

Green Housing Design Adapting to Climate Change for Low-income Communities in Viet Nam

Luu Duc Cuong

Assoc. Prof. Dr. Arch., Acting Director General of Viet Nam Institute for Urban and Rural Planning, Viet Nam Ministry of Construction

Abstract

Viet Nam is among the top 5 countries most affected by climate change. Storm, flood due to increased rainfall, heat and sea level raising are typical impacts in Viet Nam. Low-income communities are the most vulnerable due to low adaptive capacity and limited financial resources. Green design has been popular worldwide but not yet widely adopted in Viet Nam, especially in housing design for low-income communities. The US Green Building Council has determined 5 criteria for Green Building, including: 1) Sustainable sites; 2) Water Efficiency; 3) Energy Efficiency; 4) Materials and Resources; 5) Indoor Environment Quality. The aim of the paper is to recommend solutions of green housing design based on both international practices and Vietnamese traditional architecture for low-income communities in areas affected by climate change. Green building is often thought of as expensive solutions due to the use of high technology in saving water, energy and materials. However, adopting traditional and local architectural design could help decrease the costs, making housing more green, adaptive to climate change and affordable to low-income households. Design solutions suggested by the paper could be consulted for other developing countries facing similar climate change impacts and/or having similar socio-economic and natural characteristics. A part of design solutions is focused on floating and/or amphibious architecture for low-income communities living by the water in Viet Nam.

Keywords: Green housing design; climate change adaptation; low-income communities; Vietnamese traditional architecture
