

https://doi.org/10.62422/978-81-981590-2-1-010

Sustainable Model for Social and Cultural Integration in the Caribbean Region



José Roberto García Chávez¹, José Antonio Peniche Gallareta², Karina Angélica García Pardo³

¹Metropolitan Autonomous University. Division of Sciences and Arts for Design. Department of the Environment. Graduate Program in Bioclimatic Design, México ²Acceso Urbano SCP. México ³Technische Universität Wien, TUW. Research Unit Building Physics and Ecology BPI, Austria

This research work aims to generate a sustainable model for social, cultural and economic integration of people in the Caribbean region of Mexico. The case study is located in the city of Yaxunáh, Yucatán. The methodology applied aimed at contributing to the social equity and preservation of the cultural heritage of the region, as well as to provide the basis for improving the environment and mitigate Climate Change; and it consisted of these stages: (i) a detailed study of local conditions, including socio-cultural and economic characteristics, climatic and bioclimatic analysis and building typologies; (ii) designing and building a dwelling in Yaxunáh that integrates climate and natural lighting strategies, sustainable energy, water and resource management, waste management and organic food production with areas for vegetables and an organic garden applying traditional and sustainable agricultural techniques, such as crop rotation and the use of natural fertilizers, to ensure efficient, compatible and environmentally friendly production. The results of this work have shown a favourable response from local people to implement the premises proposed in this work, which are expected to generate a multiplier effect in the community, allowing the development of other productive projects and improving the economy and the social and cultural identity of the inhabitants of Yaxunáh and nearby regions, to contribute to the social equity and the well-being of them, preserving the social and cultural heritage as well as to optimize the quality of living and improve people's health and eventually improving the environment and to mitigate Climate Change.

Keywords: Sustainability, solar Maya, bioclimatic technologies, social and cultural identity.

Biography:

Professor-Researcher at the Metropolitan Autonomous University. Development of Sustainable Projects at the Center for Research and Advanced Studies (CINVESTAV). Author of more than 180 applied research papers in architectural and urban scientific journals. Member of various national and international scientific committees. Research Project Coordinator of the Erasmus-Jean Monnet European Program to promote the Development of Sustainable Bioclimatic Architecture. Member of the International Energy Agency (IEA) of the "Resilient Cooling Annex 80" Program. Evaluator of the National Council of Science and Technology (CONHACYT). Profile of the Program for Academic Professional Development, for the Higher Type (PRODEP). Member of the National System of Researchers Level II (SNII).