



FORMOSAT-2 Applications for Reef and Mariculture Studies (FARMS)

A draft proposal submitted under the APEC Satellite
Applications for Knowledge-based Economies (SAKE)

Submitted by

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INTRODUCTION

- Local economies in coastal areas in Philippines dominated by
 - Capture Fisheries
 - Mariculture
- Reef-based fisheries account for 30% of catch
- Total reef area 25,000 km²

INTRODUCTION

- Increasing demand for fishery resources exerting huge pressure in marine environment
 - depletion of fish stocks (fish biomass only 16-19% of levels two decades ago)
 - degradation of reef habitat (<15% of reefs considered in good condition)
 - rapid and unchecked development of mariculture leading to environmental problems such as eutrophication, algal blooms and further degradation by siltation of traditional fishing grounds/reef areas

Interventions

- Establishment of marine protected area networks (scaling up from municipal level MPAs) and ecosystem-based resource management
- Supporting sustainable mariculture by pollution monitoring and regulating mariculture activities

Application of SAKE

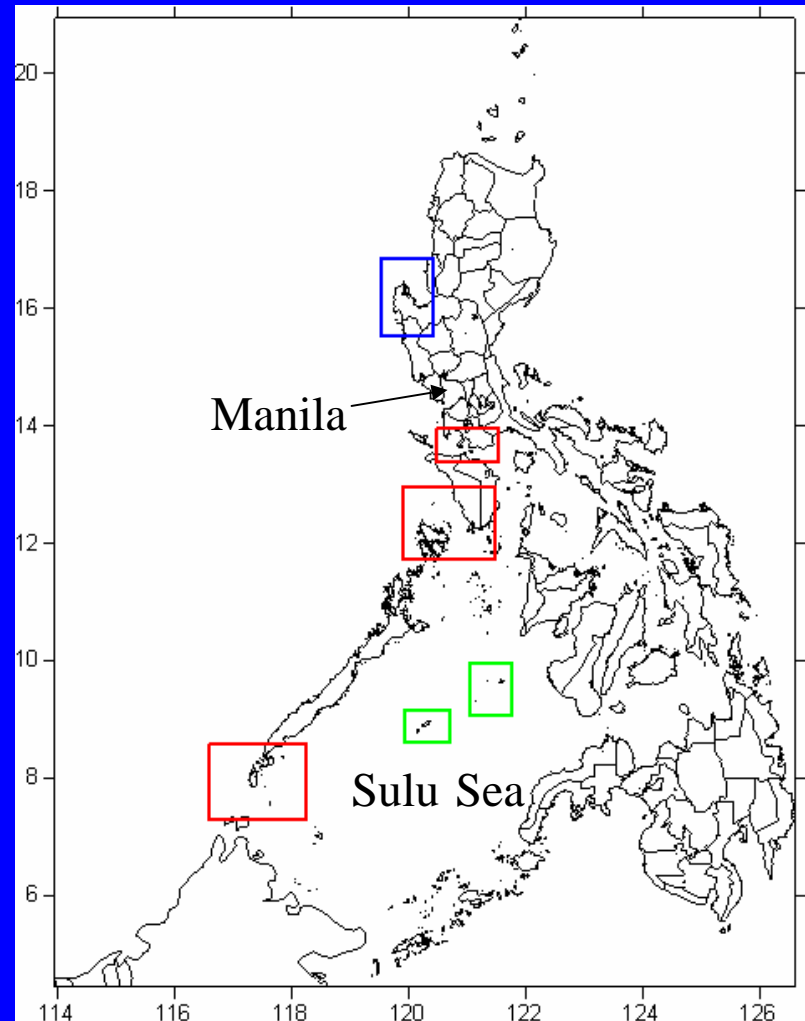
- Reef classification, mapping and monitoring
- Mariculture area mapping (2m panchromatic) and pollution/water quality monitoring

Needs:

- Classification protocol, validation experiments for reef and water quality classification and monitoring

Study Sites

- Red boxes – detailed reef classification/ mapping (Marine Biodiversity Conservation Corridors)
- Green Boxes – detailed reef classification/ mapping (Sulu Sea Atolls)
- Blue Box – method development, testing, comparison with other satellite products, mariculture area mapping and monitoring



Counterpart Funding

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- Marine Science Institute, University of the Philippines