

# Energy, Environment and Sustainability of Green Buildings



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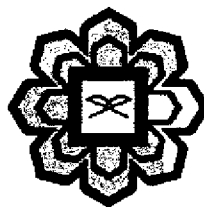
**INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA**

# ENERGY, ENVIRONMENT AND GREEN BUILDINGS

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Editors

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INTERNATIONAL ISLAMIC UNIVERSITY OF MALAYSIA

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### **7.1 INTRODUCTION**

Green buildings are part of a global response to increasing awareness of the role of human activity in causing global climate change. Buildings account for more than 40% of all global carbon dioxide emissions, one of the main culprits implicated in the phenomenon of global warming. There are other practical reasons for innovating with green buildings.

In many parts of the world, conflicts over energy and water resources are becoming common. Global warming threatens the water supplies of much of the world dependent on summer runoff from glaciers and high mountain snow packs for summer irrigation.

Green buildings also present a way to attack the inequity of global resource distribution by providing affordable housing for the poor that is healthier, more resource efficient and cheaper to own and operate. Already many architects, engineers and planners have responded to the disaster of Hurricane Katrina in 2005 by developing innovative housing designs that allow poor and lower middle-class people to have a healthy, attractive home, with lower utility costs and more good-prolong than conventional housing. Renewable energy systems using the ubiquitous solar and wind energy of the planet are powering many poor villages in the developing world, helping to provide education and healthcare in resource-poor environments.

Finally, green buildings are good for the environment. Features such as green roofs emphasize sensitivity to urban habitat preservation. Innovative onsite storm water management and the use of sustainably harvested wood and recycled-content materials help reduce the environmental and infrastructure effects of our current building methods.