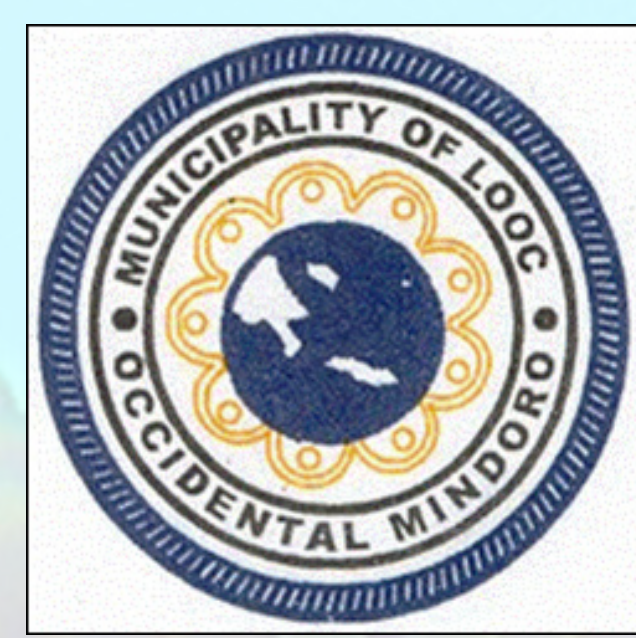


Ensuring Sustainable and Adaptive Management of the Lubang and Looc Climate-SMART MPAs



The Municipalities of Lubang and Looc, Occidental Mindoro, Conservation International – Philippines, with contributions from the UP Marine Science Institute

Climate change impacts are changing the way we protect our resources and habitats. Now, more than ever, safeguards and buffers are needed to ensure the continuation of ecosystem functioning. Protecting seascapes, corridors, and habitats remain the most efficient mechanism for buffering against climate change impacts. *How do climate considerations affect our current design principles and management of marine protected areas?*

MPAs that can potentially withstand or adjust to the impacts of a rapidly changing climate are Sustainably Managed, Adaptive, Resilient, and Targeted (SMART). Climate-SMART MPAs move beyond identifying areas that are inherently “resilient” to potential climate change impacts by incorporating social acceptability, adaptive management, and response mechanisms in the MPA management plan. Governance also scales up as climate-SMART MPAs should be large enough to provide replicability and representation of as much biodiversity as possible. This entails active inter-government collaboration and resource sharing.

