in different countries has not been examined but it is probable that the formula and table may be used in their present form. To give the final results as concrete a form as possible the sums at the end of the calculation may be converted to express the quantity of residential buildings produced as the number of dwellings situated in a building of a determined type.





#### INDEX NUMBERS OF CONSTRUCTION

#### ANNEX V

#### FRANCE

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Le rapport de M. LUKACS décrit de façon très complète et détaillée les diverses méthodes utilisables pour établir des indices de l'activité dans le secteur de la construction.

On peut toutefois faire une objection à l'encont.e du paragraphe 12, où il est indiqué que les données recueillies auprès des entreprises occupant plus de dix salariés suffiraient pour établir un indice de la production. Ceci supposerait, d'une part, que les entreprises moins importantes n'effectuent qu'une fraction très faible des travaux, ce qui n'est pas toujours le cas (en France, les entreprises de moins de dix salariés représentent 40 % de la population active occupée aux travaux de bâtiment), d'autre part, que la répartition de la production entre grandes et petites entreprises reste sensiblement constante. On pourrait donc recommander de recueillir aussi, au moins par voie de sondage, des données auprès d'entreprises occupant moins de 10 salariés.

Au sujet de la périodicité des indices, il est certain que les indices de la production calculés selon les méthodes exposées dans le rapport ne peuvent être qu'annuels. Pour apprécier sur des périodes plus courtes (mois ou trimestre) l'activité d'ensemble du secteur de la construction, on peut se servir d'un indice du nombre d'heures ouvrées, éventuellement corrigé pour tenir compte de l'accroissement de la productivité. Le coefficient de correction peut être déduit a posteriori de la comparaison des indices annuels de la production et du nombre d'heures ouvrées; pour les indices à très courte période, il n'est pas nécessaire de connaître ce coefficient de correction avec une très grande précision.

Les données disponibles pour connaître l'activité dans le Secteur de la construction en France sont :

1. Un indice du nombre d'heures ouvrées établi mensuellement par la Fédération Nationale du Bâtiment, au moyen d'une enquête par sondage touchant 4000 entreprises de toute teille.

2. Une enquête annuelle auprès des entreprises de Bâtiment et Travaux Publics; cette enquête donne le montant en valeur des travaux exécutés au cours de l'année, répartis par genre d'ouvrages (logements, écoles, usines, ponts, etc...) et par nature de travaux (terrassements, maçonnerie, couverture, charpente métallique, etc...); elle indique aussi les quantités et la valeur des matériaux consommés, les salaires payés et le montant des autres dépenses (transports, assurances, etc...)

3. Dans le domaine de la construction de logmments, une enquête semestrielle sur l'état d'avancement d'un échantillon de projets ayant reçu le permis de construire.
Cette enquête fournit en particulier l'échelonnement des achèvements des bâtiments à usage d'habitation qui ont été mis en chantier au cours d'un trimestre donné.

En ce qui concerne les indices de l'activité du secteur de la construction, au sens où ce terme est entendu dans le rapport de M. LUKACS, deux indices ont été établis en France jusqu'à présent.

A - L'indice mensuel de production du Secteur "Bâtiment et Travaux Publics", qui est une composante de l'indice général de la production industrielle. L'indice est calculé à partir de l'indice du nombre d'heures ouvrées, après une correction forfaitaire pour tenir compte de l'accroissement de la productivité; un seul indice est établi pour l'ensemble du secteur. Un nouvel indice de la production industrielle étant actuellement en cours de préparation, l'indice relatif au Secteur de la construction sera prochainement calculé sur des bases différentes, tenant compte des renseignements fournis par les enquêtes annuelles auprès des entreprises.

B - Dans le cadre de la Comptabilité nationale, il existe un indice annuel du volume de la production de la branche Bâtiment et travaux publics. Il s'agit d'un indice de production nette, dont le calcul utilise des données de sources très diverses : enquêtes auprès des entreprises, statistiques fiscales, statistiques des salaires, indices des prix, etc...

Enfin, on étudie actuellement la possibilité d'élaborer un indice de production dans le domaine de la construction de logements, sur la base des informations fournies par l'enquête semestrielle sur l'avancement des projets ayant reçu le permis de construire.

## INDEX NUMBERS OF CONSTRUCTION

### ANNEX VI

## IRELAND

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## Frequency

1. The data collected in the Annual Census of Production are used to complete volume indices of gross output relating to construction. Index numbers of net output or value added are not compiled.

## Coverage

Generally only those enterprises or establishments whose main activity is 2. construction as defined in the ISIC Division 4 are included. Thus construction work carried out by mining concerns, Bord na Mona (the National Peat Board) and the Electricity Supply Board is not classified to the construction industry as such. Special contractors such as plumbers, decorators, plasterers and electricians are included as is all such output of concerns which have construction in the basic sense as their main activity. A relatively small number of manufacturing concerns carry out sizeable construction activity on own account and in those instances separate construction establishment returns are included in the construction sector. The lower size limit for inclusion in the Census is 3 persons. 3. A simplified form is returned by establishments which have 3-9 persons engaged and the standard form by those having 10 or more persons. Thus one-man or two-man concerns are not covered by the Census.

#### Sectors

4. The enterprises or establishments included in the Census are classified under the following four headings:-

- (A) New and repair construction and maintenance by private enterprises
- (B) New and repair construction and maintenance by employees of local authorities and government departments
- (C) New and repair construction and maintenance by employees of canal, dock and **herb**our authorities
- (D) New and repair construction and maintenance by employees of railway authorities.

### Degree of response

5. For sectors (B), (C) and (D) the degree of response to the Census is satisfactory and the resulting aggregates are considered to be adequate measures of activity.

There is, on the other hand, a sizeable degree of non-response among those establishments classified to sector (A) /Private enterprises7; and in addition the basic register for those establishments is known to be incomplete.

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Computation of index
Sector (A):
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6. The Census aggregates for respondents having at least 10 persons engaged are used to obtain the index for sector (A). For this Sector the index is an indirect one relating to the volume of materials used. The index is obtained by the use of a price index for materials in conjunction with the total cost of materials used. The quantities and values of various material inputs as given by the Census returns for consecutive years are used to determine prices for commodities or commodity groups and these prices are combined using the "Fisher Ideal formula" to give a price index to base previous year = 100. The cost of materials included in the completion of the price index covers approximately three-quarters of the total cost of materials used. The quotient of the index of total cost of materials used by the price index of materials yields the index of volume of materials used, to base previous year = 100, which is subsequently linked to the series with base 1953 = 100.

## Sector (B):

7. Material input costs are deflated by means of the price index computed for sector (A). Earnings of industrial workers are deflated by an index of average hourly earnings to base previous year = 100. The volume index of combined costs of materials and earnings is then computed to base previous year = 100 by the Fisher method and linked to the series having 1953 = 100.

#### Sectors (C) and (D):

8. For each sector a volume index of costs of materials and earnings is compiled as for sector (B) but Census data for the sectors in question are used to give separate price index numbers for materials in these sectors.

## Combined index

9. No combined index for construction as such is prepared annually for national purposes; construction forms a part of the "Building and Services" sector for which a combined index is computed, weighting the index for each sector by census value added. For the OECD Annual Review an index of construction is prepared, using as weights value added 1953 to combine the indices (to base 1953 = 100) of sectors (A), (B), (C) and (D) as well as the index of construction by the Electricity Supply Board.

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10. The index numbers referred to above are used in conjunction with other correlative data collected in the Annual Census of Production for structural analysis (e.g. labour productivity) which is not seriously affected by the incomplete coverage of sector (A).

11. For purposes however of determining gross capital formation in the form of building and construction other independent data on numbers of dwellings constructed etc. are used to augment the Census of Production data and to compensate for their incomplete coverage.

#### INDEX NUMBERS OF CONSTRUCTION

# ANNEX VII ITALY

11 ....

## 1. Prémisse

L'Institut Central de Statistique a effectué, en voie expérimentale, le calcul d'un indice annuel de l'activité dans le secteur des constructions, dans le but de fournir une mesure des variations du volume de la production du secteur. A cet égard on a utilisé les données de la valeur de la production brute.

## 2. Classification de construction

- Le secteur des constructions a été ventilé dans les trois groupes suivants :
- a) Bâtiments résidentiels (à l'exclusion de la réparation et de l'entretien)
- b) Bâtiments non résidentiels (à l'exclusion de la réparation et de l'entretien)
- c) Travaux publics (y compris l'entretien extraordinaire).

# 3. Détermination de la valeur courante de la production

a) Bâtiments résidentiels. On détermine la valeur de la production à l'aide du nombre des pièces achevées et d'un prix moyen, évalué sur la base des données rassemblées et d'autres éléments indirects. Les données concernant les pièces achevées sont recueillies moyennant le rassemblement de données courantes totales de la production, basées sur les permis d'occupation des habitations.
b) Bâtiments non résidentiels. Dans le but de la détermination de la valeur de la production, le groupe est subdivisé en deux sous-groupes: bl) bâtiments non résidentiels destinés aux activités économiques; b2) autres (écoles, hôpitaux, églises, bureaux publics, etc.).

