



PROMOTING INNOVATION IN THE GREEN ECONOMY IN LATIN AMERICA AND THE CARIBBEAN BY INCLUDING QUALITY INFRASTRUCTURE

Sustainable social housing (SSH)

Context:

- The Problem(s)
- Global GE Perspective

It is often believed that sustainability concepts can only be applied to high-standard, expensive buildings. This viewpoint ignores the huge importance of affordable housing and its potential to contribute to more sustainable buildings and communities.

Sustainable social housing (SSH) refers to the building and maintenance of affordable housing which follows sustainability principles. The concepts highlight the social dimension of Green Building. SSH could be seen as a comprehensive process accounting for environmental, social, cultural, economic and institutional considerations (UN- Habitat).

According to the Intergovernmental Panel on Climate Change (IPCC), the housing sector has the most potential for CO₂-reduction and resource efficiency without extra cost in the near future (UN-Habitat, 2012a). Unmet or suppressed demand and the rebound effect however, can offset these savings.

Situation in Latin America and the Caribbean

- Leading countries in LAC

In Latin America, buildings consume 21% of treated water and 42% of electricity, while producing 25% of CO₂ emissions and 65% of waste. Green buildings are defined as structures that are environmentally responsible and resource-efficient over their full lifecycles. By transitioning to green buildings, the sector could reduce energy consumption by up to 50%, water use by 40%, carbon dioxide (CO₂) emissions by 39%, and solid waste by 70%. They also reduce operating costs, improve workplace productivity, and use sustainable materials. Amidst mounting concerns related to climate change and the demand for energy and water, it is imperative that policymakers and companies alike continue to improve efficiency in the real estate sector, using market mechanisms, certification schemes, and building codes. (ELLA, 2013).

Brazil was a pioneer of SSH in Latin America. The main green housing initiatives for social housing in Brazil are water heating, thermal comfort projects, labelling, solar energy and the selection of low-energy materials. Unfortunately, however, financial institutions are reluctant to fund energy efficiency projects.

Currently, other LAC countries are starting to reform their building codes to make them compatible with sustainability goals.

In Mexico the lack of standards to regulate the quality and efficiency of the new eco-technology products has been a barrier for SSH. In order to overcome this, the Institute for the National Workers' Housing Fund (INFONAVIT) has worked in partnership with regulators and suppliers to establish appropriate quality standards that achieve the necessary savings but which are still affordable.

In Argentina the National Institute of Industrial Technologies (INTI) has developed a labelling program for sustainable buildings.



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Promoters and key stakeholders

The United Nations Human Settlements Programme (UN-Habitat) and the United Nations Environmental Programme (UNEP) are the leading UN Organizations to promote SSH worldwide and also in the LAC region. Both are part of the Global Network for Sustainable Housing (GNSH). The GNSH has been created to contribute to the development of sustainable and affordable housing solutions in developing and transitional countries, with a specific focus on improving the social, cultural, economic and environmental sustainability of slum upgrading, reconstruction, large scale affordable housing and social housing programmes.

A pioneering project was the Sustainable Social Housing Initiative (SUSHI) which was developed by the United Nations Environment Programme (UNEP) to increase the use of sustainable building solutions in social housing programs in developing countries.

From 2009 to 2011, the SUSHI approach and guidelines were tested e.g. in Sao Paulo/ Brazil. SUSHI has provided guidelines and case studies for developers to integrate sustainable solutions in the design, construction and operation of social housing units.

NGOs like Habitat for Humanity and Practical Action are also supporting SSH in the LAC region.

Innovation in SSH is driven by architects like the Chilean Alejandro Aravena with his concept of “incremental housing”.

Links to QI:

- Relevant standards (ISO)
- QI service gaps

QI bodies have a long experience in testing and certifying building materials. This competence can be amplified to the analysis of the environmental footprint of building materials and also include unconventional or traditional building materials (i.e. bamboo or mud, “green cement”). By testing and certifying sustainable building materials, QI can support the dissemination of more environmental friendly building practice.

QI could support also the development of Green Building Standards for affordable housing. These standards could be used as requirements for public financial support.

QI can also support the accreditation of professionals for SSH.

(Preliminary) Conclusions

SSH has a high potential to support the transformation to a low-carbon and resource-efficient economy. The competence of National QI could be used to technically back up innovation and the transformation to an environmentally friendly and socially inclusive housing building practice.

QI can support the development of building codes, standards and regulations which are aligned to international standards. This could support the use of sustainable technologies, materials and methods.

SSH also has the capacity to directly or indirectly tackle the larger problems in cities such as solid waste management, storm water management, water supply, sanitation, and mosquito control.



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