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Global Sustainable Urban Development Indicators in China

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Contents

Background

Methodology

Summary of Findings

Challenges in Our Research

Comparison Between China and North America

Recommendations

Next steps

Goals of the Working Group

- Scan North American indicators that evaluate successful sustainable urban development and revitalization strategies.
- Map these metrics in the context of global best practices.
- Suggest potential common language, normative principles, and universal benchmarks around sustainability at the World Urban Campaign.

GDI Framework for Sustainable Urban Development

Dimension of Sustainable Urban Development	Elements necessary for sustainable urban development:
<i>Social Wellbeing</i>	Health Safety Local or civic identity/sense of place Access to decent – affordable – housing and services Access to public recreation and open space Access to a variety of transportation options
<i>Economic Opportunity</i>	A diversified and competitive local and regional economy Transportation and other infrastructure coordinated with land use Growth plans that leverage existing assets Access to capital and credit Access to education, jobs, and training
<i>Environmental Quality</i>	Efficient land use Use of renewable resources Waste/pollution minimization and management Climate change and natural disaster mitigation, adaptation, and resilience Carbon efficient, environmentally sound, transportation A diverse natural environment and functional ecological systems

UPenn's Research

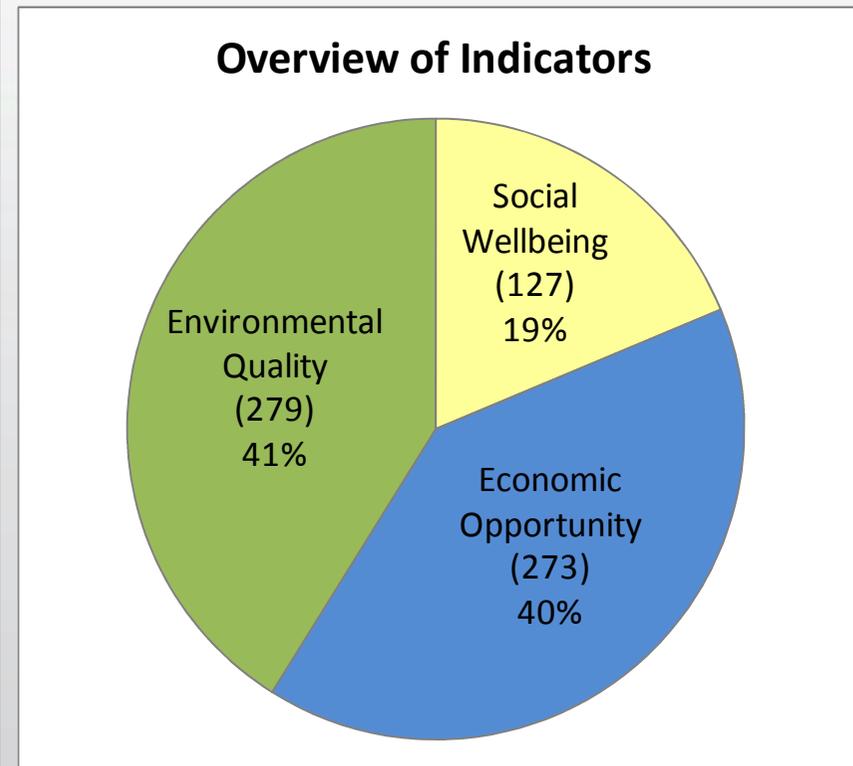
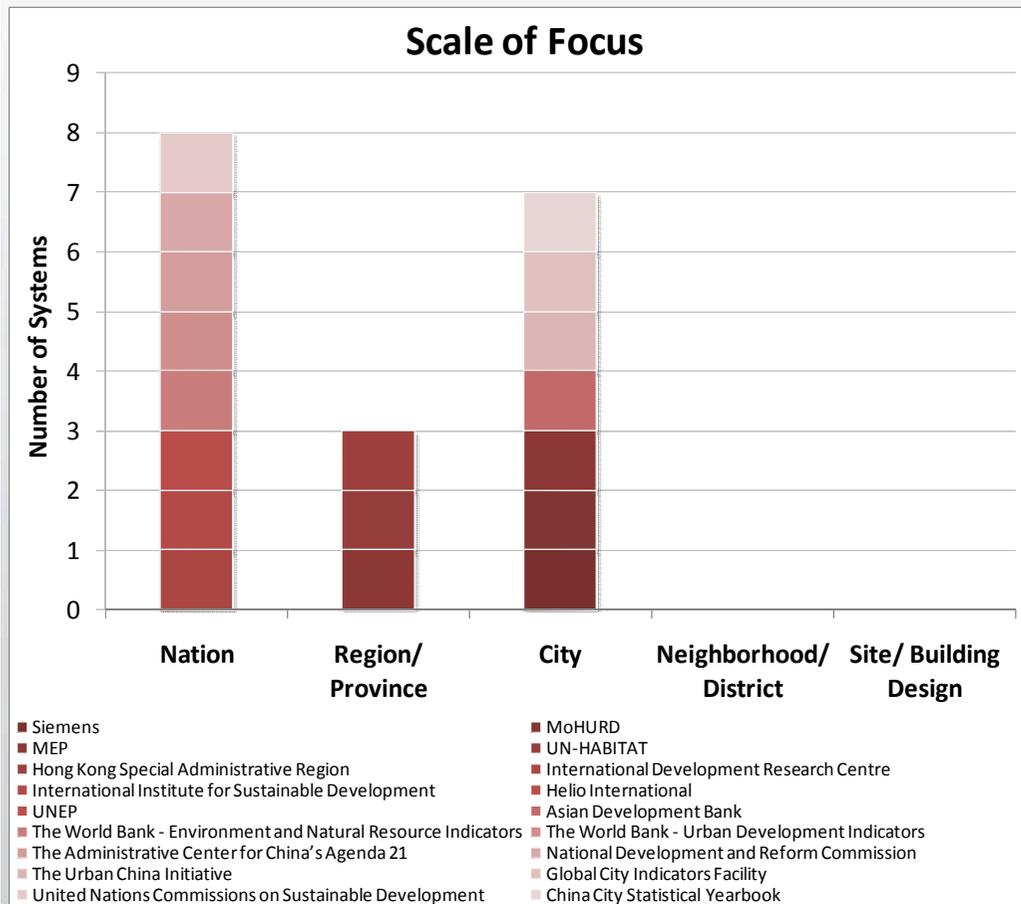
- Review of systems in North America – 22 systems
- Classification based on *SMART* criteria
 - **S**pecific/significant
 - **M**easurable
 - **A**chievable
 - **R**elevant/repeatable
 - **T**imely

