

Optimal Design Solution in "The Small Module" Within the Possibilities of Ecology, Environmental Science/Engineering, and Economics

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Abstract : We will commend accommodating an environmentally friendly architectural proposal that is extremely common/usual but whose features will make it a sustainable space. In this experiment, the natural and artificial built space is being proposed in such a way that deals with Environmental, Ecological, and Economic Criteria under different climatic conditions. Moreover, the criteria against ecology-environment-economics reflect in the different modules which are being experimented with and analyzed by multiple research groups. The ecological, environmental, and economic services are provided used as units of production side by side, resulting in local job creation and saving resources, for instance, conservation of rainwater, soil formation or protection, less energy consumption to achieve Net Zero, and a stable climate as a whole. The synthesized results from the collected data suggest several aspects to consider when designing buildings for beginning the design process under the supervision of instructors/directors who are responsible for developing curricula and sustainable goals. Hence, the results of the research and the suggestions will benefit the sustainable design through multiple results, heat analysis of different small modules, and comparisons. As a result, it is depleted as the resources are either consumed or the pollution contaminates the resources.

Keywords : optimization, ecology, environment, sustainable solution

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