CLIMATE

SUSTAINABLY

MANAGED

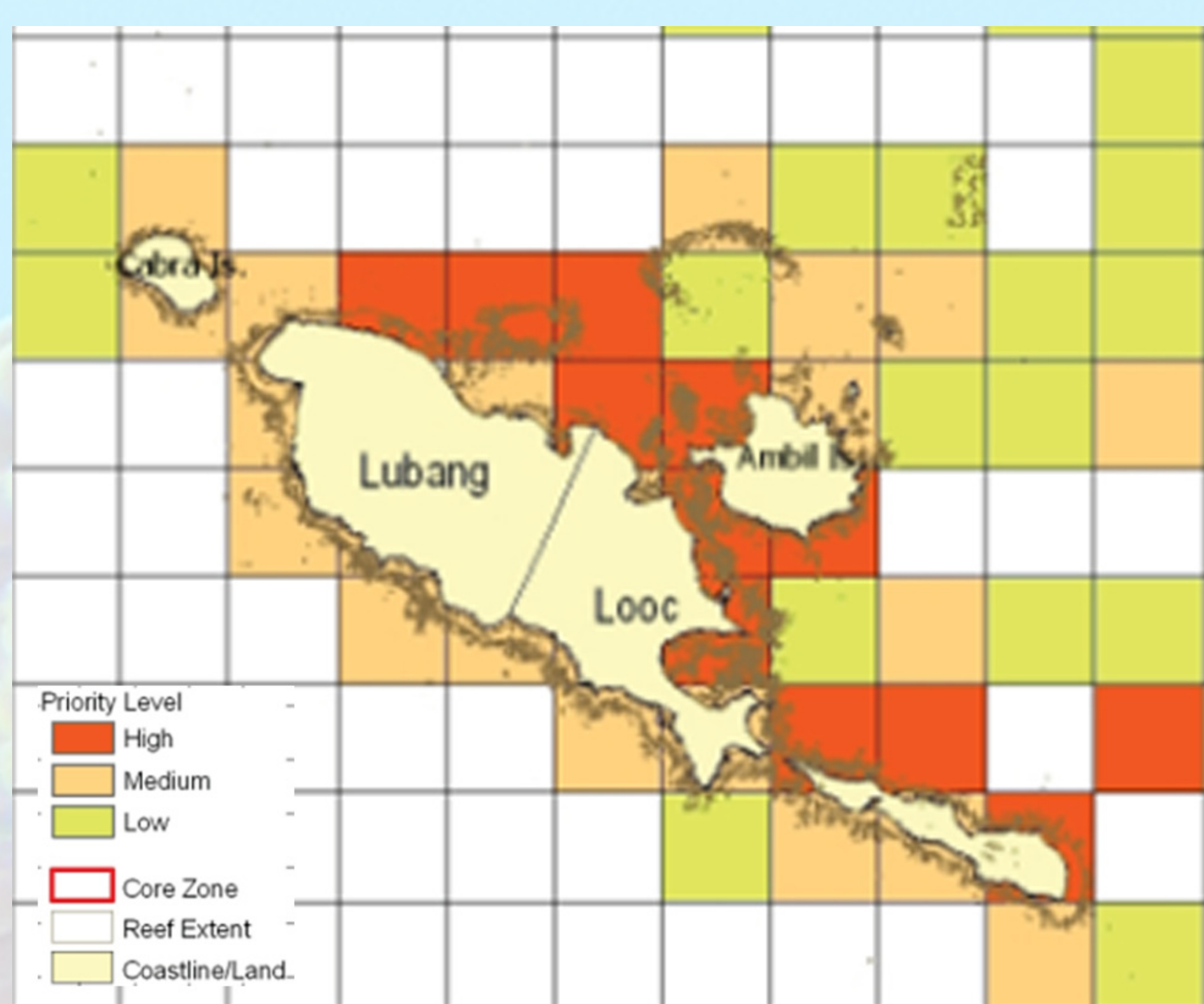
