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Providing Housing within the Sustainable Development Framework:

Lessons from Learning Exchanges with Brazil, Mexico, and South Africa



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Introduction

Throughout 2010, The Department of Housing and Urban Development's Office of International and Philanthropic Innovation (IPI) invited delegations of housing experts from Brazil, Mexico, and South Africa to Washington, D.C. to exchange ideas and perspectives regarding housing challenges and opportunities in these countries. After each of these three learning exchanges, IPI's staff was struck by the intelligence, energy, creativity, and dedication of these housing professionals. In the pages below we present brief reports and learning from each country on conditions, policies, and programs in housing and sustainable urban development, explore some common themes and challenges, and conclude with insights from national and international experts that point to fruitful directions in practice.

There are many similarities among the United States, Mexico, Brazil, and South Africa, in the challenges each nation faces in providing safe and decent housing for all of their residents, despite the vast differences in economies, wealth, resources, and development conditions. At the national policy level, all four countries have a comprehensive strategy that explicitly focuses on housing within the context of social and economic development.

In South Africa housing is intended to contribute to creating a quality urban environment where people can live with dignity and pride. According to the Bill of Rights of the South African Constitution, everyone has the right to adequate housing. In 2000 Brazil recognized a right to housing as a fundamental entitlement enshrined in the Constitution.² Article 4 of the Mexican Constitution of 1917 states that individuals have the right to live in an adequate environment, and families have the right to a dignified and decent household.³ The 1937 U.S. Housing Act states that all citizens should have "decent and affordable housing" and that ensuring this is the joint responsibility of federal, state, and local governments, as well as individual citizens, the private sector, and what has come to be known as civil society. While housing is not recognized as a basic human right under the current U.S. legal administration, long-standing federal policy has been that when state and local government, the private sector, and civil society fail to provide a decent and affordable housing the federal government has the final obligation to realize decent and affordable housing for all.⁴

This report is organized into three sections: an introduction to the countries discussed; the housing and sustainable housing challenges faced by the four countries and the national responses to these challenges; and observations regarding paths for future knowledge building and knowledge sharing.

¹ The Constitution of the Republic of South Africa. http://www.constitutionalcourt.org.za/site/constitution/english-web/ch2.html

² The Constitution of Brazil. http://www.v-brazil.com/government/laws/titleII.html

³ The Political Constitution of the Mexican United States. (Translated by Carlos Pérez Vázquez) http://www.vbrazil.com/government/laws/titleII.html

United States Housing Act of 1937. [Public Law 93-383; 88 Stat. 653; 42 U.S.C. 1437 et seq.]

National Challenges

It is useful to think of the provision of affordable housing in four states that begins with planning, proceeds to development, moves to construction, then consumption (or allocation), and finally to maintenance.⁵ John Doling (2010) observes that across the globe, public participation in each of the phases of affordable housing takes a different shape. It is common in many countries as diverse as England, France, and Singapore to find dominant public sector participation in one or all of these stages of affordable housing provision. As country conditions change, however, the contribution of the public and private sector changes as well. In each of the four countries that are the focus of this report we see different combinations of private and public sector participation in each stage of affordable housing development. National public policy in each country has made it a goal to increase private sector participation in the affordable housing sector, but it has proven difficult to manage increased participation of the private sector in the provision of affordable housing, and this may be the ongoing meta-challenge for each country.

In the near-term, each of the four countries is faced with challenges of poverty, social and economic inclusion, inequality, and environmental sustainability. The scope of the challenge is different for each country. The data in Table 1 give an imperfect view of the challenge for each country and how these challenges compare among the four.

Table 1. Poverty, inclusion, and sustainability create different constraints and possibilities for providing affordable housing

	Per Capita Income	Gini Coefficient (value)	Gini Rank (out of 134)	Per Capita Electricity Consumption (kwh)
United States	\$46,000	45.0	42	12,484
Mexico	\$13,200	48.2	28	1,614
South Africa	\$10,300	65.0	2	4,380
Brazil	\$10,100	56.7	10	2,010

Source: World Factbook. CIA. Data are for the 2005-2008 period.