Pour le premier sous-groupe, la valeur de la production est déterminée à l'aide du nombre de métres cubes d'air et d'un prix moyen, évalué de façon analogue à celle décrite au point 3<sup>a</sup>).

Pour le deuxième sous-groupe, la valeur de la production est tirée directement des statistiques courantes des travaux publics.

c) Travaux publics. La valeur de la production est tirée directement des statistiques courantes des travaux publics.

## 4. Ajustement de la valeur de la production

L'ajustement de la valeur de la production en prix fixes est effectué à l'aide d'indices des prix.

En ce qui concerne les bâtiments résidentiels et les bâtiments non résidentiels destinés aux activités économiques, on utilise respectivement l'indice des prix moyens des pièces et l'indice des prix moyens des métres cubes d'air.

En ce qui concorne les autres bâtiments non résidentiels et les travaux publics; l'ajustement de la valeur de la production est effectué à l'aide d'indices expriment les variations des prix des matériaux et des salaires moyens.

### 5. Calcul de l'indice du secteur

On calcule d'abord les indices de chacun des groupes de construction indiqués au point 2, en faisant le rapport entre la valeur ajustée de la production de l'année considérée et la valeur de la production de l'année de base.

Les indices des trois groupes sont synthétisés à l'aide de poids exprimant la valeur de la production de l'année de base.

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#### INDEX NUMBERS OF CONSTRUCTION

#### ANNEX VIII

#### THE NETHERLANDS

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1. In the Netherlands the production-index of construction is based on the current value of output, deflated by price-indices. As no appropriate price-indices are available for the different types of building and building work, and the value of maintenance work is (partly) estimated, the production-index is considered as rather crude. Consequently these indices are not published separately but only used (yearly) for the compilation of the production-index of industry as a whole, (ISFC no. 40).

2. In calculating the production-index of construction, the following groups are distinguished:

- (a) dwellings (excluding normal maintenance)
- (b) non-residential buildings (excluding normal maintenance)
- (c) civil engineering (including maintenance)
- (d) maintenance by building firms
- (e) work by plumbers and electricians (maintenance).

3. <u>Value of output at current prices</u>

Except for maintenance work the value figures are obtained from the building statistics (building permits), combined with periodic progress checks (see HOU/WP.3/Working Paper no. 39, annex II). To the original value figures the following corrections are made: (1) the value of small works (less than 2,000 guilders), which are not included in the building statistics, (2) more or less work (changes in the design) and (3) architects' fee.

Maintenance work is estimated, e.g. on the basis of data on mandays from the Social insurance statistics. From 1956, data on maintenance are also becoming available through the annual enquiries into the construction industry. The first enquiry (1956) was confined to actual building firms (prime contractors). Gradually, sub-contractors and so-called maintenance firms are also included in the enquiry. Consequently, in the near future, more precise data will be available on maintenance work.

#### 4. <u>Price-indices</u>

## Residential and non-residential building

The price-index used is based on the building-price per cubic metre of dwellings built within the framework of the Housing Act Law. These dwellings are comparatively uniform. Corrections are made for regional differences in price level and -as far as possible - also for changes in quality. Moreover a correction is made for the fact that in a given period the production does not only come from works started in that period but also from works started in previous periods with lower or higher prices. ("period" correction). It is assumed that the above-mentioned price-indices apply both to residential and non-residential building.

## Civil engineering

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The value of output is deflated by an <u>input</u> index, based on fixed quantities for different kind of works.

Consequently only changes in material and labour costs (not adjusted for changes in productivity) are taken into account.

## Maintenance by building firms

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The same price index is used as mentioned under "residential and nonresidential buildings", but with a different "period" correction.

#### Work by plumbers and electricians

The value at constant prices is approximated by means of an <u>input</u> index

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#### INDEX NUMBERS OF CONSTRUCTION

### ANNEX IX

#### LIONANIA

Paragraphe 5. En Roumanie, on observe tant la production globale (brute) que la production nette du secteur de la construction.

<u>Paragraphe 6</u>. Généralement, cette définition correspond au contenu de l'activité de construction de notre pays. Il est à mentionner que jusqu'à présent on n'y a pas inclus les travaux de réparations courantes et les travaux d'entretien. <u>Faragraphe 9</u>. Dans notre pays, comme en Hongrie, les travaux de mise en exploitation des mines sont rangés parmi les travaux de construction; on y inclut également les travaux de montage technologique, à condition qu'ils soient exécutés par les entreprises de construction.

<u>Paragraphe 10</u>. On observe en noumanie les travaux de construction exécutés par les entreprises de construction et par les coopératives de construction, ainsi que les travaux enécutés par les entreprises se réclamant d'autres branches d'activité, ou les travaux exécutés par la population (construction de logements, constructions domestiques, etc.).

En 1961, la production globale de construction exécutée par les entreprises se réclamant d'autres branches d'activité a marqué 32,1%, et les travaux de construction exécutés par la population ont marqué 1,9% du total de l'activité de construction.

Il est possible d'indiquer séparément la production exécutée par les entreprises et par les coopératives de construction.

<u>Paragraphe 11</u>. L'activité de construction des entreprises à une autre activité de base, n'est pas incluse dans la production des branches dont elles se réclament, mais seulement dans la branche de la construction; il n'y en a donc pas de doubles comptages.

Paragraphe 12. Il n'existe pas actuellement de règle qui indique que les données soient exclusivement rassemblées sur les entreprises de construction à un certain

nombre d'ouvriers. De plus, il n'y a pas d'entreprises de construction qui emploient moins de 10 ouvriers ou salariés.

Paragraphe 13. Les méthodes directes sont employées.

<u>Paragraphe 16</u>. Pour les périodes de quelques années on utilise les prix fixes (invariables). Les changements éventuels de prix qui pourraient survenir pour quelques matériaux sont généralement insignifiants; leur influence sur l'indice de la production globale (brute) est négligée.

Dans ce cas la méthode utilisée pour déterminer la production de construction est la même que celle qui est indiquée dans le projet de rapport HOU/WP.3/ Document de travail No. 39. Conf.Eur.Stats/WG.18/3 par.28.

Lorsqu'à la fin d'une certaine période on établit de nouveaux prix fixes, on utilise les indices des prix pour rendre comparables les séries de données.

Jusqu'à présent les indices des prix ont été déterminés comme suit : l'ensemble des travaux de construction-montage ont été divisés en une série de groupes et de sous-groupes (voir l'appendice). De chaque sous-groupe un nombre de devis furent retenus, qu'on calcula en prix nouveaux autant qu'en prix de la période précédente.

Une comparaison de la valeur de ces devis détermine les indices des prix pour le sous-groupe respectif.

Pour déterminer des indices de prix moyens on tient compte de la pondération en valeur des devis représentatifs calculés, de la fréquence spécifique en fonction de la structure de l'exécution et de la fréquence spécifique de l'objet respectif par rapport aux autres objets du groupe ayant la même structure. <u>Paragraphe 36</u>. Quant à la méthode indirecte de calcul de l'indice de la production brute, à notre sens elle n'est pas à même de donner les meilleurs résultats, puisqu'on calcule seulement le volume des matériaux sans tenir compte d'une série d'autres dépenses nécessaires à l'exécution des travaux de construction, à savoir : les salaires des ouvriers, ceux des techniciens, du personnel administratif et de la direction, dépenses de régie, etc.

Paragraphe 42. Dans notre pays les comptes rendus statistiques font mention distincte des dépenses matérielles, coûts d'amortissement, salaires, etc., ce qui nous permet d'utiliser cette méthode.

Paragraphe 43. Au cas d'un changement des prix fixes, les séries de données sont ajustées, pour les rendre comparables, à l'aide des indices des prix, établis conformément aux remarques présentées à l'intention du paragraphe 16.