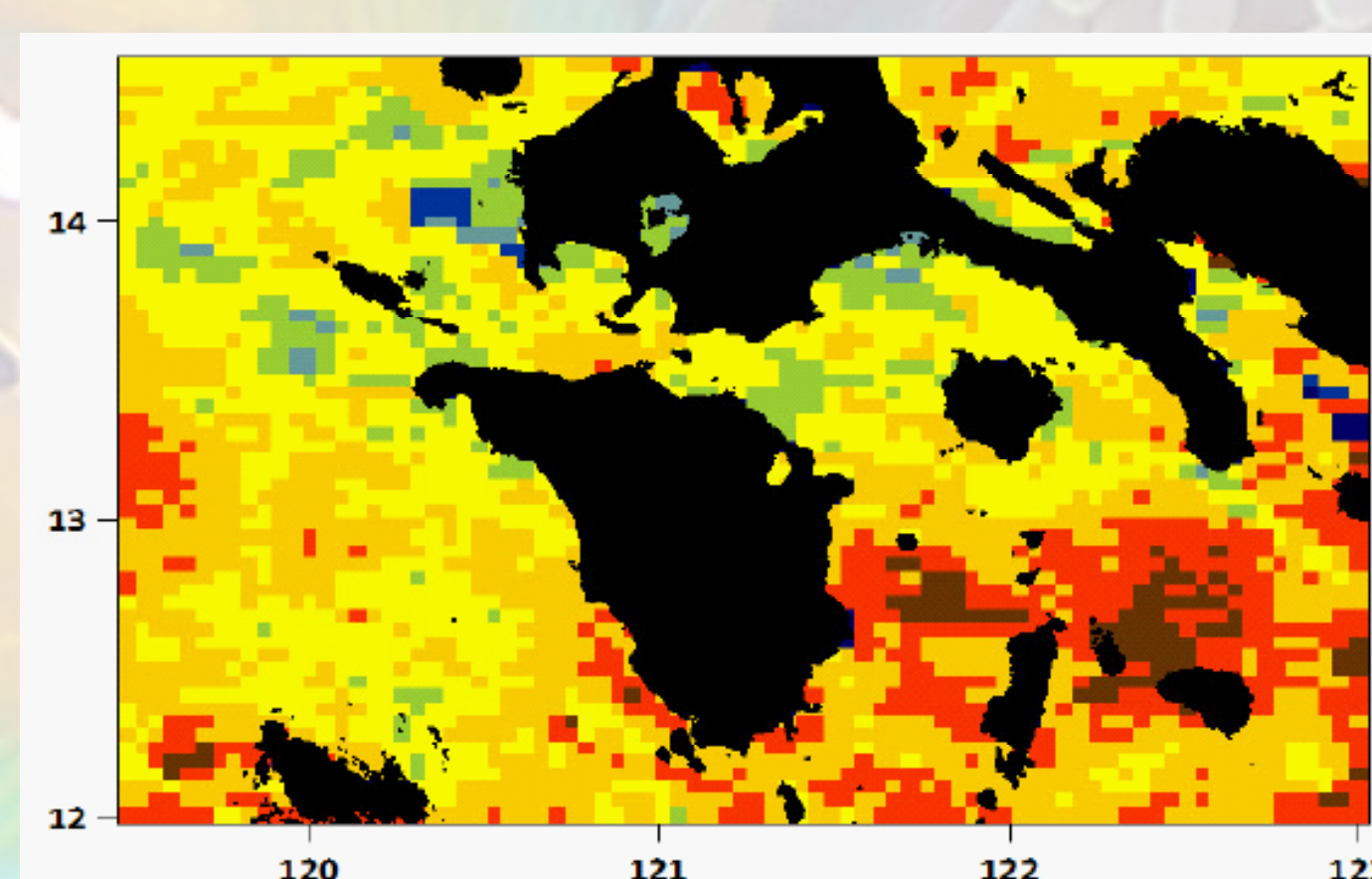
