
LATITUDES

INTERNATIONAL

DESIGN

CHALLENGE

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Malé 4° 10' N
Design Challenge



Resilient housing for
low-lying islands

Submitted by:

Maldives National University

Point of contact:

Ibrahim Nadheem, Department of Architecture

Thematic Area:

Resilience Design

Resilient housing for low-lying islands

Introduction

Maldives, distributed into 26 Geographical atolls with over 1190 Islands lies across the equator in the Indian Ocean. The islands most famous for its beautiful white sandy beaches, which are just about a meter above mean sea level, are in constant threat of land erosion and beach loss. In addition, the islands face extreme danger from natural disaster such as tsunamis and storm surges.

The country has a growing population of over 300,000 distributed over 198 inhabited islands. Over a third of the population resides in the capital Male' City making it the most populated city in the world.

Male is protected with breakwaters and sea walls all around the island to prevent erosion and storm surges. However most of the other islands have inadequate protection from the natural elements, exposing a great portion of the population living near the shoreline to a constant struggle to save their homes and properties.

The built environments of these low-lying islands are in a battle with the natural environment due to climate change, rising sea levels and severe storm events and natural disasters.

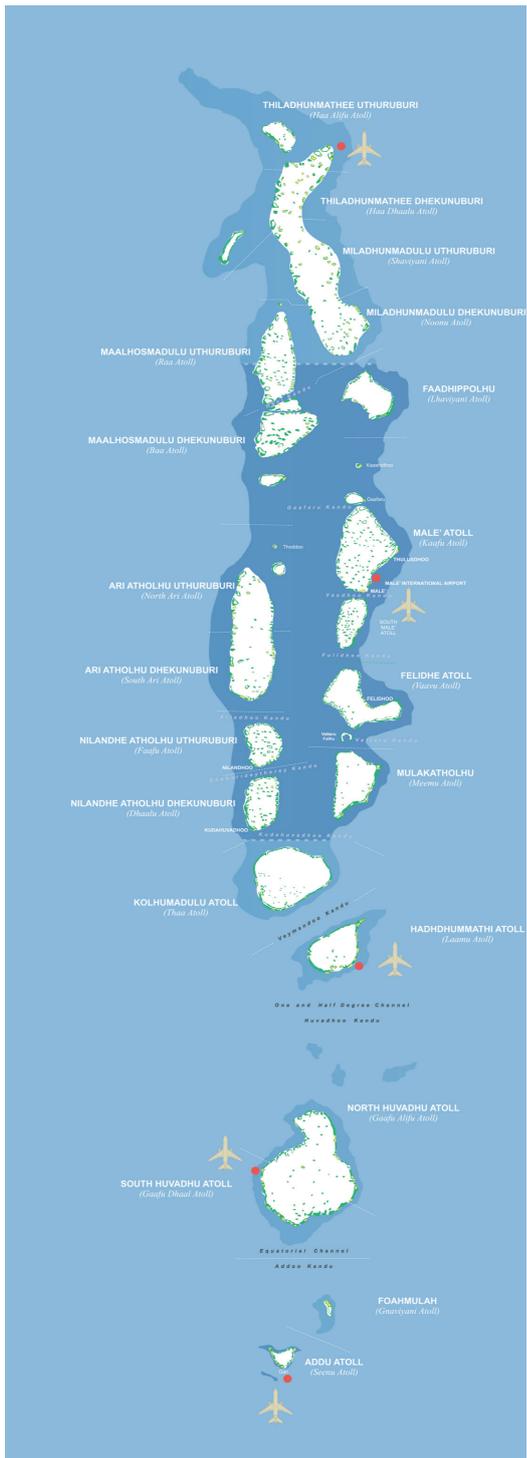
People are constantly trying to defend their homes with expensive structures to protect the islands. There is an urgent need in Maldives for effective strategies to deal with natural occurrences such as erosion, storm surges, flooding and tsunamis.



All of these occurrences result in costly damage to houses, utilities and other infrastructure, jeopardizing the future of these vulnerable communities.

Designing and planning these island communities to shield from these numerous natural threats can be quite challenging especially since the country lacks alternative geographically more suitable locations for settlements.

With these factors and many others in mind this competition aims to solicit creative design solutions for Resilient Houses that can be implemented in vulnerable communities in the islands of Maldives. These houses can be built in vulnerable coastline communities throughout the country to provide a comfortable and resilient home for residing families.



Design Guidelines

Resilience is the capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of stress or disturbance. It is the capacity to bounce back after a disturbance or interruption.

Hence, the proposed house should be able to withstand recent natural occurrences and adequately function in its aftermath. It should be able to adapt to wide range of regional and localized impacts that are expected with a warming planet: more intense storms, greater coastal flooding and severe erosion.

The house will be a prototype of sorts, which can be easily adaptable to contextual conditions of different islands in the Maldives.



The design solutions must respond to the aesthetic, social, and economic context of the country and must be guided by the following criteria:

- Cater to basic human needs including potable water, sanitation, energy, livable conditions, lighting, safe air and occupant health.
- Simple, passive and flexible systems.
- Durability.
- Find & Promote resilience in nature.
- Social equity and community contribution.
- Sensitivity to site ecology and natural habitat
- Use of healthy and environmentally-responsible building materials

The proposed house must be able to comfortably accommodate a family of four and be easily adaptable to growing and changing needs of the family.



Resources

<http://www.housing.gov.mv>

<http://www.environment.gov.mv/>

<http://isles.egov.mv/>

<http://ecocare.mv/>

<https://www.mangrovesforthefuture.org/countries/members/maldives/>

Main point of contact:

Professor Ibrahim Nadheem

Mail to: ibrahim.nadheem@mnu.edu.mv

National University of Maldives | Department of Architecture