## Appendix

# TRAVAUX DE LA PRODUCTION DE CONSTRUCTION-MONTAGE SUR LESQUELS ON A CALCULE DES COEFFICIENTS DE CORRECTION

I. Travaux de construction (fondation, maçonnerie, plâtrage, menuiserie, toiture, finissage, etc.) pour :

1. Logements

2. Bâtiments socio-culturels

- 3. Constructions industrielles
- II. Travaux de construction (fondation, maçonnerie, plâtrage, menuiserie, toiture, finissage, etc.) pour bâtiments agrozootechniques.
- III. Installations intérieures
  - 1. Sanitaires
  - 2. Chauffage central
  - 3. Aération
  - 4. Gaz

IV. Installations électriques intérieures

V. Réparations aux bâtiments et aux installations intérieures.

VI. Réseaux extérieurs d'alimentation à eau et canalisation

1. Conduites et réseaux d'eau.

2. Canalisations

VII. Correction des torrents et hydroaméliorations

VIII. Barrages, digues et travaux portuaires

IX. Routes, rues, etc.

X. Ponts et ponceaux

1. Ponts et ponceaux sur les routes

2. Ponts et ponceaux sur les voies ferrées

3. Funiculaires

XI. Terrassements

HOU/MP.3/Working Paper No.39/Add.1 Conf.Eur.Stats/MG.18/3/Add.1 Annex IX Appendix page 2

XII. Superstructure ferroviaire pour :

- 1. voies à écartement normal
- 2. voies à écartement étroit
- 3. voies de tramways

XIII. Réfection des voies ferrées

XIV. Tunnels de chemins de fer et routes

XV. Pipe-lines pour produits pétroliers et gaz

XVI. Forages pour alimentation à eau

XVII. Lignes de transport d'énergie électrique

XIX. Lignes et équipement de télécommunications

XX. Travaux de signalisation, centralisation

XXI. Montage des pièces mécaniques des funiculaires

- XXII. Constructions métalliques unitaires
- XXIII. Montage d'outillage technologique
  - 1. Fours tubulaires et cheminées
  - 2. Outillages technologiques de l'industrie minière
  - 3. Outillages technologiques des industries chimique et
  - des métaux non ferreux
  - 4. Outillages technologiques de l'industrie légère
  - 5. Outillages technologiques de l'industrie alimentaire
  - 6. Montage d'outillage technologique dans l'industrie sidérurgique.

XXIV. Installations technologiques dans les entreprises industrielles XXV. Travaux de mise en exploitation, rodages, etc.

#### INDEX HUMBERS OF CONSTRUCTION

# ANNEX X THE UNITED KINGDOM

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# A. Comments on HOU/WP.3/Working Paper No.39:Conf.Eur.Stats/WG.18/3

1. The authors of the Paper have covered the subject very fully.

2. International comparisons of the level of output, as the authors suggest, are difficult and would probably be always impossible, but comparisons of the rates of development and the dynamics of the industries (as suggested in paragraph 61) should be possible.

3. The suggested methods of trying to arrive at comparisons of building output in different countries seem unlikely to be satisfactory. For example, it is suggested that an "Index house" might be used. The fact is that house-building practices and forms of construction and typical accommodation etc. vary from country to country, and if a country is asked to build a house it does not in practice build, then the estimated cost of such a house or the man hours required to construct it have not necessarily any relevance to the normal practices of the country.

### Paragraph 5

4. As will be seen from Section 3, below, in the United Kingdom use is made of the net output for weighting the index numbers of production, but in calculating the index the gross output is used. We are not therefore wholly in agreement with the distinction drawn in this paragraph.

#### Paragraph 22

5. The description of the method of calculating our price index is not quite correct as we do make allowance for changes in overheads and profits when this is necessary. (As Section B, below, shows, we calculate separate cost indices for deflating output to arrive at the index of production.)

#### Paragraph 23

6. It is not very clear how the price index in Hungary is calculated. In particular, what are the "single price factors"?

## Paragraphs 24, 25 and 26.

7. It has not proved practical to make use of methods of this kind in order to arrive at cost changes in the United Kingdom. In the case of most types of building the number of buildings is not sufficient to provide a good statistical average of costs,

either of the building itself or in terms of cost per cubic metre, per square foot etc. - the variations are too big. Even in the case of housing where there are a large number of units it is very difficult to allow for changes in the quality of the house.

## Paragraph 28 et seq.

8. The method of calculating output described is far from clear. In particular, if productivity changes, then labour costs must also change, even if earnings per hour remain constant.

# Paragraph 61 et seq: Other Methods of International Comparisons

9. In order to arrive at some international comparison of output it might be helpful to calculate the total value of materials used in each country, using the price of the materials in one country throughout the exercise, and then varying the prices of the country used to see the effect on the over-all comparisons.
10. A comparison of the effective use of labour on construction as compared with its use in other industries might be practicable if the output of the construction industries in each country was expressed as a percentage of Gross Domestic Product for the country, and if the percentage of the labour which is employed on construction in different countries was also compared. The relative earnings of the men employed on construction would also need to be compared, since net output is affected by this.
B. Method of calculating the index of production for the construction industries

1. The definition used for the construction industries in the United Mingdom is similar to the international SIC, except that construction, repair, and demolition work undertaken by the staff and for the use of the enterprise classified in other divisions of the SIC are included if they have separate building departments with separate accounting systems. (In practice the effect of this is small). Work done on construction by labour directly employed by local authorities, public utilities and other nationalized undertakings is also included. The work done by the construction industries in the United Kingdom includes work on opencast coal mining, because it is carried out by civil engineering contractors.

2. Figures are collected from all the firms undertaking construction work, including repair and maintenance work; this includes firms employing no operatives as well as all those with operatives.

3. In order to calculate the index, the work done by the industry is divided into three classes - new housing, new work other than housing, and repair and maintenance work - and separate indices of production are prepared for each. The separate indices are combined with weights proportional to the value of net output in each class of work at the base date.

4. To calculate the individual indices the value of work done during the quarter is deflated by appropriate cost indices. These cost indices are derived by the same method as that referred to in the text of HOU/WP.3/Working Paper No. 39, but are specially calculated to allow for factors which affect the figures concerned; for example, allowance is made for the fact that building materials are purchased in advance of work being done.

5. The value of work done during the quarter is evaluated by contractors on the basis of the contract price for the job. This means that if the contract has been let at a fixed price then the contractor will evaluate his work by saying, for example, that he has carried out 10 per cent of the contract during the quarter and therefore that the value of the work he has done is 10 per cent of the total value of the contract. The cost index which is used to deflate the output is based on the assumption that the figures are estimated in this way. If costs of the input have changed unexpectedly since the contract price was fixed, then profits will fall, but this is reflected in the cost index.

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# INDEX NUMBERS OF CONSTRUCTION ANNEX XI TUGOSLAVIA

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En principe, nous pourrions accepter le rapport de M.Lukács, sans remarques substantielles étant donné que nous avons déjà appliqué certaines des méthodes y exposées pour l'établissement des indices yougoslaves de la construction.

En ce qui concerne les champs des indices de la construction, nous sommes d'avis qu'il est nécessaire avant tout qu'on définisse précisément la notion de la construction, aussi bien que l'unité statistique correspondante. Notre classification de la construction comprend, en outre de ce qui est contenu dans la classification CITI, le montage technologique et les projets. Cependant, notre classification est élaborée ainsi qu'on peut la ramener toujours à la Classification internationale type par industrie, de toutes les branches des activités économiques.

Nos statistiques de la construction rassemblent les données sur toutes les entreprises de construction, aussi bien que les données sur les travaux effectués pour compte propre (faisant 20 % environ des travaux totaux effectués dans le secteur social). Les données sur ces travaux peuvent être retranchées pour obtenir les chiffres sur l'activité pure des entreprises de construction.

L'indice de la production brute en Yougoslavie est calculé à l'aide des méthodes directe ou indirecte, élaborées dans le rapport de M. Lukács, aussi.

Le calcul de l'indice des prix utilisé pour l'établissement de l'indice de la production brute s'effectue en Yougoslavie de la manière suivante :

a) on applique la méthode mentionnée par M. Lukács dans le paragraphe 23. Pour l'établissement de l'indice des prix des matériaux, on a pris en considération soixante-dix groupes de matériaux;

b) on applique la méthode "habitation-indice". Par cette méthode, comme on l'a expliqué dans le paragraphe 24, les données sont rassemblées à la base des offres faites de la part des réalisateurs des travaux pour les deux bâtiments types et selon les classes des travaux.

Cependant, cet indice ne peut pas être utilisé comme indice général des prix pour l'établissement de l'indice de la production brute, parce que l'évolution des

prix des autres types d'objets n'est pas relevée selon cette méthode (par exemple, routes, ponts et autre). Le calcul de l'indice des prix pour les deux bâtiments types d'habitation est effectué par les services statistiques officiels et dans une partie du pays seulement (en Slovénie);

c) on applique encore une méthode qui part de "habitation-indice", avec cette différence que l'indice des prix n'y est pas obtenu en relevant les prix de certains types de travaux, mais à l'aide du relèvement des prix des types principaux de matériaux de construction pour construction de bâtiments déterminés, de l'évolution des gains horaires d'ouvriers et de toutes les autres dépenses. Cette méthode est appliquée lors du calcul de l'indice pour dix types d'objets.

Or, à la base de l'expérience yougoslave, il nous paraît préférable de recommander que l'indice des prix soit calculé en appliquant plusieurs méthodes, mais, bien entendu, dans le cas où il y a possibilité de vérifier la validité des indices, étant donné que chaque méthode inclue nécessairement certains biais. Aussi, en comparant ces indices entre eux, on peut vérifier les résultats eux-mêmes et découvrir les erreurs éventuelles.