Methodology

- Systems reviewed – 17 systems
 - Nonprofit/ Non- governmental (10)
 - Chinese Government (5)
 - Private Organizations (1)
 - Higher Education Institutions (1)

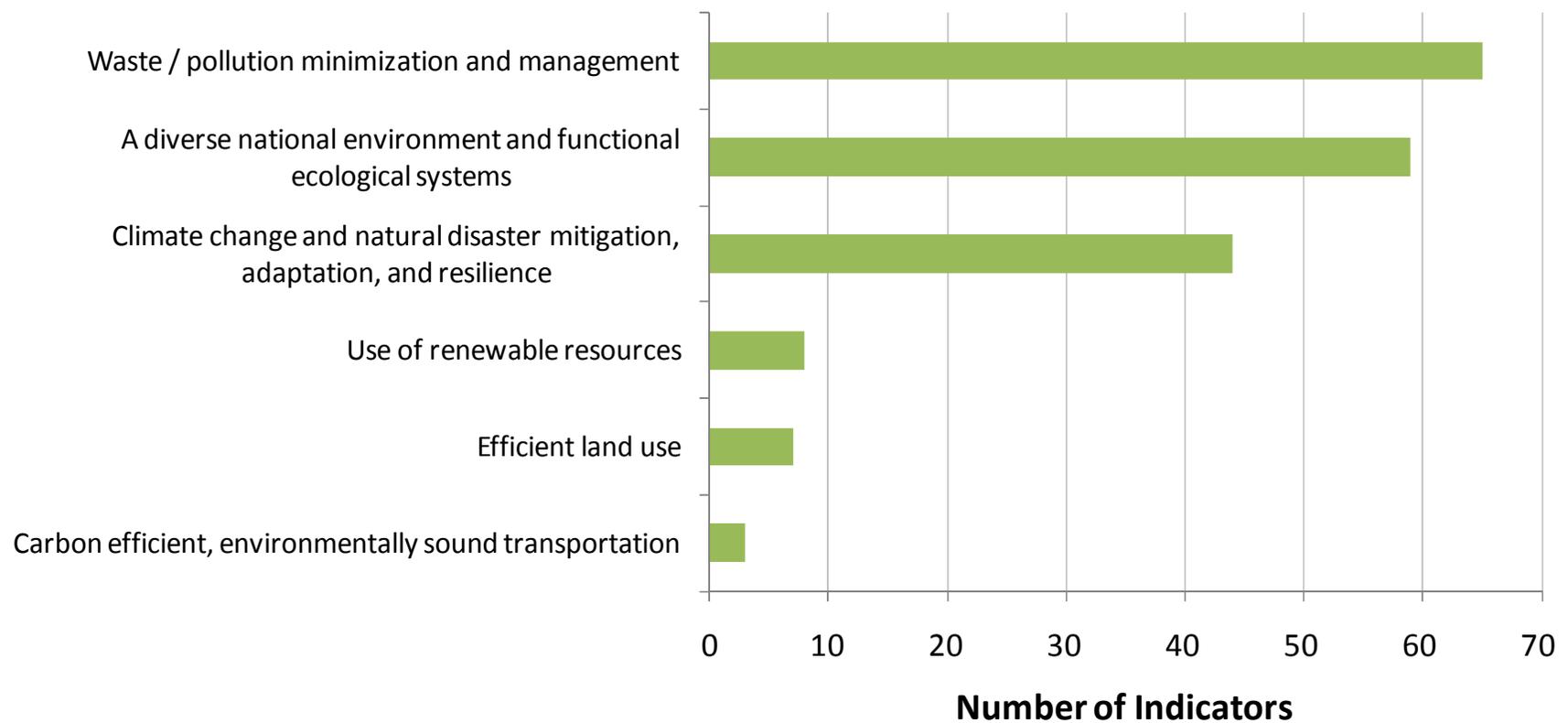
- Classification based on SMART parameters
- Grouped under Social Well-Being, Economic Opportunity and Environmental Quality
- Analysis of findings