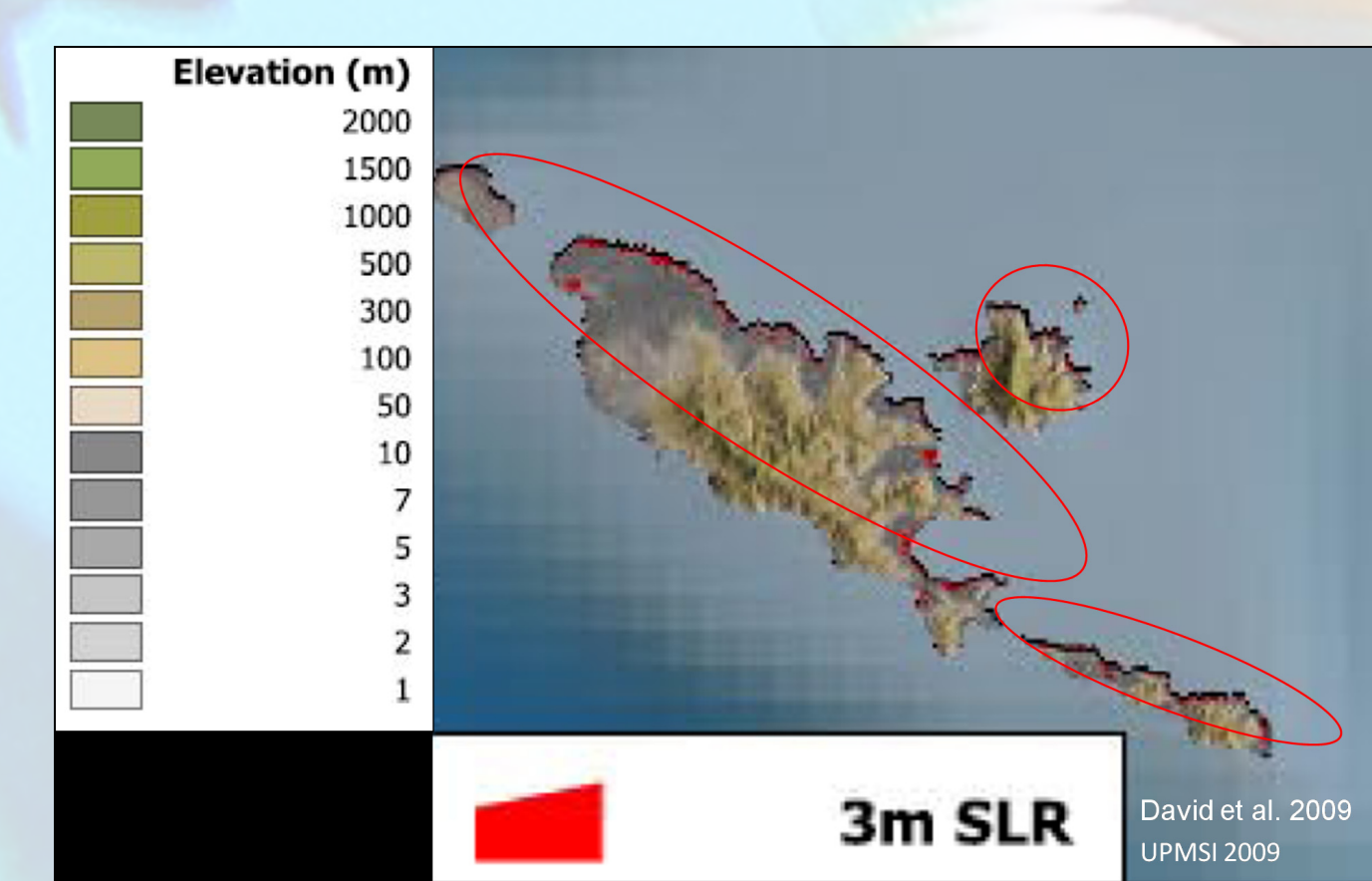
