



Dialogue 3: Equal Access to Shelter and Basic Services *Affordable and Adequate Housing*

NAME:

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DISCIPLINE:

ARCHITECTURE

SPECIALISMS:

- Sustainable Design
- Tropical Architecture
- Design for development



RELEVANT RESEARCH:

Sustainability assessment of traditional housing typologies in the tropics

The third session of Dialogue 3 addresses the different ways in which provision of affordable and accessible housing can be delivered for all segments of society, most specifically that best way to meet the aspirations and needs of low-income households. Traditional architectural practices can provide valuable understanding on how self-reliance and autonomy of construction can be reinforced in rural-urban tropical environments. From traditional housing knowledge, it is possible to derive lessons for the development of new construction materials that are affordable, environmentally friendly, culturally relevant and accessible to all. We can learn the qualities and properties of plants, the possibilities of climatic modification, the efficient management and use of resources, the acquisition of skills. Specifically to the urban context, such solutions are of utmost importance, as it reinforces the needs and aspirations of a community in an autonomous way and do affect the organisation of settlements. The identification of needs and aspirations is crucial for a strong policy on shelter for development, on affordable housing and overall sustainable housing which is directly linked to adequate housing. The current focus on provision of affordable housing focus on the physical infrastructure mostly, be it the housing itself or the urban infrastructure. If we want to provide houses that are more than shelters, that are adequate and provide quality of living, we need to understand traditional building types, which can only succeed if the needs and aspirations of the society are met. These needs are not just marked by physical infra-structure such as shelter from the elements, carrying for animals or storage of cereals. It can be symbolic needs, related to ancestral roots, religious and hierarchies within a community, or the need for identification with a site, or exchange. The key into traditional buildings is that is 'perfected for need and not material terms alone' (Oliver, P. 1983). Our research lies on assessing the sustainability/habitability of typologies and settlements of 'Ribeirinhos' commonly found in the Amazonas region (Brazil), the Kerala region (India), and the Kiribati islands (Pacific), using for that an integrated life cycle assessment framework, which takes into account cultural, economical, social and environmental aspects.

RESULTS:

Through the analysis of the Amazonas case study, it was possible to determine that the fragility of the Ribeirinho's architecture lies on the supply of infrastructure of the isolated communities, and not necessarily on the house itself. This confirms the success



of the traditional knowledge in terms of use of materials, siting, and adaptation to the life in the forest for the Ribeirinhos. Through the continuation of this study and extending it to the Kerala region in Southern India, and the Kiribati Islands (Pacific) we expect with this research to establish a strong methodological approach on analysing traditional settlements in tropical regions in a cross-cultural manner. This should result on substantial extension to the concept of shelter and adequate housing, in which a hierarchy of environmental, cultural, social and economical aspects are established, where culture-core aspects are identified. This framework will need to demonstrate the complex relationships existing within communities and the concept of habitability, which is beyond the physical infra-structure: spatial organization, the relationships and the linkages to lifestyle, and the particular activity systems in different and highly culture-specific ways. Once this is demonstrated, it is possible to map to what extent the environments are actually supportive of the people who live in them, and therefore determine if adequacy, aspirations and needs are met for each specific community.

IMPLICATIONS:

For the urban neighborhoods that are being reconstructed as slums upgrading programmes and low cost housing projects, this framework has a strong potential to improve quality of living taking into account the very culture-specific aspects of settlements, which encompasses different notions of acceptable standards, comfort, habitability and environmental quality. It can also determine the aspects of settlements that should contribute for improvement of habitability in communities of tropical regions, with strong autonomy and self-reliance.

SOME RECENT PUBLICATIONS IN THIS AREA:

- DE PAULA, A. K., TENORIO, R., (2010), Ribeirinhos: A sustainability assessment of Housing typologies in the Amazon region, *ICURPT, International Conference on Urban Planning and Transport*, Paris, 28th – 30th June.
- MANI, M., TENORIO, R.M.S (2009) .'Tribal Earthen Habitations: role of Environment and Culture in integrated Life Cycle Assessment (iLCA).', *Earth Building Conference NZ 2009, Earth Building Conference NZ 2009, Dunedin, NZ, 24 - 26 October 2009*
- TENORIO, R.M.S., DUNCAN, (2009) O.'Bioclimatic Modernism in Mexico, Brazil and India: an overview after Brasilia', *ISES Solar World Conference, ISES 2009(ed.), Renewable Energy Shaping our future, Johannesburg, 11 - 16 November, 2009*

WHERE TO FIND OUT MORE:

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