Per capita income can be used here as a proxy for the capacity of each nation to address the problem of affordable housing as well as the size of the affordable housing challenge. The incongruity is that the U.S., with the greatest monetary capacity to meet its affordable housing challenge as indicated by its per-capita GDP, also has the smallest challenge in affordable housing relative to its population. In contrast, Mexico, South Africa and Brazil have per capita incomes in the range of 20% to 30% of that of the US but have far greater affordable housing challenges.

The Gini Coefficient in Table 1 is used as a proxy for the challenge of social and economic inclusion. The final measure presented in Table 1, per capita electricity consumption, reported in kilowatt hours, gives us a mixed picture of sustainability. The data indicate that electricity consumption is more than seven times greater in the U.S. than in Mexico. This is

⁵ John Doling (2010) describes a three-stage process. I add "planning" on the front end and "maintenance" on the back-end to his existing paradigm.

not to say that the Mexican economy is seven times more environmentally sustainable than the US economy. Rather, this measure of electricity usage indicates the size of the challenge in shifting consumption patterns to more environmentally sustainable practices.

Housing Challenges

Inequality and the Gini

The Gini coefficient ranges from 0 to 100, where a lower value indicates a more equal society economically. A Gini coefficient of 0 would indicate perfect income equality within a society and 100 perfect income inequality. In Table 1, each country's world rank in terms of Gini coefficient is also listed to aid in interpreting the value comparatively. Namibia is the only country in the world that has an income distribution more unequal than South Africa, with a Gini coefficient of 71. Thus, 132 other countries across the globe have income distributions that are characterized by greater societal equality. In this way the Gini coefficient can be understood as a proxy for social and economic inclusion in a country.

South Africa. In South Africa today the housing challenge comprises nearly 2 million inadequate dwelling units, most of which are in informal settlements and backyards. Nearly 6 million South Africans are living with AIDS and there are 1.4 million children orphaned



A view of the Kennedy Road settlement in Durban, showing conditions faced by South Africa's shack dwellers Photo Credit: http://abhalali.org/node/822

because of HIV/AIDS who are in need of supportive housing. There are 3 million Zimbabwean refugees currently living in South Africa, increasing pressure on the housing supply. Additionally, nearly 10 million South African residents live without adequate water and sewage With unemployment services. estimated at between 23 and 35 percent, affordable and decent housing located near sources of employment is scarce. Moreover, smaller household sizes are causing an overall increase in demand for housing.

While government subsidies are geared towards the nation's poorest families, there are few options for low-income households who earn enough that they do not qualify for government subsidies. This segment of the market is referred to as the "gap market" because these households are in the gap, served neither by government subsidies nor by bank loans. In addition to limited financing for the gap market, financial institutions have also been reluctant to provide financing for housing construction.

Together these challenges mean that South Africa must build large numbers of new housing units and do so at an acceptable level of quality. The immensity of the need provides a sense of the magnitude of the challenge for the South African government. consequence of past government inability to meet this challenge, much of the housing is resident-built. An important aspect of housing need and policy challenge in South Africa is attending to the living conditions of those living in these squatter settlements.

Brazil. Brazil faces a housing deficit of some 6.3 million new units. Brazilian slums house nearly 37% of the country's urban population, or 52 million people. There is an urgent need to upgrade existing units. Those seeking to purchase housing must typically finance 70% of the purchase price, and those who cannot afford housing in the formal sector turn to the informal sector. In the favellas, the slums that constitute the informal sector, living

conditions are overcrowded and lack adequate infrastructure such as sewage and drinking water. Furthermore, these favellas are often built on land that is located in environmentally fragile areas such as hill slopes and other areas that are prone to flooding, landslides, and other natural disasters. Brazil lacks a rental housing market, which offers the potential of providing a partial solution to the country's enormous housing deficit.

Mexico. Approximately 76% of the Mexican population lives in urban areas. Many Mexicans emigrate from

An informal favella settlement in Bahia, Brazil. Photo Credit: Diego Alfonso Erba

rural areas that lack job opportunities-such as the underdeveloped southern states and the crowded central plateau--to the industrialized urban centers and the developing areas along the U.S.-Mexico border. According to some estimates, the population of the area around Mexico City is nearly 22 million, which would make it the largest concentration of population in the Western Hemisphere. Cities bordering on the United States such as Tijuana and Ciudad Juarez, and cities in the interior such as Guadalajara, Monterrey, and Puebla, have undergone sharp rises in population in recent years. At the same time, Mexico is experiencing an increase in income inequality, and job creation continues to lag dramatically behind demand.