En Yougoslavie, on calcule aussi un indice de la production brute au moyen de la méthode indirecte (de la même manière que celle expliquée par M. Lukács).

Nous sommes d'avis que pour établir l'indice de la production brute, la méthode directe est la plus avantageuse. En Yougoslavie, ce calcul est effectué par la méthode directe.

Nous considérons que l'application de la méthode indirecte est très difficile, ayant en vue que le temps de la construction des objets dépasse en règle une année, ainsi qu'il est difficile d'exprimer en unités physiques le volume de la construction dans la période considérée. Il serait beaucoup plus simple d'appliquer le volume des types particuliers de travaux effectués en unités physiques de mésure. Cependant, il y apparaît des difficultés en connexion avec le rassemblement des données sur le volume de travaux effectués dans la période considérée, car les constructeurs, lors de l'établissement de leurs comptes avec les investiteurs, présentent différemment les travaux effectués. C'est pourquoi il est nécessaire d'établir une classification uniforme de types de travaux qui serait observée de la part de tous les réalisateurs des travaux. En ce cas, on pourrait fournir beaucoup plus aisément les données

nécessaires pour le calcul de l'indice de la production nette. La méthode du calcul de l'indice de la production nette à l'aide des heures de travail effectuées et de l'indice de la productivité est aussi difficile parce qu'elle demande l'enregistrement exact des heures effectuées chez tous les réalisateurs des travaux. Cependant, l'expérience nous a montré, qu'en Yougoslavie au moins, on ne peut pas s'appuyer sur les données sur les heures de travail effectuées. En outre, il y existe, comme M. Lukács le met en relief lui aussi, des difficultés concernant le calcul de l'indice de la productivité du travail.

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Pour arriver à la comparabilité internationale, il serait recommandable d'établir une classification uniforme des objets et des types de travaux et même des matériaux de construction. Enfin, nous tenons à mentionner que la nomenclature hongroise des objets (annexe III) est très similaire à la nomenclature yougoslave des objets.

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# ECONOMIC COMMISSION FOR EUROPE HOUSING COMMITTEE Working Party on Housing and Building Statistics (Tenth Session 16 to 18 June 1958)

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# REPORT OF THE WORKING PARTY ON HOUSING AND BUILDING STATISTICS ON ITS TENTH SESSION

(As adopted on 18 June 1958)

1. The tenth session of the Working Party was held in Geneva on 16 to 18 June 1958. 2. Representatives of Austria, Belgium, the Byelorussian SSR, Czechoslovakia, Denmark, the Federal Republic of Germany, Finland, France, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, the Ukrainian SSR, the Union of Soviet Socialist Republics, the Eastern Zone of Germany, the United Kingdom, the United States of America and Yugoslavia participated in the meeting. Israel was represented under the provision of paragraph 11 of the terms of reference of the Economic Commission for Europe. The International Confederation of Free Trade Unions (ICFTU), the International Union of Architects (UIA) and the International Statistical Institute (ISI) were also present.

3. Mr. C. ANONSEN (Norway) and Mr. P. MACOVEI (Romania) were re-elected Chairman and Vice-Chairman respectively.

4. The provisional agenda (HOU/WP.3/39) was adopted.

Activities of the Conference of European Statisticians

5. On item 3 of the agenda, the Working Party took note of a statement concerning the activities of the Conference of European Statisticians. At the sixth plenary session of the Conference in June 1958, the view had been expressed that some of the Statistical Working Parties of ECE Committees went into great detail in developing statistics in their respective fields. As a result, demands were sometimes made on national statistical offices which were difficult or expensive to carry out and might unbalance the statistical programmes of some countries. The Conference requested the Secretariat to bring this matter to the notice of the Economic Commission for Europe.

6. As regards Housing and Building Statistics, the Conference noted that the Statistical Office of the United Nations had not yet definitely formulated its

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work programme for current housing statistics. The Conference agreed that the question of work on a statistical programme in this field that might be done at the European level should be considered at a later stage. The Conference had also expressed some views on the programme of work of the Working Party on Housing and Building Statistics. The Working Party considered these points under item 7 of its agenda.

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7. The Working Party took note of progress made by the Conference on items which were of interest in connexion with the Working Party's own programme of work. The Conference had set up a Group of Experts to discuss statistics of changes in financial assets and liabilities. The Conference's Working Group on Censuses of Population and Housing had been reconvened to finalize the European programme for the forthcoming population and housing census. The Conference had approved the programme for the collection of statistics of fixed capital formation and had requested the Secretariat to circulate it as an agreed document. <u>Annual Bulletin of Housing and Building Statistics for Europe</u>

8. The Working Party considered a draft of the Annual Bulletin of Housing and Building Statistics for Europe (HOU/WP.3/Working Paper No.24 and Add.1, 2 and 3).
9. The Working Party proposed the following amendments to the draft tables and made the following suggestions:

#### Table 1:

(a) the month during which the census was taken should be indicated;

(b) the column showing the percentage of the total population living in private households should be deleted;

(c) a column should be added showing the number of persons per room;

(d) data for countries using independent definitions for households and for dwellings should be distinguished (e.g. by using different lettering) from data for countries using linked definitions;

(e) if possible, figures on the number of rooms and population for a prewar year, as near as 1938 as possible, should be included; countries should be requested to provide the Secretariat with the necessary data. The Secretariat was requested to study these figures and consider whether they were sufficiently comparable for inclusion in the Bulletin.

#### Table 2:

(a) the title of the table should read: "Some characteristics of occupied dwellings"; "running water" should read "piped water"; "fixed bath" should be substituted for "bath";

(b) the column for "gas" should be deleted;

(c) countries should be invited to submit particulars of the distinction between urban and rural areas used in their national statistics;
(d) the Working Party agreed with a proposal by the Secretariat that data on tenure status be included in this table and that countries should be requested to supply this information ("tenure status" should be translated by "statut d'occupation").

## Table 3:

(a) the title should read: "Occupancy of dwellings".

(b) countries should be requested to supply information on the basis of density of occupancy for the following ranges:

less than 1.0 person per room
1.0 to less than 1.5
1.5 to less than 2.0
2.0 to less than 3.0
3.0 and more.

In the light of the replies received the Secretariat would consider whether the information could be published according to this breakdown.

## Table 4:

(a) it should be made clear in the title that the data on dwellings under construction relate to the situation at the end of the year under review;
(b) figures should be added showing the number of dwellings begun in the course of the year under review;

(c) the figures on dwellings completed should be supplemented by a series "of which new construction (including reconstruction)";

(d) in the final version a clear distinction should be made between the total number of dwellings completed and the number of dwellings completed per 1,000 inhabitants, by means of a different letter type or otherwise. Table 5:

This table should be deleted from the first edition of the Bulletin. It was agreed however that, at a later stage, consideration should be given to the possibility of replacing it by a table showing the net increase in the dwelling stock broken down by its components. Table 6:

It was agreed that those countries for which the number of rooms shown in the table did not include kitchens should make an attempt to supply data in conformity with the agreed international standards, according to which the kitchen should be regarded as a room.

Table 7:

The French term for "one-dwelling house" should be "maison individuelle". Tables 8 to 11: ۲

No amendments were proposed.

#### Table 12:

The title should read: "Price indices for the input and output of housebuilding".

#### Table 13:

(a) It was agreed that this table should be presented on a country by country basis;

(b) data should be shown for cement, bricks and for those building materials which were particularly important in each country. The selection of the latter items should be left to the countries concerned;

(c) the data to be shown should relate to (i) production, (ii) imports, (iii) exports.

#### Table 14:

More detailed notes explaining the concepts used and the coverage of the indices shown should be added to the table. In many instances countries would be asked to supply the necessary information for these notes, since it was not available in published sources. Particular attention should be given to the treatment of rents for new dwellings and old dwellings.

10. The Working Party noted that a table was in course of preparation on capital formation by construction (residential building, non-residential building and other construction) based on data available in national accounts. It was agreed that this table should not be included in the first issue of the Annual Bulletin and that its inclusion in a later issue should be considered at the Working Party's next session.

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11. The Working Party also agreed to consider at its next session the desirability of including in later issues of the Bulletin a number of additional statistics such as: (a) the number of existing dwellings, analysed by ownership; (b) current dwelling construction by size (in square metres); (c) current dwelling construction broken down by equipment supplied, and (d) current dwelling construction analysed by tenure status. The Working Party would also consider at that session a number of proposals.made by Czechoslovakia (see HOU/WP.3/42) and the possible inclusion of data on certain aspects of the housing situation derived from sources other than **censuses.** 

12. It was agreed that countries would submit revisions and additions to the draft Annual Bulletin and the additional information referred to in the previous paragraph by not later than 15 August 1958. The Working Party also agreed that the data for future issues of the Annual Bulletin should be collected by a questionnaire and it requested the Secretariat to prepare such a questionnaire.