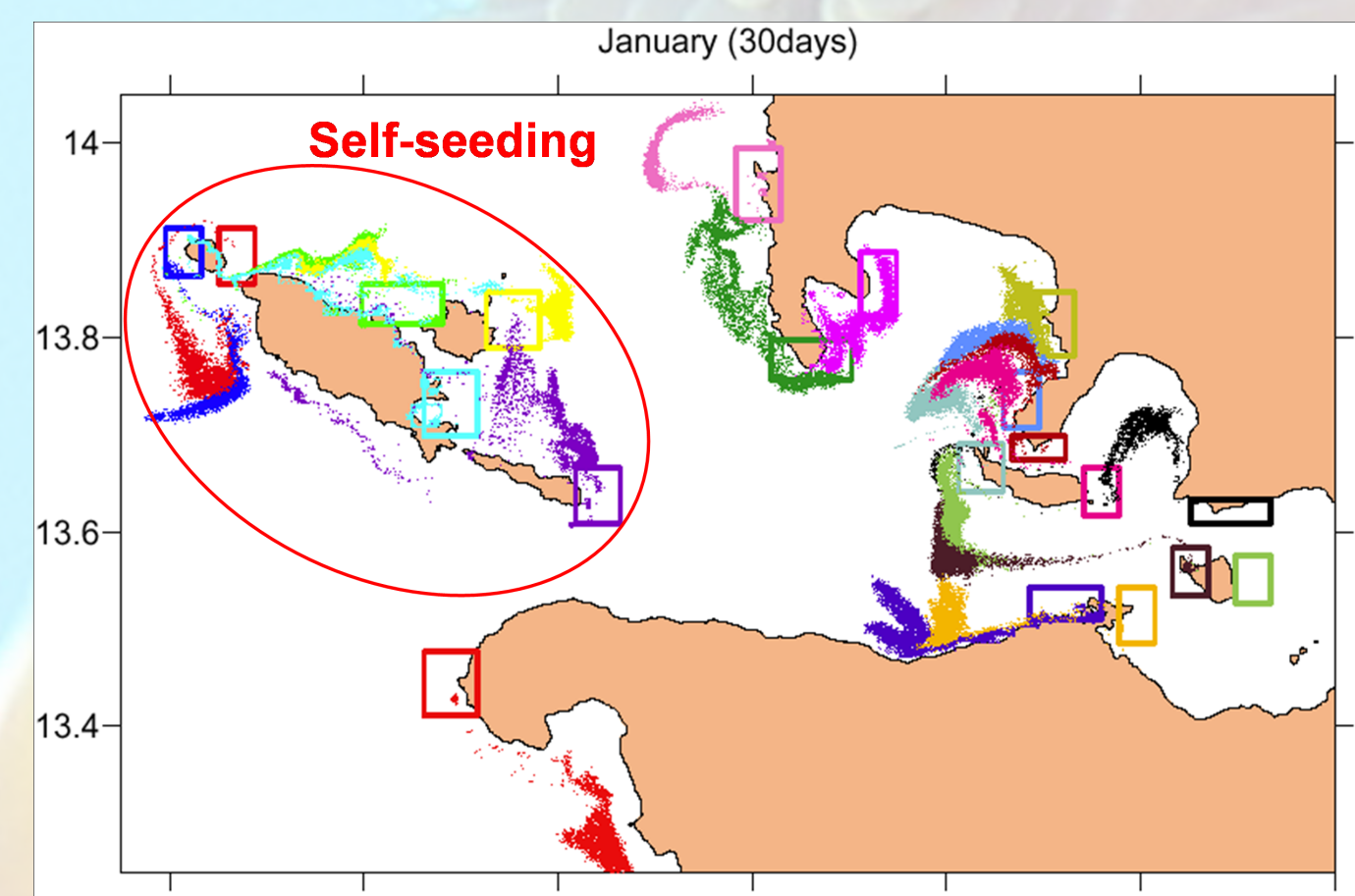
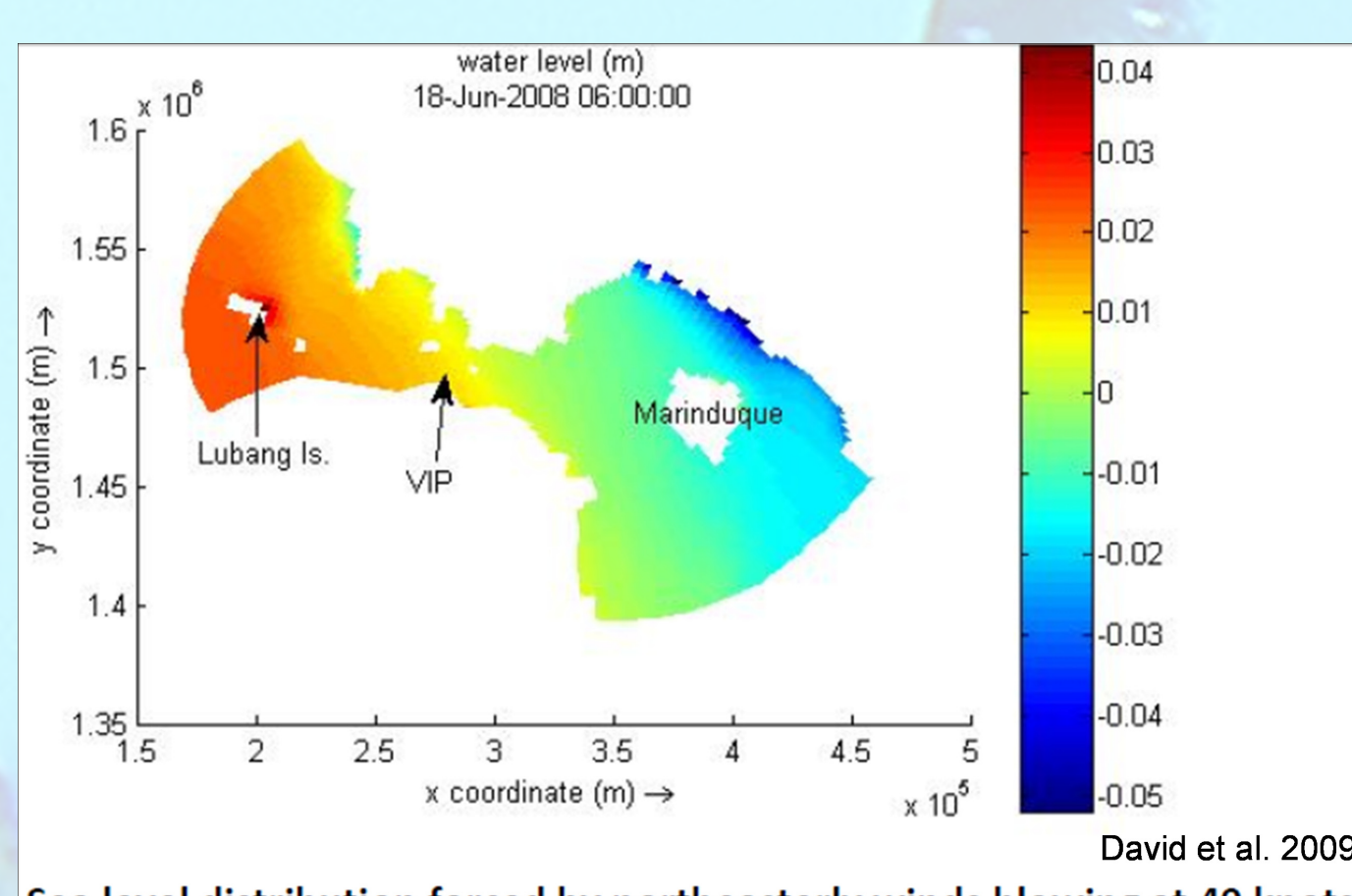