The lack of sufficient employment that provides a living a wage for the population in Mexico's cities translates to poor quality housing and tenuous living environments. From 2005 to 2008 about 500,000 new housing units were completed in Mexico annually. Nonetheless, the current housing deficit is at more than 9 million units, according to the Inter-America Development Bank⁶. The developer-built segment is increasing its share of the housing market, as compared to self-built housing. Though housing construction in

⁶ http://www.iadb.org/news-releases/2009-08/english/idb-approves-500-million-to-support-mortgage-markets-in-mexico-5554.html

Mexico is still highly informal, only around 30% of new houses in 2006 were self-built, down from 70% in 2000. Much of this decrease is due to expansion of housing finance for progressive housing and housing lots with services⁷.

The United States. In the United States, current housing challenges include foreclosures caused by the housing finance crisis and prolonged joblessness which has led to increased mortgage delinquencies among homeowners. Nearly five percent of all home loans were delinquent 90-days or more in the second quarter 2010.⁸ For the same period, slightly more than one percent of all home loans entered into foreclosure. While many of the families who have been evicted from their homes due to foreclosure are able to find alternative housing, either by renting or moving in with family or friends, some have entered the ranks of the homeless. Because homelessness is often an "invisible" problem, hard to track, an accurate count of the US homeless population is hard to produce. However, estimates indicate that on any given night, over 640,000 Americans are homeless.⁹

For the nation's 26 million low-income households, housing cost burdens are by far the greatest problem. Recent data show that of the nation's low-income households, 2% live in substandard housing units, 5% live in overcrowded conditions, and 67% face cost burdens.¹⁰ According Harvard University's Joint Center for Housing Studies, out of a total

The United States Recession

In the period from 2000 to 2005 the value of the stock market dropped by over 10% as measured by the Dow Jones Industrial Index. The ripple effects were felt by workers who suffered layoffs and by cashstrapped homeowners who were faced with rising mortgage costs (when their adjustable-rate mortgages reset), falling house values (when a shrinking economy weakened demand) and communities that were left with an inventory of foreclosed property. By the fourth quarter of 2010, the stock market had regained about 8% of its value and in November of 2010 private employers added over 90,000 jobs. For the 12 months ending in October 2010, house prices had fallen approximately 15% since their peak in April 2007. Despite these modest signs of optimism, the economic challenges for the U.S. remain formidable. In November of 2010 the unemployment rate registered at 9.8%. The number of long-term unemployed workers has increased sharply since the recession began in December 2007.

U.S. Bureau of Labor Statistics. Issues in Labor Statistics. October 2010. http://www.bls.gov/opub/ils/summary_10_10/r anks_unemployed_year.htm

of 115 million American households, 40 million spend 30% or more of their income on housing. 11 Among those 40 million households are over 18 million who spend 50% or more of their income on housing.

Social and Economic Inclusion

South Africa. In 2006 the President's Office of South Africa released the National Spatial Development Perspective, 12 which drew upon and expanded the 2003 edition of this report.

⁷ The Joint Center on Housing Studies (Harvard University). The State of Mexico's Housing. 2005.

 $^{^{8}}$ U.S. Department of Housing and Urban Development. US Housing Market Conditions. 3^{rd} Quarter 2010. http://www.huduser.org/portal/periodicals/ushmc/fall10/index.html

U.S. Interagency Council on Homelessness. Opening Doors. Federal strategic plan to prevent and end homelessness. 2010. http://www.usich.gov/

HUD User.org. Housing Problems of Low-Income Households (2009) http://www.huduser.org/tmaps/LI-household/chas.html

¹¹ The State of The Nation's Housing 2010. Joint Center for Housing Studies. Harvard University. Cambridge, Massachusetts.