Quarterly Bulletin of Housing and Building Statistics for Europe

13. The Working Party reviewed the Quarterly Bulletin of Housing and Building Statistics for Europe in its new form and made the following proposals for amendments:

<u>Table 1</u>: This table should be transferred to the Annual Bulletin. <u>Table 2</u>: This table should be confined to the last five years only; a column should be added to show population figures for the last year. <u>Table 6</u>: This table should be deleted.

<u>Table 7</u>: The title should read: "Unemployment in the construction industry". <u>Table 8</u>: The title should read: "Price indices for the input and output of housebuilding".

14. The Working Farty considered that the Quarterly Bulletin should be closely linked to the Annual Bulletin, and should in fact constitute a supplement to the latter publication, giving more up to date information. Uniformity in presentation and in the terminology used was therefore desirable. The Working Party requested the Secretariat to review the Quarterly Bulletin from this point of view and to make any amendments which appeared necessary. The Working Party suggested that a reference should be made in the Quarterly Bulletin to the Annual Bulletin, and vice versa.

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15. The Working Party considered that henceforth, the explanatory notes, and notes on sources relating to the Quarterly Bulletin should be included only in the first issue of the bulletin each year, and that the other issues should include only additions and revisions to these notes.

## The use of physical units for measuring building activity

16. The Working Party had before it a paper on this subject prepared by Dr. Deneffe (Federal Republic of Germany) and Mr. Hirdes (Netherlands) (HOU/WP.3/ Since this document had been circulated shortly before the Working Paper No.26). meeting the members of the Working Party had not had the opportunity to discuss the various questions raised with the appropriate authorities in their countries. was therefore agreed that countries should be requested to submit written comments on The Working Party proposed that the rapporteurs' paper, together this document. with the national comments and any views which the rapporteurs might wish to express in the light of these comments, should be taken into account when a general programme for current housing statistics was drawn up either by the Working Party The Working Party considered that pending the preparation of or by another body. such a programme no further work on this subject was necessary for the time being. Work programme

17. The Working Party discussed its work programme on the basis of a note by the Secretariat (HOU/WP.3/Working Paper No.27).

The Working Party noted that at its sixth plenary session, the Conference of 18. European Statisticians had expressed some views on the Working Party's programme. The Conference had agreed to include sampling surveys of the housing situation and indices of rents in its own programme of work if the Working Party on Housing and Building Statistics wished to refer these subjects to the Conference. Conference had considered that the "capacity of dwellings for family occupation" was a concept that was difficult to measure statistically and that if this subject were retained in the Working Party's programme of work, it should be given low The Conference had also considered that the Working Party might usefully priority. discuss the need for statistics on the consumption of building materials but should not embark upon a study of statistics of building materials in general. 19. The Working Party agreed to refer consideration of sampling surveys of the housing situation and of rent indices to the Conference of European Statisticians, in addition to statistics of housing finance which had already been referred to the Conference at a previous session.

20. As regards the remaining items in its work programme the Working Party reached the following conclusions:

(a) Statistical bulletins: it was agreed that from time to time the two statistical bulletins should be reviewed;

(b) Index of building activity: as noted above, the Working Party did not envisage further work on this item for the time being;

(c) Method for measuring the capacity of dwellings for family occupation: the Working Party agreed with the views expressed by the Conference of European Statisticians that this was a concept which was difficult to measure statistically, and decided to give it low priority in the work programme;
(d) Problems of collecting current housing and building statistics: the Working Party agreed that no immediate work was required on this item; at a later stage it might consider whether to invite a national rapporteur to prepare a consolidated document on the practices in the various countries;
(e) Calculation of housing needs and shortages: It was noted that the Housing Committee had already done some work on housing needs and shortages. The Working Party considered that it would be useful if further work were done on the more detailed statistical aspects of this question. The Working Party invited Mr. de Jonge (Netherlands) to prepare a report on this subject for consideration at a later session;

(f) Manpower statistics:

Building Materials:

The Working Party was of the opinion that there was a need for better and more complete statistics in this field, but considered that before work was done the views of the Housing Committee should be sought. At a later stage, if the Housing Committee agreed that work on these subjects should be undertaken, the Working Party would consider how cooperation with other responsible bodies could be secured.

21. Since the greater part of the existing work programme had now been disposed of and other items had been referred to the Conference of European Statisticians, the Working Party considered that it was no longer necessary to meet as frequently as in the past. It was therefore agreed that the Working Party need not in future be convened according to a regular meeting schedule but only when the necessity arose.

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HOUSING AND MOMENT CONTRACTIONS OFFICE OF THE CONTRACTOR EFFICE WASHINGTON 25, D. C. MAY 2 9 JULU

D.04 RESTRICTE HOU/101 HOU/WP.3/42 15 October 1958 Original: ENGLISH/RUSSIA

# ECONOMIC COMMISSION FOR EUROPE HOUSING COMMITTEE



### Note by the Secretariat

The Czechoslovak Delegation to the Housing Committee have suggested that the . Working Party on Housing and Building Statistics should examine the possibility of determining indicators characterizing the influence of various factors on the volume of house-building costs. The Secretariat believe, however, that it would be preferable if, in the first instance, this matter were considered by the Housing Committee itself, in conjunction with the enquiry into government policies and the cost of building. Accordingly the text of the Czechoslovak proposal is attached, together with an explanatory note and a model reply, also prepared by the Czechoslovak Delegation.

### DETERMINATION OF INDICATORS SHOWING THE INFLUENCE OF VARIOUS FACTORS ON THE LEVEL OF HOUSING CONSTRUCTION COSTS

### Memorandum of the State Statistical Office in Czechoslovakia

### A. INTRODUCTION

In March 1958, the head of the Czechoslovak delegation to the Housing Committee submitted to the Committee secretariat a report by the Czechoslovak State Statistical Office recommending for consideration a number of suggestions as to the contents of the tables included in the Annual <u>Bulletin</u>. The report further expressed the opinion that indicators showing the influence of various factors on the level of housing construction costs might also usefully be included in the next Annual <u>Bulletin</u>. In this connexion, it was recommended that the agenda of the next session of the Working Party on Housing and Building Statistics should include the following item:

# "Determination of indicators showing the influence of various factors on the level of housing construction costs"

A solution of this problem might be very useful, since information as to the magnitude of the main influences on the level of housing construction costs in various countries would undoubtedly be valuable to all member States. Moreover, should future discussions in the full Committee be directed mainly towards ways of reducing housing construction costs, it would be essential to have comparable data on these matters from different member States, so as to enable the full Committee to formulate proper conclusions and recommendations.

The following proposal on the above-mentioned problem has been prepared in accordance with the wishes of the Housing Committee secretariat. The proposal is based on the results of a detailed investigation of housing construction carried out in Czechoslovakia during the past two years.

# B. FACTORS AFFECTING THE LEVEL OF HOUSING CONSTRUCTION COSTS

The level of housing construction costs is undoubtedly affected by a large number of factors, some of which act simultaneously and with reciprocal effect. It would therefore be very difficult, if not impossible, to determine the extent to which the level of housing construction costs is affected by each individual factor. Accordingly, for the purposes of the problem under consideration, it will be appropriate to consider only those factors which have a decisive effect on the level of housing construction costs and which can be assessed with comparative ease. These more important factors should include technical and technological progress in housing construction, the size of residential buildings, the time required for building, and, lastly, the distribution of building activity between separate dwellings and group housing schemes.

- (a) From the standpoint of solving the technical problems connected with the erection of residential buildings and the dwellings they contain, progress in housing construction may be indicated by reference to the types adopted in a given year. It may be presumed that the cost will vary according to whether the buildings are erected to standard or to individual plans.<sup>(1)</sup>
   For the purposes of housing construction statistics, therefore, technical progress may usefully be indicated in relation to two groups of residential buildings:
  - (i) residential buildings erected to standard plans, separate consideration being given to the most commonly used types or groups of types;
  - (ii) residential buildings erected to individual plans.
- (b) Technological progress in housing construction can be indicated by the degree of industrialization achieved.

The industrialization of housing construction, chiefly by the use of large prefabricated parts and panels, means a considerable saving of time and simultaneously a reduction in cost. In housing construction statistics, technological progress may therefore be usefully indicated for two main groups of buildings:

<sup>(1)</sup> Most residential buildings are erected to previously prepared plans, of which there are certain varieties called "standard" plans. These vary mainly according to the size of the dwellings contained in the buildings, the number of floors and the amenities provided. Plans prepared without the use of standard documents, and intended only for a single residential building, are called "individual" plans.

- (i) residential buildings erected completely on the site with the aid of brick or monolithic constructions and the use of traditional materials . such as cement, bricks, small slabs, etc.
- (ii) residential buildings erected with the use of large prefabricated parts and panels.

Residential buildings erected with the use of large prefabricated parts and panels should be further subdivided.

For the purpose of studying the technological development of housing construction in Czechoslovakia, four stages of technological progress have been distinguished.