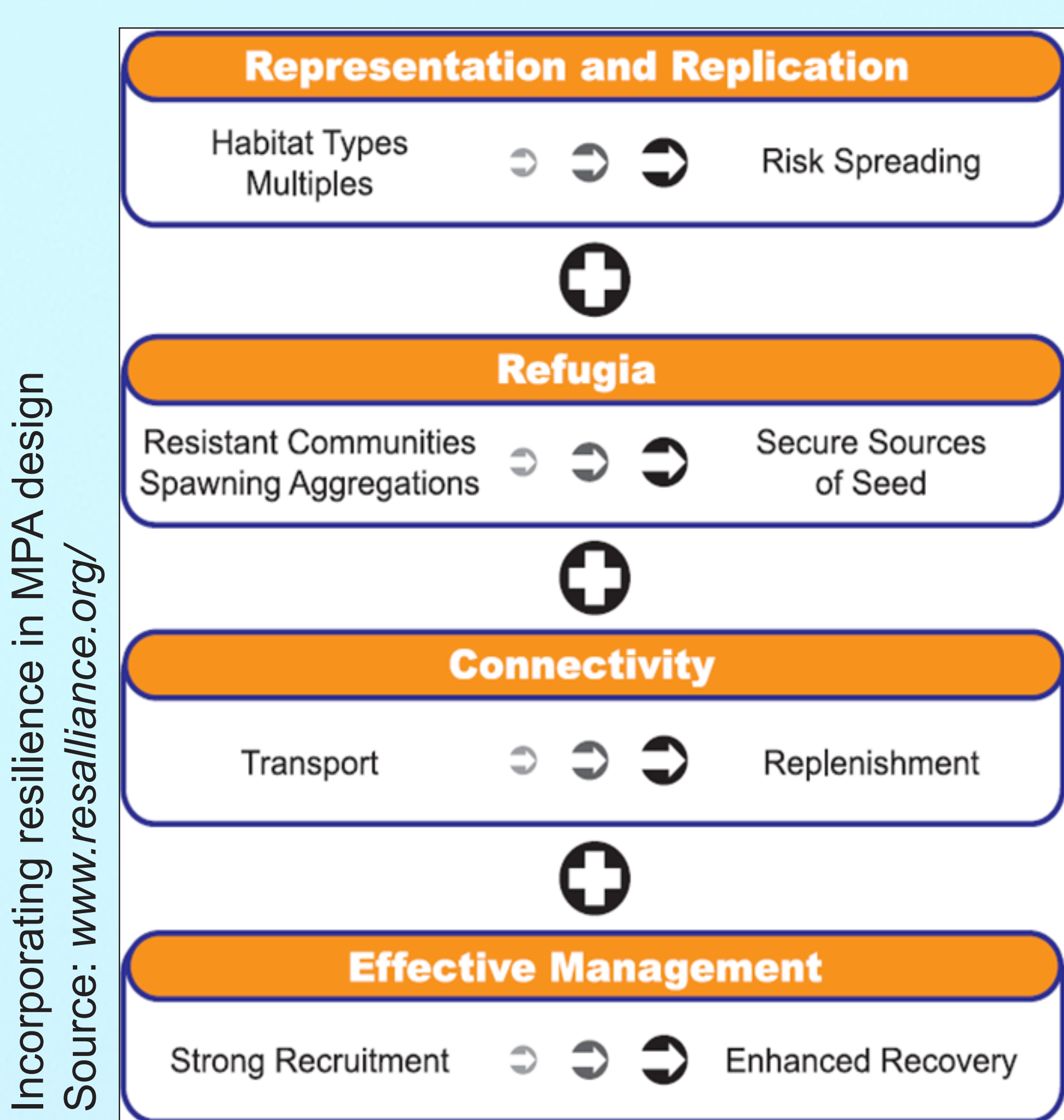
ADAPTIVE

