Regional Training Workshop on Human Settlement Indicators for Arab States

Indicator 11.c.1
Sustainable, resilient and resource efficient buildings utilizing local materials

3-5 July 2018
Cairo, Egypt
Indicator Overview

Supporting least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource efficient buildings utilizing local materials

TARGET 11.c

Gaborone, Botswana

13-15 December
Housing and localization of construction

- It is necessary to manage flexible and appropriate construction methods and processes, and guide self-construction activities in terms of technology and architecture choices.

- The goal is to improve the quality of life in spontaneous settlements according to existing resources, including time, skill and expertise labor availability.

- Brazil, Chile and several other countries across the globe are exploring these options of low cost housing by use of local materials.
Recycled materials re-usable for housing construction
What have we learnt so far......

- There is need to define the technical solutions to improve local housing and built environment in ways that allow for use of local materials.
- Solutions based on use of local materials are easily available, adaptable and allow for self construction.
- Such solutions are designed to keep a close link with place and people and environment and often more affordable.
Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource efficient buildings utilizing local materials

1. Least developed countries
2. Financial support
3. Funds for construction and retrofitting/sustainable/resilient/resource efficient
4. Utilize local materials
Manufacture of locally available building materials

*Materials of which the entire lifecycle* (including all steps of the production chain: 1. extraction of raw materials, 2. manufacturing into building products, 3. sale and 4. use of building products, 5. recycling/end-of-life) *takes place within the same region.*

Positive Impact on Local Economy

The close link with employment is one of the most important economic functions of housing.

- The relative use of local building materials and resources in the construction industry has a substantial effect in the way in which the construction industry can be harnessed to enable growth in the local economies of LDCs.
Concepts and Definitions

Sustainable and resilient buildings

Use of locally available building materials with low embodied energy provides substantial benefits in decreasing the carbon footprint of buildings, especially in rapidly urbanizing regions where most of the building stock is yet to be built.

Use of local materials can also contribute to the resiliency of settlements, as these materials tend to be well suited to the local climate, and can be conveniently altered and replaced using locally available resources.
Monitoring and data sources

Data Sources:

- National Accounts Statistics
- National Data on manufacturing industry.
- Ministry of housing/urban development.
- Specialized household surveys to assess building materials
Method of Computation

Entails monitoring the financial allocations for the construction industry of LDCs involved in the manufacture of local sustainable building materials that promote a positive impact in the local economy, out of the total allocations received by LDCs.

So the total funds allocated to least developed countries will be required. Out of this allocation, the proportion allocated to the construction and retrofitting buildings utilizing local materials will be derived.

\[
x = 100 \left[ \frac{\text{funds allocated to constructions and retrofitting buildings utilizing local materials}}{\text{total support allocated to LDCs}} \right]
\]
Limitations

- Inventory of local building materials
- The indicator focuses on local building materials, disregarding imported sustainable building material and its work chain (sale/building).
- Monitoring of informal construction and self-construction activities need to be enhanced.
- Requires detailed breakdown of national accounts especially funds received for supporting housing.
- How to score countries that have/generate own/internal resources used for housing.
- Indicator covers low cost and high cost housing that use local materials.
- Global comparisons due to variations in costs of local materials among countries.
- Regional definition issues: what counts as durable materials
- Seems to address international concessional flows provided by governments/donors – Lacks internationally comparable sectoral information on other financial supports availed to building and constructions (LDCs) countries.