In the first stage, the building work is all done at the site in the form of monolithic structures and brickwork, with the use of traditional materials such as cement, bricks and small slabs, etc. In the second stage, small prefabricated parts weighing less than 600 kg are employed. In the third stage, residential buildings are made of brick or slag-concrete slabs, parts and panels weighing from 600 to 2,000 kg. In the fourth stage, buildings are assembled from large, complete prefabricated parts and panels usually weighing more than 2,000 kg.

Technological progress in housing construction may, however, be characterized simply by the technology and material used in the construction of vertical carrying structures. In Czechoslovakia, the following kinds of building material are used: brick, brick blocks, concrete blocks, sectional or monolithic ferro-concrete frames, panels, etc.

(c) The average cost of a dwelling unit is undoubtedly also influenced by the size of the building erected. In the case of small residential buildings with one, two, three or four flats, the cost of a flat is increased by various expenses which, though they vary to some extent, are inevitable, irrespective of whether the building in question contains a small number of flats or whether it has a large or small number of storeys. It is, therefore, desirable to classify construction costs for residential buildings according to the latters' size. Moreover, a unit of measurement for residential buildings should be established. It may be the number of floors, the number of flats, the floor space, living space, the total space or the total volume of the building (the cubic contents).

 (d) The building time has, of course, a considerable influence on the level of housing construction costs. The sooner residential buildings are ready for use, the smaller the construction costs will be. The main way of reducing costs is to reduce wages and outlay on production.

It seems, therefore, advisable to classify construction costs for residential buildings according to the building time. Simultaneously, residential buildings, classified according to the building time, could be subdivided according to their cubic contents. The unit of measurement for the classification of residential buildings according to the building time could be a day, or a more approximate unit, such as a calendar month.

(e) Housing construction costs are also affected by the opportunities for a more progressive organization of building work. The work can undoubtedly be organized better in the case of group housing schemes, and it may, therefore, be supposed that costs for this type of construction will be lower than for separate dwellings. Thus it seems advisable to classify costs for group housing apart from those for separate dwellings.

### C. DEFINITIONS OF CONCEPTS

Definitions of most of the concepts encountered in this branch of housing construction statistics have already been agreed by the Working Party on Housing and Building Statistics and approved by the Committee. The remaining definitions should be discussed in the Working Party on Statistics, together with the classification programme and the scope of the various classes.

The definitions of the following concepts should be considered:

- 1. Housing construction costs. In establishing this definition, the following questions should be taken into consideration:
  - (a) whether or not for this purpose the cost, to undertakings, of housing construction should include profits. It would probably be desirable, for the sake of greater comparability, to consider the cost to building undertakings without profits. On the other hand, in view of the considerable degree of co-operation between building undertakings, it would be very difficult, and in many countries almost impossible, to determine costs in that way. It seems, therefore, more practical to include profits in the cost, to undertakings, of housing construction.

- (b) whether or not for this purpose the cost of residential buildings should be taken to include expenditure on joining pipes to the mains, putting the grounds in order, etc., or only the costs of the buildings themselves. For the sake of greater comparability, it seems better to consider only the costs of residential buildings themselves;
- (c) whether a classification of housing construction costs should be made, and if so, of what kind. It seems most practical to take the total costs, including the costs of basic materials.
- 2. Standard plans and individual plans. Here it would be necessary to determine in which cases the designs should be regarded as standard and in which as individual. More detailed classification of standard designs should be left to individual member States.
- 3. Technology of housing construction.
- Here it would be necessary either to decide what technology of housing construction should be considered as an industrial method of construction, or to establish several technological stages of housing construction. At the same time, the basic materials and kind of carrying structures used in building should be taken into consideration.
- 4. Group housing schemes and separate dwellings. Here it would have to be decided what number of residential buildings should be regarded as a group housing unit and when the housing constructed should be regarded as separate dwellings.
- D. METHOD AND PERIODICITY OF INQUIRIES
- 1. The method of gathering the necessary data would be very simple. After a residential building was completed or handed over to the agency or person commissioning it, the construction undertaking would complete a questionnaire giving the necessary particulars. The questionnaire would be then sent to the statistical office or its appropriate organ for analysis.
- 2. The analysis of the data thus obtained might cover any period of time; a period of one year would seem to be enough at present. The results of the analysis should be sent to the secretariat of the Committee in any case not later than 31 March of the following year, so that they could be published before the Committee's spring session.

### E. <u>PUBLICATION OF RESULTS</u>

It would be desirable to publish the results of the above-mentioned inquiries in the Annual Bulletin. In principle, the tables should be arranged in the same way as in the quarterly bulletin, with the subject as the heading and the names of the countries in the first column. Where such an arrangement would not be feasible (e.g. in the case of data for various types in individual countries), separate tables for each country could be used.

## F. CONCLUSION

It is recommended that the secretariat of the Committee take note of these suggestions and recommend, for inclusion in the agenda of the autumn session of the Working Party on Housing and Building Statistics as a main subject for consideration, the following item:

"Determination of indicators showing the influence of various factors on the level of housing construction costs"

For this purpose, it would be necessary to appoint a group of rapporteurs who would prepare a more detailed proposal for the solution of the problem in question and present it at the autumn session.

The main object would be to establish a uniform method of classifying residential buildings, according to the suggestion made in section A above. The results obtained from an inquiry of the type mentioned (which would not be at all complicated) would be valuable, not only for each member State, but also for the Committee as a whole in enabling it to arrive at a proper understanding of housing construction problems.

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#### ANNEX

### TO THE CZECHOSLOVAK MEMORANDUM OF 16 MAY 1958

### Report of the State Statistical Office

1. Mr. A.F. EWING, Director of the Steel, Engineering and Housing Division of ECE, during his visit to Czechoslovakia, asked the members of the Czechoslovak Delegation to the July plenary session of the Housing Committee to provide the Secretariat of the Committee with information concerning the method and results of the statistical survey of the house building industry carried out in Czechoslovakia. In compliance with the wishes of the Secretariat of the Housing Committee, the State Statistical Office of Czechoslovakia - which carries out this detailed investigation - transmits herewith the desired information in the form of an annex to the Czechoslovak memorandum on the determination of indicators showing the influence of various factors on the level of house construction costs.

2. In Czechoslovakia, the house-building plans aim at providing the population with an ever increasing yearly number of dwellings equipped with modern amenities. If these bold targets are to be successfully fulfilled, all economic executives in the house building industry have to discover new ways of ensuring the largest possible volume of new buildings, compatible with existing financial and material possibilities and the current shortage of labour in the industry. In order to assist those responsible for carrying out specific measures for the improvement of building operations and the reduction of building costs, the State Statistical Office carried out detailed enquiries into house-building costs and other factors affecting the house building plan and its standard.

The initial survey of this kind covered residential buildings completed in 1956, the second - buildings completed in 1957 under State auspices. The Building undertakings were required at the beginning of 1957 (and 1958) to complete a questionnaire covering all residential buildings completed during the previous year. The questionnaires, when filled in, were sent through the local statistical offices, to the State Statistical Office for completion. The questionnaire - relatively simple - contained indicators classifying the buildings from the standpoint of the technical system and technology used in construction. On the basis of information obtained from the survey of State house construction in 1956 and 1957, the State HOU/101 HOU/WP.3/42 Annex page 2

Statistical Office - together with Ministry of Building and the State Development Board - put into circulation, for 1958 and subsequent years, a Report on the technical and economic indicators for residential buildings completed in the year 19... (See Appendix). This report which as it stands embodies a considerable number of indicators, will be used by the Ministry in planning the construction of each residential building separately; copies of the report are prepared at the same time in the State Statistical Office. The report filled in by the building undertaking (contractor) is transmitted to the appropriate ministry (copies being sent to the appropriate State statistical offices) at the latest by the end of the month following the completion of building operations.

The results are published in classified form by the State Statistical Office for the use of economic executives in Czechoslovakia. In addition, every year, the State Statistical Office carries out a representative sampling survey on residential buildings for which the total  $costs^{(1)}$  for the various building undertakings, co-operating in the construction of the given building, are assessed by its local offices.

The results are further arranged on a classification basis and according to other criteria and thus give a clear picture of real house building costs in the various sectors of the national economy.

3. If it is desired to enlarge the contents of the Annual Bulletin on Housing and Building Statistics for Europe by the inclusion of further indicators showing the influence of various factors on the level of house construction, it will not be necessary to carry out such a wide investigation as organized in Czechoslovakia. It is, however, advisable to ensure that in all countries concerned the collection of data is effected in similar fashion i.e. by the building undertakings after the completion of the residential building. In any case, it appears highly desirable to have this information, together with figures published in the Annual Bulletin.

It would seem advisable - from the standpoint of international comparability to complete the contents of the Annual Bulletin with respect to the level and costs of house construction with several classifications of the residential buildings.