RESILIENT

TARGETED

The Lubang-Looc Joint Marine Protected Areas in Occidental Mindoro, Philippines, provide a first example of designing and managing climate-SMART MPAs. This is also where the concept originated. Its 1,150 hectare of no-take zone is also among the few, if not the only, MPA in the country which spans, and is jointly managed by two municipalities. Conservation International’s Sulu Sulawesi Seascape Project supported the establishment of the first MPA in Lubang and Looc which further benefitted from extensive habitat and scoping surveys, vulnerability assessment of the Verde Island Passage to climate change impacts, and larval connectivity studies. Design of the MPAs also coincided with the principles of incorporating resilience in MPA design proposed by McLeod and colleagues (2009) which includes spreading the risk, protecting critical areas, considering connectivity patterns, and encompassing the MPA in a broader management framework.

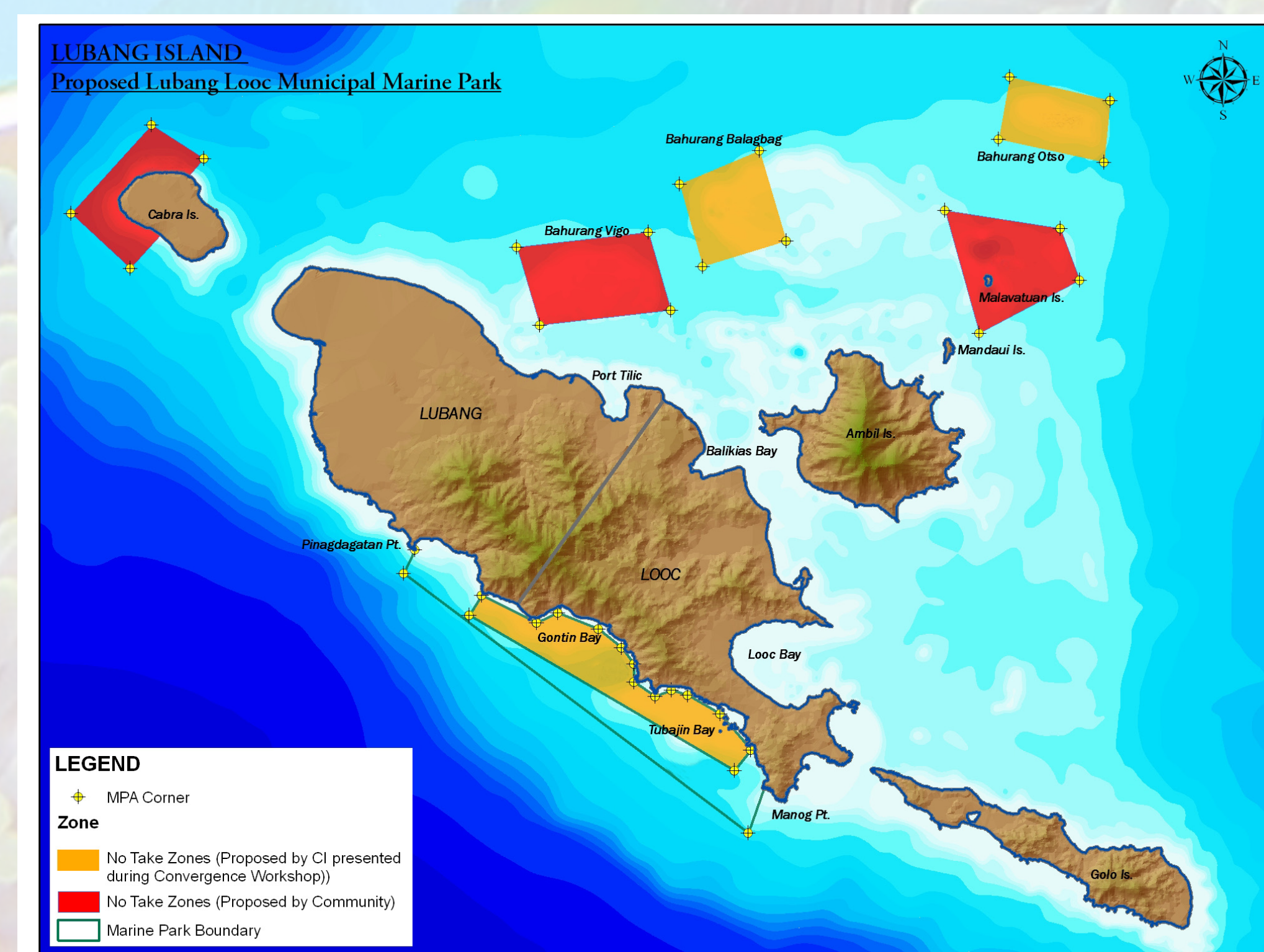
MARINE PROTECTED AREAS



Red cells were originally identified as high priority areas for protection based on ecological and anthropogenic threat data. These are commonly used parameters in selecting marine areas for protection in the Philippines.