The NSDP provides a framework for equitable and sustainable development by articulating seven principles to address the historic pattern of spatial inequality and the impact of this legacy on social inclusion. The NSDP is based on the expectation of rapid and sustained economic development, and articulates that such economic growth is necessary for inclusive growth. The NSDP principle to invest in activity corridors and nodes near existing growth nodes is intended to create bridges between the geographies of need and the geographies of opportunity, to borrow a US framing of urban spatial patterns¹³.

Despite progress in addressing the legacy of apartheid in the housing and human settlements sector, challenges persist. Current policy as articulated in Breaking New Ground attempts to approach housing comprehensively¹⁴. The report identifies high unemployment, the slow pace of social housing delivery in the post-apartheid period, and the continuation of income inequality as significant elements of the context into which the policy is being introduced. This policy expresses a commitment to leverage housing investments for sustainable economic development via the expansion of employment opportunities and spatial restructuring to support social inclusion. Furthermore, the plan is meant to address the entire residential property market. The primary path for doing so is to expand government subsidies to lower-middle income groups and provide mechanisms to increase private sector participation in the supply of social housing. These mechanisms are aimed at the development and construction industries as well as the finance industry. It is hoped that sectoral expansion would then increase employment opportunities.

Brazil. In Brazil the current primary vehicle for leveraging housing investments to create a more inclusive economy through employment the generated housing by new 2009 construction. In Brazilian government created the housing program, "Minha Casa, Minha Vida" (My House, My Life), with the goal of reducing the housing deficit by 14% ¹⁵.

The Brazilian delegation meets with DAS Ana Marie Argilagos during the Learning Exchange. Photo Credit: HUD Photography

The goals of Minha Casa, Minha Vida are to increase access to credit by low and

middle income families, to increase the participation of the private sector in the low-income housing market, and to create a vehicle to stimulate employment in the construction sector. The program aims to address land regularization in the favellas and to improve tenure

 $^{^{12}\} www.info.gov.za/view/DownloadFileAction?id=94476$

¹³ Xavier de Souza. 2005 *The Geography of Opportunity*. Washington, DC: Brookings Institution Press.

¹⁴ www.info.gov.za/view/DownloadFileAction?id=94476

¹⁵ Raquel Rolnik. 2010. Promotion and Protection of all human rights, civil, political, economic, social and cultural rights, including the right to development. United Nations General Assembly. Report of the Special Rappporteur. Follow-up to country recommendations: Brazil, Cambodia, Kenya

security of women, while also improving the effectiveness of municipalities as partners in housing provision.

Mexico. In Mexico, social inclusion is addressed through housing investments that focus on the compact city. The eleven development principles of the Ministry of Urban Development and Territorial Planning include encouraging a compact city, coordinating transportation and land use, and privileging public transport and non-motorized transport modes. Together such planning principles hold promise for the poor to be able to more readily access existing economic opportunities across the metropolis.

The United States. In the U.S. HUD views housing as a platform to provide a wide array of positive social outcomes for residents and entire communities. Stable housing provides an ideal platform to deliver social services through federal, state, and local partners. These services include education and early learning programs, health programs, access to economic opportunities, improved public safety, and supportive services for vulnerable populations.

The Choice Neighborhoods initiative is a new U.S. program that will transform distressed neighborhoods into viable and sustainable mixed-income neighborhoods by linking housing improvements with appropriate services, schools, public assets, transportation, and access to jobs. Another program that follows this integrated housing approach is the Promise Neighborhoods program, run by the Department of Education. This program focuses on education and strong schools as the center of transformation for distressed urban and rural neighborhoods. Additionally, HUD's Office of Sustainable Housing and Communities' Sustainable Communities Initiative provides grants for local communities to achieve integrated planning that includes social outcomes.

Environmental Sustainability

South Africa. Recently, the South African government signed a delivery agreement for Sustainable Human Settlements and Improved Quality of Household Life, called Outcome This agreement involves all spheres of government and outside partners and is a commitment from the government to the people of South Africa. The three major components of Outcome 8 are: accelerated delivery of housing options; access to basic services, and the efficient utilization of land for human settlements. ¹⁶ The current policy has a focus on improving conditions in existing informal settlements by providing tenure and services to some 400,000 households. For residents of informal settlements such improvements are quite welcome as some settlements lack basic services. In addition to this improvement of existing informal settlements, there is an unmet need for 2 million additional housing units.

