

K&C Phase 3 – Brief project essentials

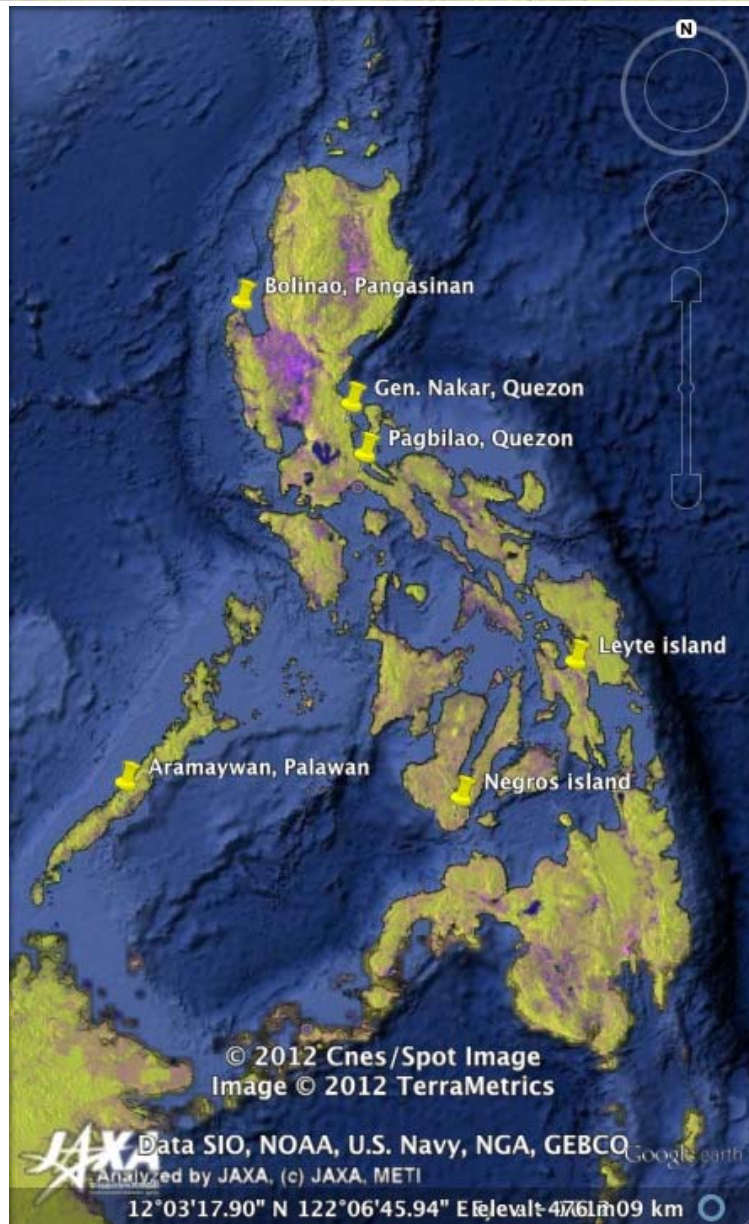
*Mapping and monitoring of mangroves in the Philippines
using ALOS/PALSAR mosaics:
support to K&C Global Mangrove Watch*

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Project areas: Philippines

- ① Gen. Nakar, province of Quezon
- ② Aramaywan, Quezon, Palawan
- ③ Bolinao, Pangasinan *
- ④ Pagbilao, Quezon *
- ⑤ Leyte island *
- ⑥ Negros island *

* Potential sites

K&C Project Collaborators and Partners

Project Collaborators

1. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
2. Fauna & Flora International (FFI)
3. Department of Geodetic Engineering, University of the Philippines (UP-DGE)

Partners & Supporting Agencies

1. Arcadia Marine Fund
2. Non-Timber Forest Products – Task Force / Exchange Programme
3. European Commission
4. National Commission on Indigenous Peoples
5. Department of Environment and Natural Resources: National Mapping and Resource Information Authority