Summary of Findings



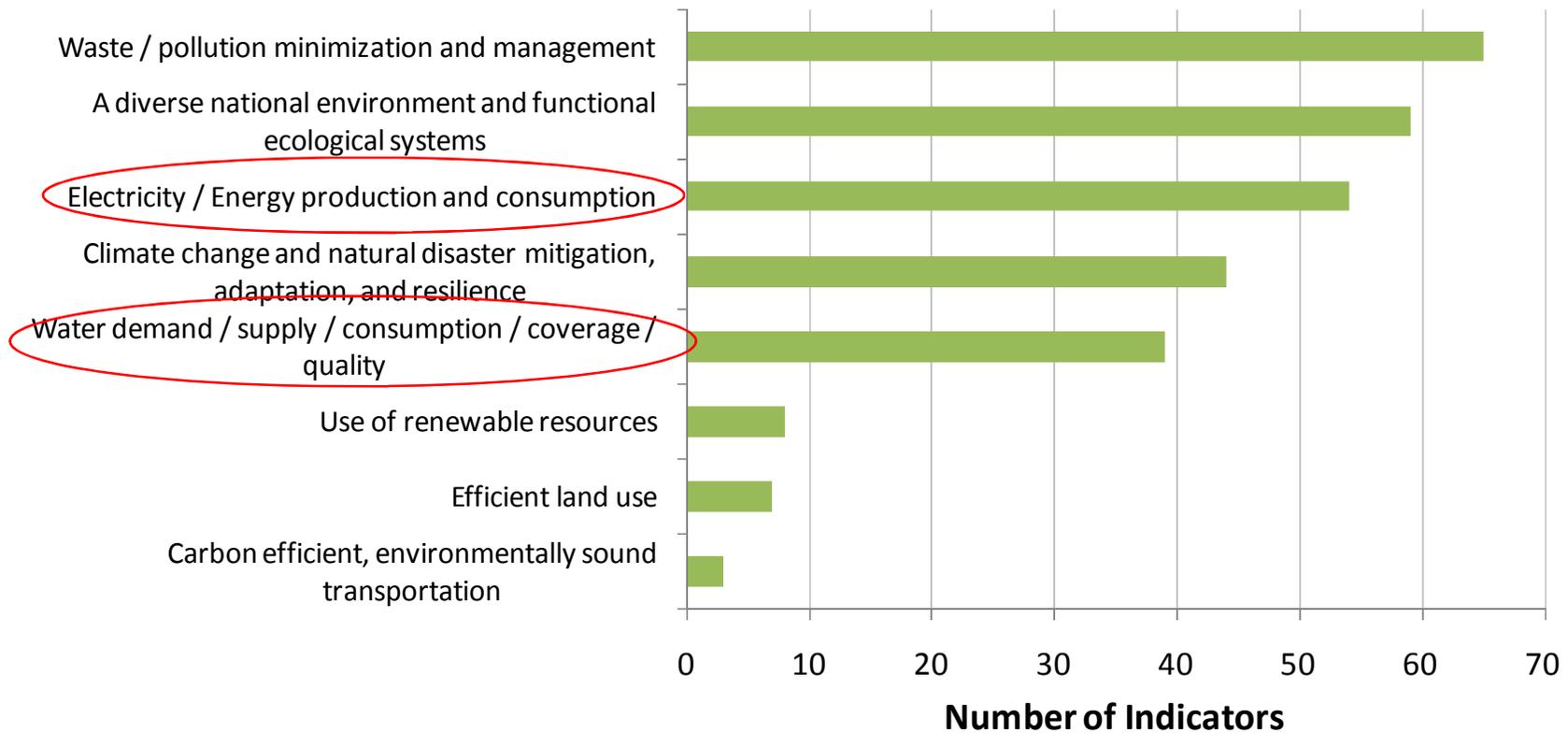
Summary of Findings

Coverage of Elements (Environmental Quality)