This new housing demand provides an opportunity to include "green solutions" to the housing challenges as well as mechanisms for responding to climate change. Examples of possible solutions include solar panels for electrification and durable materials for roofing.

 $\frac{\text{pages.}}{17}\text{ "South Africa must speed up housing delivery". }18\text{ August 2010. }\text{http://www.southafrica.info/about/social/housing-180810.htm}$

¹⁶ Annexure 8 For Outcome Delivery 8 Agreements: Sustainable Human Settlements and Improved Quality of Household life. (ND) 66

This investment in green infrastructure bodes well for the residents. In the past, subsidyhouses have not always been built to a standard where residents would regard these units as valuable assets to own.

Within the context of Outcome 8, the South African national government defines sustainable human settlements as those that provide residents access to adequate accommodations where residency is secure (i.e., free from eviction whether the dwelling is owned or rented or located in an informal settlement), where the accommodations are welllocated with access to both basic services (i.e., water, sanitation, refuse removal and electricity) as well as the opportunities of the city including social services, recreational facilities, transportation, and employment opportunities. The government also sees such settlements a catalyst for economic development.

Brazil. The Brazilian Government initiated the expansion of the National Housing Plan (PLANHAB) in 2007. 18 PlanHab is a comprehensive planning framework to fully integrate government resources to address housing needs. The country's first 4-year phase of its Growth Acceleration Program (Programa de Aceleração do Crescimento-PAC-) was launched in January 2007 and is known as PAC-1. That program was focused on infrastructure development. Within PAC-1 there was an emphasis on accelerating private investment in the energy sector, including approximately \$10 billion USD in renewable fuels. Other investments of PAC-1 included housing improvements, water and sanitation, electrification, and various transportation improvements including to the highway and subway systems. In addition, a project called PAC for children was aimed at addressing the causes of violence against children and included youth housing, counseling, educational and sport programs, and libraries.

The second phase of PAC was launched in March of 2010 and included expenditures for 2011 to 2014. Total investments are slated about \$526 million USD. The majority of funding (49%) will go to energy investments, directed to renewable energy, oil production, increasing electricity efficiency, mineral research, and shipbuilding.

Mexico. Housing Law Article 73 plays an important role in the Mexican government's ability to address housing and urban development in a sustainable fashion. The housing law mandates that all social housing must follow federal guidelines for sustainability with respect to public facilities, infrastructure, and environment. Additionally, housing developments must be consistent with plans, urban development programs, and risk management and risk prevention plans.

El Instituto Fondo Nacional de la Vivienda para los Trabajadores (INFONAVIT¹⁹) provides mortgage loans in Mexico, with an emphasis towards low-income workers. Through the "Esta Es Tu Casa" (This is Your House) program, the federal government subsidizes house purchases by low-income buyers. To receive the subsidy the house must meet sustainability

¹⁸ Raquel Rolnik. 2010. Promotion and Protection of all human rights, civil, political, economic, social and cultural rights, including the right to development. United Nations General Assembly. Report of the Special Rappporteur. Follow-up to country recommendations: Brazil, Cambodia, Kenya.

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criteria including efficient lighting and air conditioning, solar water heating, and water conserving systems. In addition to this subsidy, INFONAVIT offers a Green Mortgage product, which provides additional payment capacity, equivalent to the savings generated from reductions on energy consumption and utility payments.

The Green Mortgages also provide a savings from the sale of carbon credits. Using the Clean Development Mechanism (CDM) established by the Kyoto Protocol, INFONAVIT is able to receive carbon credits for projects that meet CDM criteria. INFONAVIT expects to



HUD staff and Mexican delegation in California during the Exchange. Photo Credit: HUD Photography

build 100,000 sustainable homes in the 2009 to 2010 period. Each house that meets the CDM technical criteria would generate 1.5 tons less of carbon dioxide under standard than technologies. Every house built that meets CDM technical criteria would generate US\$1.5 million to further **INFONAVIT's** support activities. In addition, these programs encourage high-emitting industries

such as cement, steel, glass and metals to adopt new technologies. Finally, CTF financing will be used to offer financial benefits and incentives to consumers to buy energy efficient appliances and equipment.

