

Sustainable Strategies for Post-Disaster Shelters: Case Study-Based Review and Future Prospects

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Abstract : When disasters occur, it is important to provide temporary shelters to protect victims from their environment and to comfort them with privacy and dignity. However, the commonly used shelters like tents and shanties can not ensure a comfortable condition. Furthermore, the demand for more energy and less pollution has become a major challenge. Focusing on the sustainable of temporary shelters, this study intends to clarify the essential role of temporary shelters before the reconstruction work is done. The paper also identifies the main problems from three aspects including spatial layout, thermal comfort and utilization of passive technology. Moreover, it expounds the passive strategies of ecological design by case study and simulation. It is found that the living condition of shelters can be improved from the perspective of architectural space, ventilation theory and construction techniques. Regardless of being temporary, these shelters are crucial elements in emergency situations and should be taken more seriously.

Keywords : architectural space, construction technique, sustainable strategy, temporary shelter

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