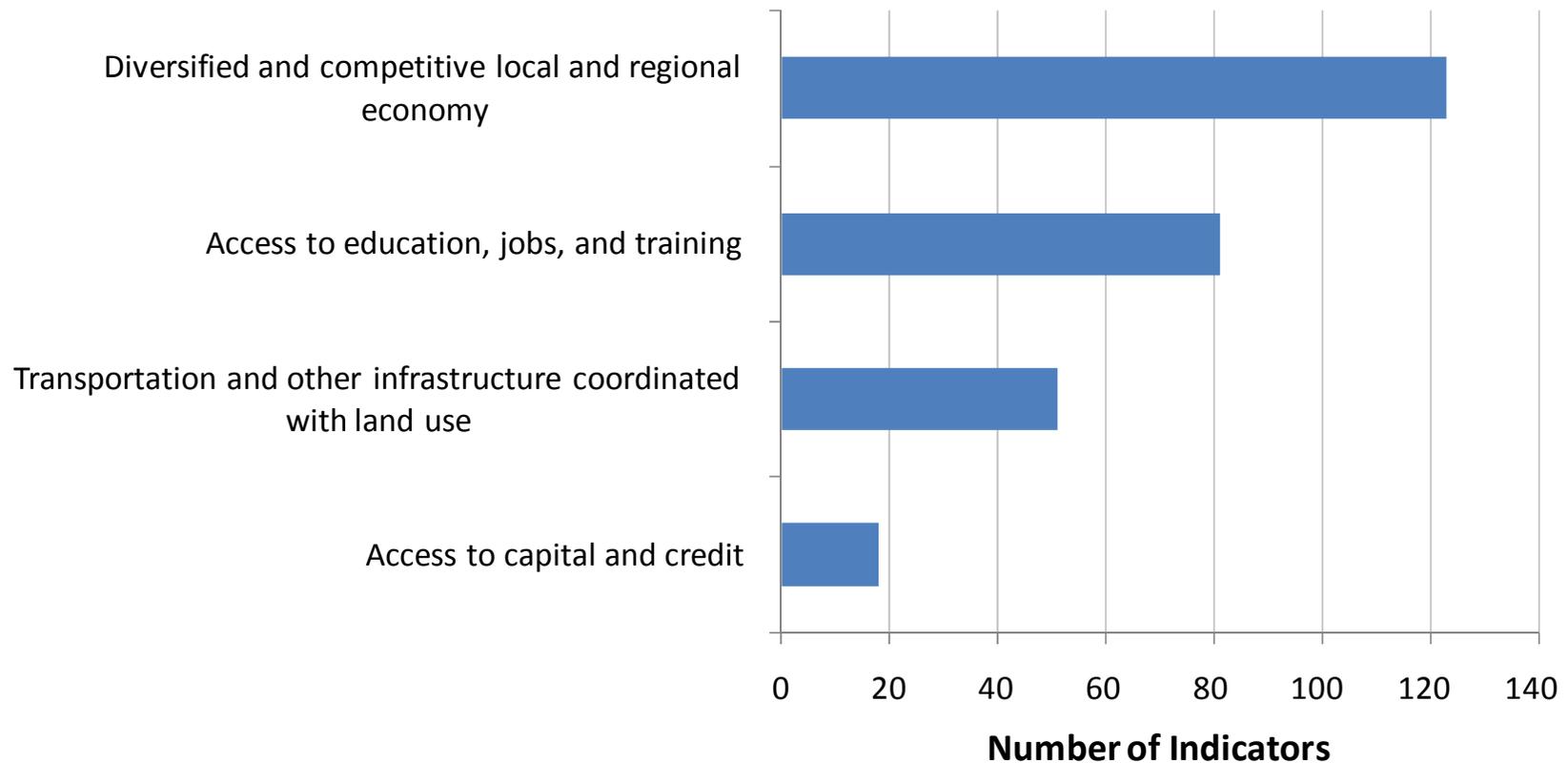
Summary of Findings

Coverage of Elements (Environmental Quality)