<sup>(1)</sup> Total house construction costs of the building undertakings include costs of material, wages and salaries, amortization, overhead charges of the undertakings; profits are excluded.

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For reasons explained in our Memorandum of May 1958, we should recommend classifying residential buildings on the basis of the following criteria:

- a) The various kinds of standard designs; a separate group would be formed of units built according to individual designs.
- b) The technology applied in construction.
- c) Whether the advanced organization of building work stream-line method is applied on a large scale or not;
- d) The size of the residential building.
- e) Additional criteria might be envisaged, such as the building time, number of floors, the average floor space in the building, etc.

The level of house construction and its cost in the various sectors might be defined in accordance with the following indicators:

- a) Relative weight of dwellings;
- b) Average price of dwellings (or average total cost per dwelling erected by the building undertaking)

In addition, the level of housing built in accordance with the various criteria might be shown by the relative living or useful floor space or cubic contents of the dwelling; the value might be determined by the average price of  $l m^2$  of living or useful floor space of the dwelling.

It seems advisable to include in the Annual Bulletin the abovementioned or other agreed data separately for each Government.

4. We give here, by way of example, some results obtained by the detailed investigation on the <u>State house construction in Czechoslovakia</u> in 1956 and 1957.

The data concern <u>new</u> residential buildings only, completed in the year under review (excluding buildings with built-in equipment, such as shops, workshops, sanitary amenities etc.). Also excluded is the construction of community dwellings for single persons, students, high-school pupils and working youth. Only the construction of new residential buildings under the State house construction plan, with flats designed for families, is taken into consideration.

The average price of a dwelling, as shown in the table, refers to gross dwelling costs, i.e. including expenditure on joining pipes to mains, putting surrounding land in order, etc.

The net average price of the dwelling is approximately 12 per cent lower. The prices are purchase prices paid by the buyers and are not production costs which are - especially with industrial methods of construction - much lower.

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<u> </u>		1956		1957	. [
Classificati	on Proportio of dwelling units	price of	Proportion of dwelling units	Average price of dwelling in crowns	Index number of the average price of the dwelling (1956=100)
Czechoslovakia -	TOTALS 100	99.9	100	95.7	95.8
1. Buildings erected standard designs	l to 71.8	98.2	75.2	93•4	95.1
including T-13 T-15	35.5 15.4	97 <b>.</b> 7 99.0	28.4 10.3	91.9 89.0	94.1 89.9
Buildings erected individual design		104.4	24.8	102.9	98.6
2. Technology applic construction	ed in				
lst degree	19.0	107.0	24.3	101.3	94.7
2nd "	65.9	99.1	59.0	93.3	94.1
3rd " 4th " (2)	13.9 1.2	100.1 98.3	10.6 6.1	94.9 98.7	94.8 100.4
3. Traditional metho organization of building work	od of 71	100.3	81.5	96.2	95.9
Advanced method organization of work (stream-line method)	milding 29	99.1	18.5	93.5	94.3
4. Size of the residual building	lential				
up to 50 5001-100 10001-200 20001 end m	00 " 23.9	103.8 98.1 97.1 101.2	31.2 28.2 23.7 16.9	95.0 93.3 97.8 98.0	91.5 95.1 100.7 96.8

(2) In the 4th degree, only the construction of panelled houses, system G, was completed in 1956. In 1957, in addition, houses, system BA were completed, but cost more. Hence, the apparent rise in prices. As a result of changes in design and structure, and of the reorganization of panel production industry in 1958, prices will be considerably reduced.

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Amenities and equipment of houses and dwelling units built under State house construction plan

(Proportion of the total number of dwellings)

	1956	1957
Gas Central heating Hot water Central heating and hot water Landry rooms equipped including those with modern equipment Built-in furniture (in hall, kitchen)	61.1 65.7 65.8 61.3 92.1 87.9	64.6 70.5 72.6 66.4 95.6 84.2 95.0

All the flats completed in 1956 and 1957 are joined up to water and sewerage mains and are equipped with bathrooms. The average floor space of the flats in 1957 in the total number of residential buildings surveyed increased, as compared with 1956, by 4.1 per cent and amounted to  $37.3 \text{ m}^2$ .

The reduction of the average price of flats was attained with a simultaneous increase of housing levels.

DEFINITIONS OF TERMS USED IN THE TABLE

- a) Designs not prepared specially for a single building but for a large number of residential buildings are called standard designs. (Such designs may, however, be adapted to the actual conditions of a given site). A design prepared without the use of any conventional document and intended for the construction of a single residential building is called an individual design.
- b) The <u>first</u> technological degree includes residential buildings erected entirely on the site, with the aid of brick or monolithic construction and the use of traditional materials, such as cement, bricks, small slabs etc.

The accord technological degree includes the use of small prefabricated parts

wai hing loss than 600 kilograms.
Residential buildings of the <u>third</u> technological degree are those built of brick, slag-concrete, or rock-concrete pieces, parts and panels weighing from 600 up to 2 000 kilograms.
Housing units of the <u>fourth</u> technical degree are assembled from large, complete, prefabricated parts and panels the weight of which generally exceeds 2 000

kilograms.

- c) Advanced method of building work stream-line method includes work carried out without any interruption between the individual production processes. All operations flow rhythmically, a constant number of workers being employed on each working process. The stream-line method allows building work to be carried out on a production-line system, thus ensuring the rhythmic flow of the whole production process in its technological sequence. Thus, the stream-line method requires precise timing of transport, the uninterrupted supplying of workers with materials (according to the short term plan), the introduction of mechanization and increased mechanization of all branches of building work.
- d) The cubic contents is determined according to the definitions agreed in the Housing Committee of ECE.

In order to obtain comparable data on the housing industry in accordance with the above-mentioned (or additional)criteria, it would be advisable to discuss, at a plenary session of the Housing Committee, the question of defining certain concepts, a proposal already put forward in the Memorandum of May 1958.

5. The abovementioned classification of residential buildings shows clearly what factors influence house construction costs. These are: the standard and individual designs used in construction, building technology, organization of the building work and the size of the house built. The table also gives an idea of the proportion of housing construction in the various classifications in accordance with the accepted criteria. By comparing two or several years, housing industry trends from the point of view of standardization of design, technology applied, organization of building work, etc. may be followed, together with the trend of average prices of dwellings. Furthermore, this comparison will show to what extent the various factors influence the trends of average prices.

For the abovementioned reasons, it would be advisable for us to take steps to ensure the enlargement of the Annual Bulletin of Housing and Building Statistics for Europe, in accordance with the proposal made in the Czechoslovak Memorandum of 6 May 1958. This would considerably facilitate an exchange of information between Governments concerning the technical and technological development of the housing industry and methods designed to lead to a reduction in the average prices of dwellings.

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Approved by the SSO: No. of the report: 5230-58/59/

Date: 16 July 1958

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Thickly framed parts should be filled in by the SSO

General supplier has to submit the report - according to the instructions to the SSO 1 copy to the Reg. Service of the SSO

No. of the residential building Min. gen. supplier Type of commune Region Main investor Size of the commune

### REPORT ON THE TECHNICAL AND ECONOMIC

INDICATORS REGARDING RESIDENTIAL CONSTRUCTION DURING THE YEAR

19..

Designation of the building ..... Builder Main builder General contractor

I. Characteristics of the building x)

Location of the building	in group constr. in individual constr. in interstitial space (between two houses)			_	standard design what kind indi- vidual design	
Dwelling units	a) by new construction by reconstr., exten- sions, adaptations	1 3	Organi: of the ing wo:	build-	traditional method stream-line method	1
obtained	in residential houses in homes for single b) persons, for pupils, for high-school stu- dents and for the working youth	1	Mate- rial used	base- ment walling work	bricks or stone concrete ferro-concrete prefabricated parts	1 3 5 7
	designed for State and public organs c) for housing co-oper- atives for private persons	1 3 5		ceilings	wood ferro-concrete monolithic ferro-concrete prefabricated,	1 3 5
	Technological degree of construction:				beams panels large panels	79
Technology of construction	lst degree 2nd degree 3rd degree 4th degree	1 3 5 7		roofs	wood ferro-concrete prefabricated flat roofs	135

Location: a) region ..... b) district .... c) commune .....