The United States. Creating greener buildings and more sustainable communities are cornerstones of President Obama's vision for the country. HUD is deeply committed to creating strong, sustainable, inclusive communities built on a foundation of green, affordable housing. Roughly one-third of HUD's Recovery Act funds (\$4.86 billion) have been aimed at "greening" the public and assisted housing stock, while at the same time contributing to the creation of a new industry for increasing residential energy efficiency.

The Office of Sustainable Housing and Communities (OSHC) was created to guide and coordinate HUD's efforts in this partnership. One signature initiative of OSHC is the Energy Innovation Fund. The Energy Innovation Fund is both providing a service to homeowners and jump-starting a green sector. A current collaboration with the Department of Energy (DOE) and EPA is developing strategies to reduce energy consumption in public and assisted housing.

Paths for Future Knowledge Building and Sharing

Each of the four countries involved in The Office for International and Philanthropic Innovation's learning exchanges are implementing national housing policies to address the needs of their poorest residents. Despite the huge differences in wealth, political histories and customs, and social structures in these countries, all are attempting create innovative and sustainable solutions.



Secretary Donovan meets with Mr. Samson Moraba, CEO of the South African National Housing Finance Corporation. Photo Credit: HUD Photography

In all countries discussed in this report there is great variation in capacity to plan, develop, construct, allocate, and maintain subsidized housing. stream of actions requires coordination across national government agencies, bureaus, and offices. In addition, it requires coordination from national to state to local government entities. Beyond this horizontal and vertical intergovernmental coordination requires coordination between the public and private sectors. Additionally, coordination is required with the nongovernmental sector. Accountability to residents or end-users is required. This is complicated, time consuming, and

requires special skills and capacities. Not only does this complex system require skills and capacities within each sector, effective implementation also requires system-wide capacity. That effective working together across divisions is analogous to the "collective capacity" required of multiple government agencies, multiple units of government, public sector entities, non-governmental entities, and residents or end-users.

All of the national policies discussed here require this type of coordination and collaboration. Thus, national governments need to acknowledge the complexity of the housing provision system; inventory skills required within and across sectors; and develop capacity within and across sectors. The financial sector needs to be supported to better serve housing consumption at existing income levels. The financial service industry must reach all income levels in order to support national housing goals. Credit must be available for the working poor to purchase regularized housing. Furthermore, government regulation of the finance industry must extend beyond the formal financial markets and serve and protect those who rely on financiers in the informal and quasi-formal sector.

In all of these four countries, including the US, there are formal and informal economies. In the housing sector the informal market provides an important function in providing housing to those excluded from the formal market. In Mexico, Brazil, and South Africa national policy calls for providing support for the formal finance industry to extend credit to lowermiddle class families. In South Africa's delivery agreement for Sustainable Human Settlements there is reference to providing micro loans for small-scale landlords providing affordable rental units.²⁰ In most circumstances micro-lending resides in institutions outside of the formal economy. Just as national policy to support the housing sector is aimed at supporting financial institutions in the formal sector, governments can consider new policies to support financial intuitions in the informal and quasi-formal sector. Micro-lending is needed because there are potential borrowers with needs that financial institutions in the formal sector consider to be "micro needs". There is space for national governments to expand their concept of the financial sector to include lenders who serve the current financial needs of all residents.

The housing construction industry is segmented in most countries where builders tend to focus on product at specific price points. High-end markets are most lucrative and the financing industry does a better job of supporting that market segment. Furthermore, in Brazil and South Africa an explicit goal of national housing policy is to expand the rental housing market. Thus, governments need to assess the degree to which builders across the industry have access to credit in ways that are compatible with their business models and then provide the market structure to support national housing goals. Similarly, to expand the supply of housing, the financial sector needs to better serve housing construction by providing credit to builders whose product is targeted to a range of price points. National governments need to assess the degree to which their financial sector is serving builders at all price points in the housing market, including rental housing.



²⁰ Annexure A For Outcome 8 Delivery Agreements: Sustainable Human Settlements and Improved Quality of Household Life (p. 56)