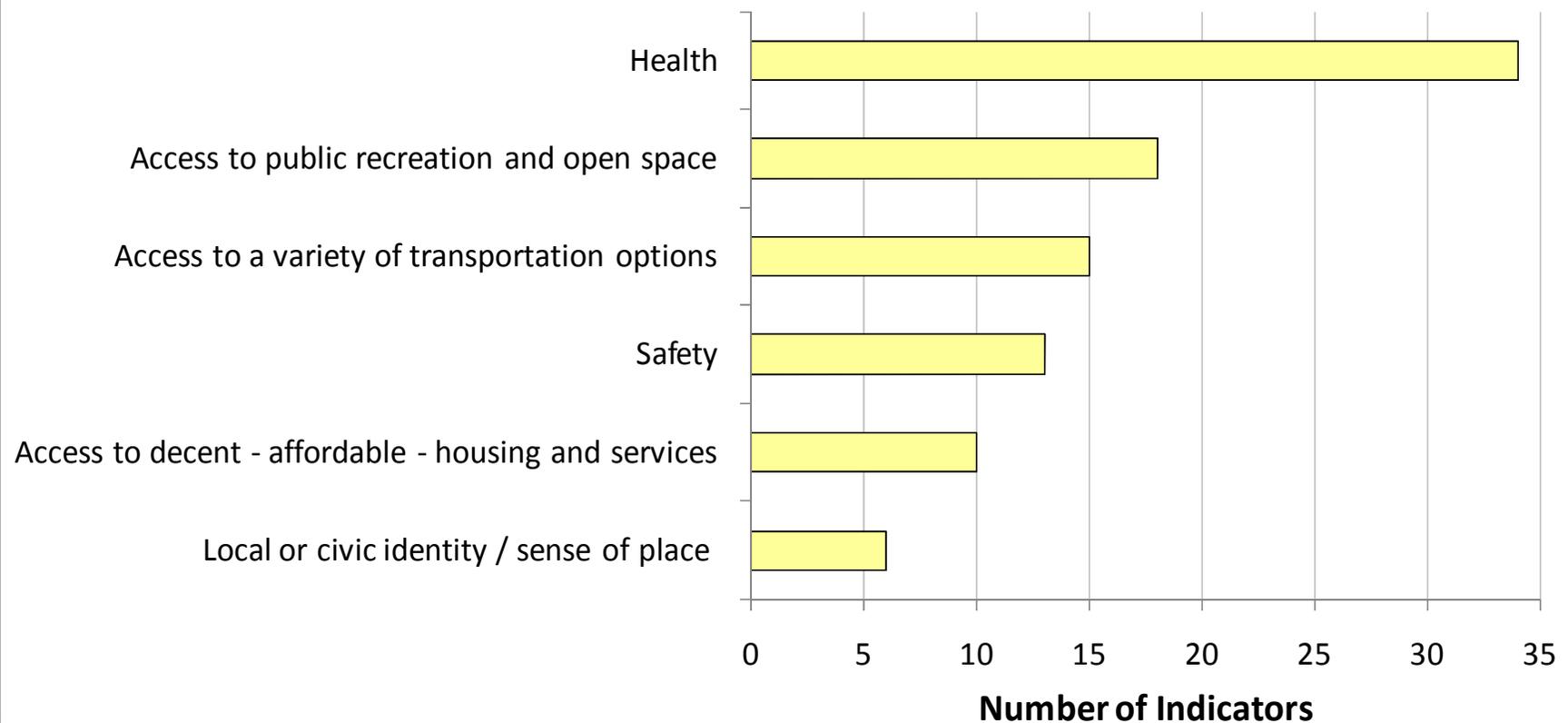
Summary of Findings

Coverage of Elements (Economic Opportunity)