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Technology	Material for vertical supporting structures: wood bricks brick slabs concrete "	1 2 3	floors of living rooms (without kitchens)	made of boards parquet floors floor covering others, what kind	1 3 5 7
Construction (contd.)	ferro-concrete skeleton (slabs) ferro-concrete skeletons (mounted) panels	4 5 6 7	Main frontage of the building	simple (1-3degr.) complic.(4-5")	)1 3

II. Equipment of the building x)

	 Boiler- room loc- ated in the house		Lift	I aundry- room with modern equipment	L <b>aundry-</b> rooms	Drying room	Ironing- room	Built- in equip- ment
L	yes-no	yes-no	yes-no	yes - no	yes - no	<b>y</b> es-no	yes - no	yes-no

X) Cross out when not included

2nd page of the report

Number of floors Average building time of 1 flat Building time of the house No. of flats per house Cubic content Average price of a flat Equipment of the building Civil equipment

Average (number	building of days)	time	of	l flat
	price of			
No. of 1	lats per	I hou	1se	

III. Size of building (block of flats)

IV. Size of flats

No. of houses per l block of flats	1	
No. of floors above ground 1.	2	
below the ground 1.	3	
Cubic content m <sup>3</sup>	4	
Area covered by a building m <sup>2</sup>	: 5	
Total area of the building m <sup>2</sup>	6	
Area of built-in civil equipment	7	

ter and the second s			· · · · · · · · · · · · · · · · · · ·
	No.	Living floor space m <sup>2</sup>	Useful floor space m <sup>2</sup>
Total flats 8			
of which: rooms for single <b>pers</b> ons 9			
with 1 room and kitchen 10			
with 2 rooms and kitchen 11			
with 3 rooms and kitchen 12			
with 4 (and more) rooms and kitchen 13			

Page 3 V. Building time Building time Date of the Starting date of 14 16 15 (no. of days) handing over of building operations flats for use VII. Consumption of certain building VI. Value of the building in 1000 crowns materials 24 Cement q Value of building in estimate Steel for concrete 17 prices 25 constructions q 18 of which: residential houses Bricks solid and holmaking up of the ground for 26 19 low 1000 pieces building purposes 27 m<sup>3</sup> 20 Sawn wood equipment of the ground 28 including built-in " 21 total other work 29 11 Prefabricated parts Real volume of the work 30 carried out up to the date of the handing over of the dwelling 22 for use in estimate prices Value of the uncompleted work 23 Estimating of indicators IX. Building costs in 1000 crowns VIII. a) Economic indicators Main building production: 31 Basic material Total costs in crowns 1 dwell.unit 42 1 m<sup>2</sup> of the for: 32 Basic salaries useful floor 33 Building machinery space and of 43 built-in Other direct costs 34 equipment 35 Total indirect costs  $1 \text{ m}^2$  of the 36 Total costs total space 44 1 m<sup>3</sup> of the Auxiliary building production 37 own - total cubic contents 45 38 of which: + profits - loss 39 Total sub-deliveries Technical indicators b) Total costs 40 Per 1 dwelling unit total space x)46 + profits - loss 41  $(in m^2)$  (to the tenth useful floor place) 47 space The total space is to be reduced x) living floor by the area of the built-in 48 space equipment. 49 50

Stamp and signature of the general contractor The loss 100 WR 3/421

Annex Appendix



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## ECONOMIC COMMISSION FOR EUROPE

### HOUSING COMMITTEE

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Working Party on Housing and Building Statistics

### PROVISIONAL AGENDA

### Twelfth Session

### to be held at the Palais des Nations, Geneva, from 19 to 22 December, beginning at 3 p.m. on 19 December 1961

- 1. Adoption of the agenda
- Survey of the housing situation in European countries (HOU/WP.3/Working Paper No. 29; HOU/WP.3/Working Paper No. 35 and addenda 1 to 4); ME/202/61.
- 3. Decisions of the Housing Committee (E/ECE/HOU/95; HOU/WP.3/Working Paper No. 36)
- 4. Decisions of the Conference of European Statisticians
- 5. Any other business
- 6. Date of next meeting
- 7. Adoption of the report to the Housing Committee

GE.61-10759

### NOTES ON THE AGENDA FOR THE TWELFTH SESSION

#### Item 1: Adoption of the agenda

Item 2: Survey of the housing situation in European countries

An ad hoc Heeting of rapporteurs on the preparation of the survey was held in Geneva on 29 and 30 May 1961. Experts of Czechoslovakia, Ireland, the Netherlands, Poland, Sweden and the United Kingdom participated in the meeting. The rapporteurs agreed on the revisions and completions to the various subjects of the outline of the survey (HOU/MP.3/Working Paper No. 29). The revisions and completions to Subjects I, II and III, together with a new full outline of Subject IV are submitted to this meeting for discussion (HOU/WP.3/Working Paper No. 35 and add.1, 2 and 3). In connexion with the latter subject an illustrative note prepared by Hungary on a method for calculating replacement needs is also made available  $(kE/202/61)^{(1)}$ . Countries which are known to have experience in this field and which have undertaken or are undertaking similar investigations into the quality of their housing stock, such as Belgium, Federal Republic of Germany, Hungary and Yugoslavia, will be invited The government replies received by to make a brief statement to the Working Party. the Secretariat on its encuiry into the possibility of implementing the outline of the survey are set out in a summary form in HOU/WP.3/Working Paper No. 35/Add.4. It is proposed that the Working Party should discuss under this item the following three points: (a) the revisions and completions to Subjects I, II and III; (b) the new outline of Subject IV, and (c) the possibility of each country supplying the material required for the elaboration of the countries' monographs and the time at which this information would become available, thus permitting a proper phasing of the preparation of the survey.

### Item 3: Decisions of the Housing Committee

At its twenty-first session held in June 1961, the Housing Committee reached agreement on various points relating to the work of this Working Party:

(a) it agreed with the view expressed at the ad hoc meeting of rapporteurs on the preparation of the survey, that a study of factors relating to effective future housing demand would be most useful in order to complete the picture of future housing requirements as drawn up in Subject IV of the survey, the work being carried out with the aid of experts from a limited number of countries with experience in this field, i.e. the Federal Republic of Germany, Sweden, United Kingdom and the United States of America (E/ECE/HOU/95, paragraph 7 (b)). The Working Party had agreed at its previous session that the problems involved in effective demand lay partly outside its own competence, and that the attention of the Committee should be especially drawn to this point (HOU/WP.3/44, paragraph 39);

(b) the ad hoc Meeting of rapporteurs had a first exchange of views on the phasing of the preparation of the survey. On the basis of the country replies received by the Secretariat on its enquiry into the possibility for implementing the outline of the survey, it appeared that countries were at different stages in completing their censuses and that the proposed housing survey could not be finalized until the full census results became available for each country, probably towards the end of 1964. Rather than wait so long for a full survey statement, it was proposed to ask for the submission of partial census results as they became available. To facilitate this it was proposed to prepare a full specimen statement for a country which had already obtained sufficient census information to cover the most important points required for the survey. This specimen statement was to be submitted to each country with a request to provide data as near as practicable to the lines of the specimen, as and when individual data became available. At the Housing Committee's previous session, it was noted that the Netherlands was willing to prepare such a specimen statement for the survey (E/ECE/HOU/95, paragraph 7, point (c));

(c) at its previous session the Working Party agreed to recommend to the Housing Committee the adoption of its terms of reference (HOU/WP.3/44, paragraph 10). The Housing Committee adopted the proposed terms of reference, the full text of which is shown in the appendix to E/ECE/HOU/95;

(d) the Housing Committee heard a proposal by the Secretariat that the Working Party should be requested to consider whether it was necessary to continue the publication of the Quarterly Bulletin of Housing and Building Statistics for Europe. It was noted that some delegations were not in favour of a discontinuation. The Housing Committee requested the Working Party to consider this proposal and consequential matters arising therefrom, and authorized it to take a final decision in this matter. (E/ECE/HOU/95, paragraphs 10 and 11 (d)). A Secretariat note substantiating its proposal is submitted to the Working Party for consideration (HOU/WP.3/Working Paper No. 36). HOU/WP.3/46 page 4

(e) in connexion with the preparation of a European programme for current housing and building statistics, jointly with the Conference of European Statisticians, the Committee was informed that a favourable reply had been received concerning the nomination of national experts from the countries concerned and that Finland was willing to consider nominating a rapporteur on statistics on rent (E/ECE/HOU/95, paragraph 9).

Item 4: Decisions of the Conference of European Statisticians

At its ninth plenary session held in July 1961 the Conference expressed agreement with the further arrangements made for the preparation of a European. programme for current housing and building statistics; the Conference proposed that, if it appeared necessary to assign priorities to the various items of work in this field, priority be given to the subjects of index numbers of building activity and methods of collection. Reviewing the statistical activities carried out under the auspices of ECE Committees, the Conference expressed general satisfaction with the progress made in implementing its recommendations for improving the arrangements for co-ordinating this work with its own work. As regards the statistical work under the programme of the Housing Committee the Conference considered that the suggestions to discontinue the publication of the Quarterly Bulletin of Housing and Building Statistics appeared to be justified; but that efforts should be made, however, to issue the Annual Bulletin more promptly. Item 5: Any other business

Item 6: Date of next meeting

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The Secretariat will make a proposal for the date of the next meeting in the light of the progress made on the various problems covered by the Working Party. <u>Item 7</u>: Adoption of the report to the Housing Committee

In accordance with established practice the Working Party should agree on the report of this session before concluding its work.

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