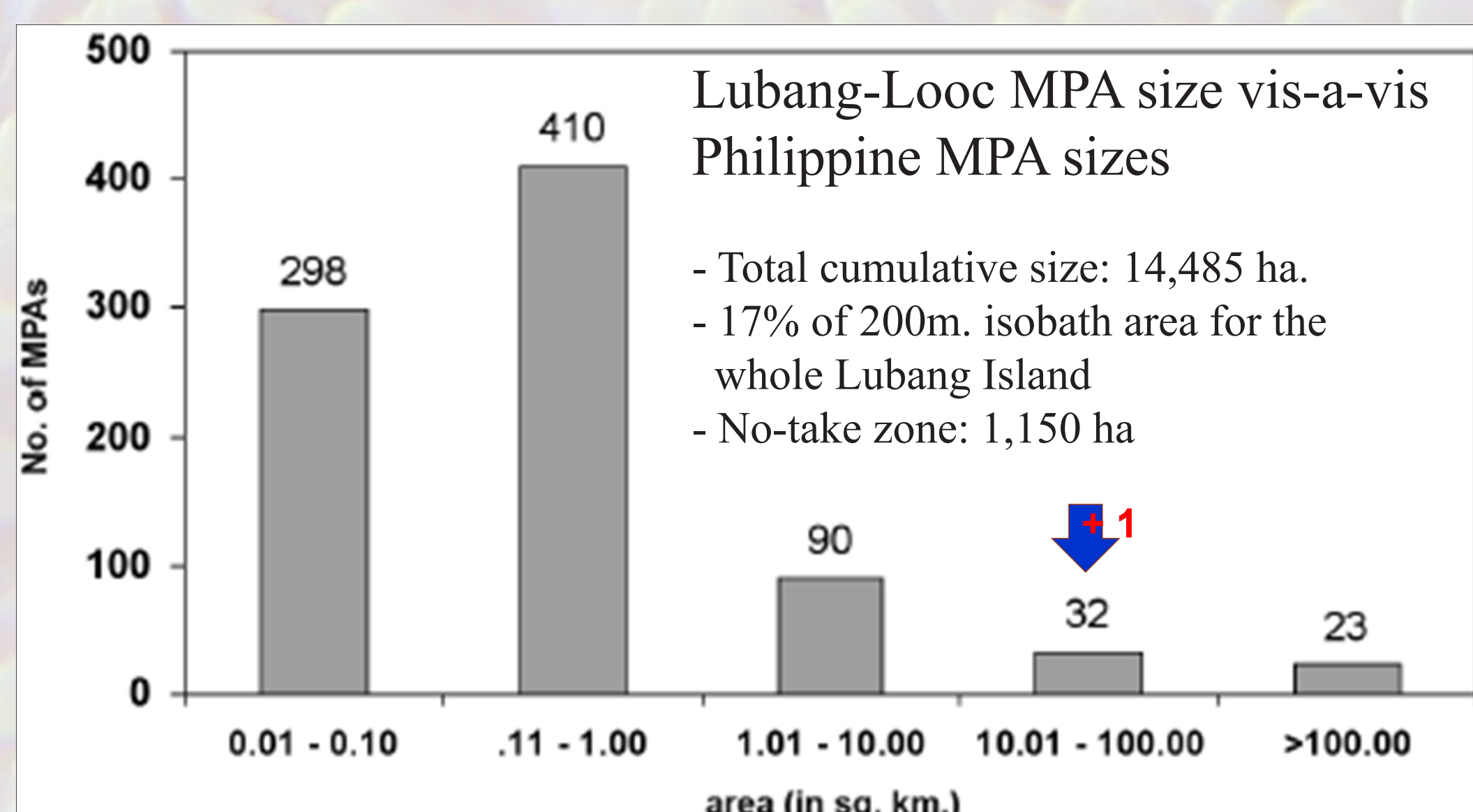
Source: modified from Quibilan et al. 2008

Managing the no-take MPA together with the Fishery Management Areas with a total area of 14,485 hectares will be a governance challenge but both local governments are giving their full attention and resources in ensuring that the MPAs can be sustainably managed. Their MPAs are now being integrated in broader management frameworks (e.g., with a Ridge to Reef approach and the Tourism Master Plan).



Identified areas for protection after incorporating climate change considerations and resilience in the design. This shifted selection of the no-take zone to the other side of the island where reefs are deeper and shaded by thick forest growth.

Map by: Hubert Froyalde



Towards Sustainable Management

- MPA Planning and Implementing Rules and Regulations in process
- Integrating with Tourism Master Plan
- Joint Lubang-Looc MPA Management Board overseeing MPA management councils
- Bantay-dagat strengthening
- Established common fishing ground for Lubang and Looc fishers