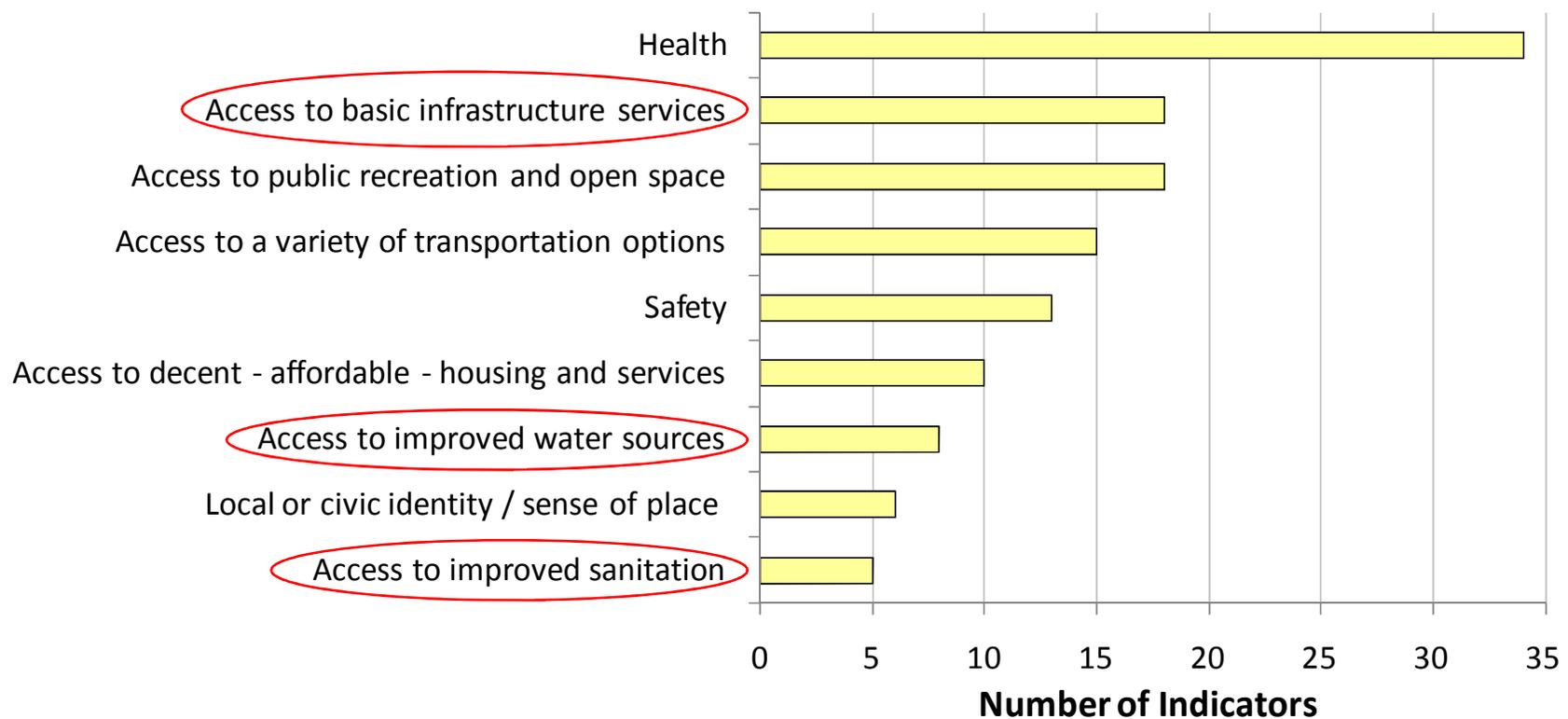
Summary of Findings

Coverage of Elements (Social Well-being)



Summary of Findings

Coverage of Elements (Social Well-being)



Challenges in our research

- The lack of reliability of indicator sources
- Ambiguous description of core indicators and sub-indicators
- Difficulty of classifying indicators into each dimension
 - One indicator may serve multiple purposes
 - Some indicators related to transportation and energy fall under all three dimensions
- The lack of sufficient and transparent information from China
- Lack of access to updated and first-handed resources

Observed gaps in our research

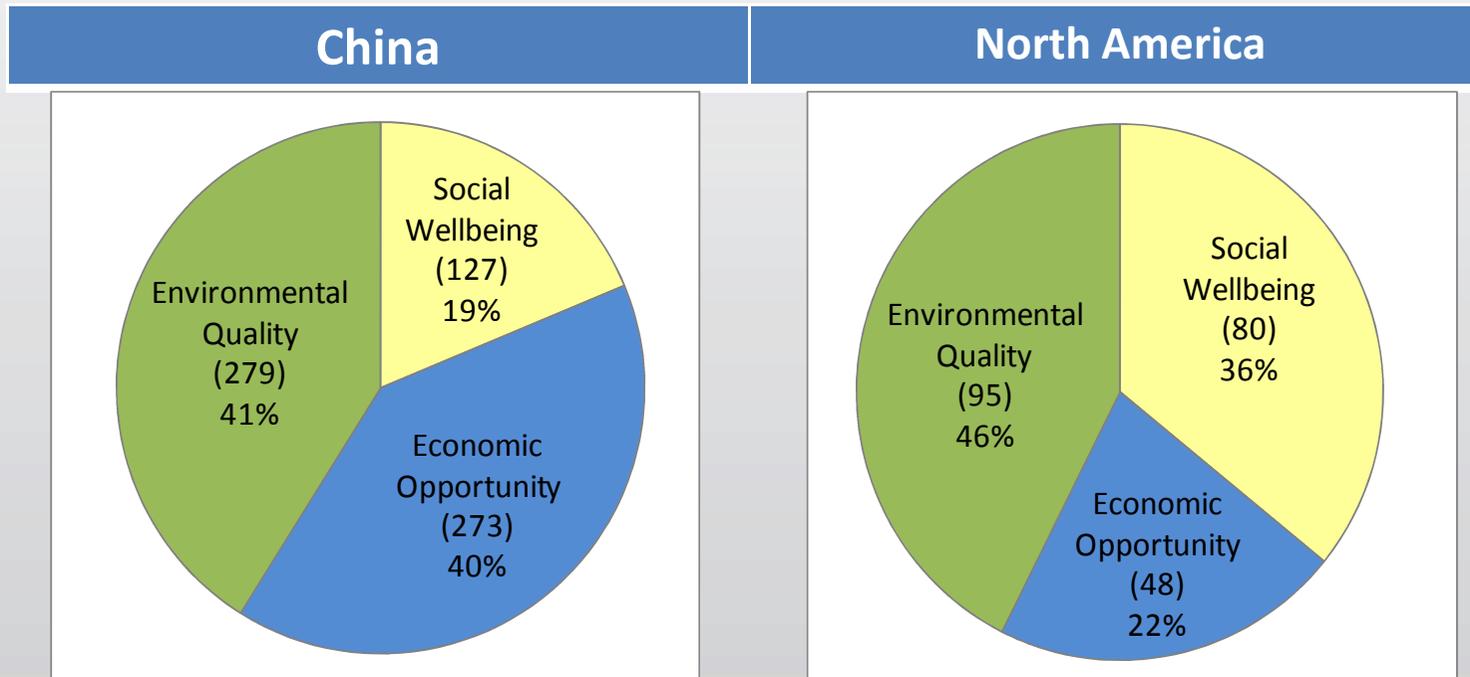
- Different level of focus

China	North America
Data from national level rather than individual municipalities	Data from city and community levels

- This discrepancy makes it difficult to compare our indicators to the UPenn team's indicators
- Studying implementation becomes more difficult
- How to utilize the SMART tool in a correct way
 - Words such as "Specific," "Achievable," and "Relevant" are subjective and vague in judgment

Comparison of Findings (1)

- Our indicators focused on the national level rather than the city and community levels
- Different proportions of indicators in each dimension



Comparison of Findings (2)

■ Environmental Quality

■ Consensus

- Indicators of air and water quality, CO₂ emissions, and waste treatment and disposal
- Air and water quality are major concerns for the U.S. and China

■ Difference

- Acceptable levels of air and water pollution vary greatly between two countries.
- As urbanization develops rapidly in China, the noise pollution indicator has become increasingly prevalent in Chinese systems

Comparison of Findings (3)

- Economic Opportunity
 - Consensus
 - Diversity in employment
 - Access to education
 - Difference
 - More indicators related to transportation and other infrastructure coordinated with land use
 - Poverty and income inequality indicators

Comparison of Findings (4)

■ Social Well-Being

■ Consensus:

- Access to green space and recreation
- Health care

■ Difference:

- Access to quality affordable housing ranks far lower on our list
- No emphasis on public safety

By studying China's Statistical Yearbook and China's 11th Five-Year Plan, we found:

- An all-round development strategy of economic growth and construction of a political civilization are government's priorities.
- China wants to fulfill economic growth in a scientific way and build a resource-efficient and environmentally-friendly society.
- The 11th Five-Year Plan stresses "saving resources, protecting the environment, and building a sustainable national economic system."
- Although the Five-Year plan touches upon Social Well-Being, it is absolutely not the first priority for the government to rejuvenate the country.

Policy recommendations to HUD

- Need a worldwide view
- Keep prevalent indicators and improve the awareness of controversial indicators
- Pay attention to Economic Opportunity indicators
 - Such as poverty and income inequality indicators
- Consider cultural differences in various cities and areas

Next Steps

- Reassess the indicators
 - Match the SMART criteria and the Six Livability Principles
- Further narrow down the existing list
 - Delete overlap indicators through the UPenn's rigorous evaluation process
- Collaborate with the Center for Sustainable Cities at the School of Policy, Planning, and Development
- Continue to study other countries

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Q&A

THANK YOU !