Some background

- In the Philippines, there are about 40 species of mangroves belonging to 14 families (Primavera et al. 2004; Primavera 2000)
- In addition to ecological values, mangroves are important in the Philippines for aquaculture, charcoal, timber, and firewood.
- Extent of Philippine mangroves have declined to 120,000 ha. in 1994 from ~500,000 ha. in 1918 due to conversion to settlements and aquaculture (Primavera & Esteban 2008; Primavera 2000)
- Mangrove rehabilitation initiatives: 1930s-1950s (community initiatives); 1970s (government-initiated); 1980s (international development assistance)

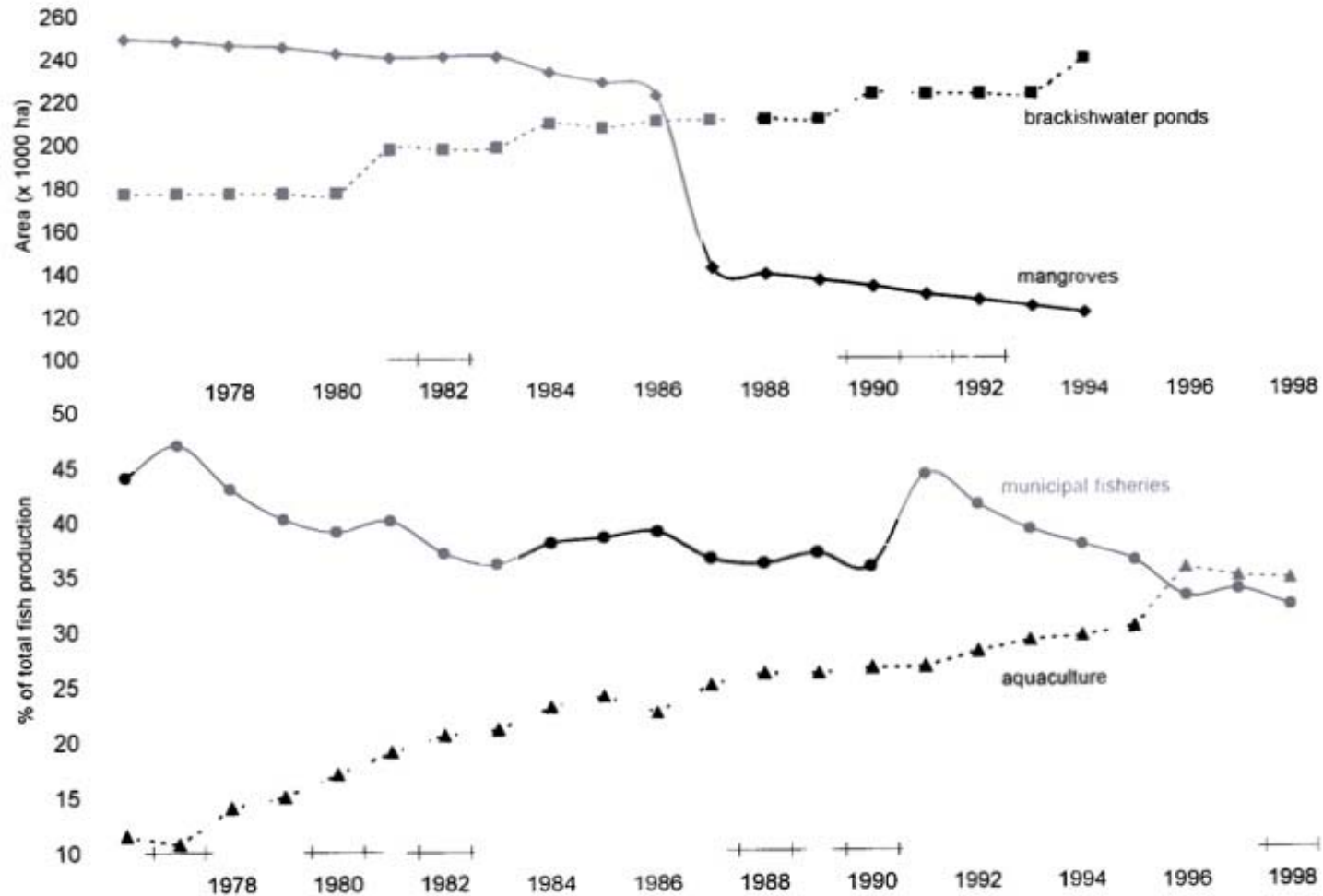


Fig. 1. Changes in (a) mangrove and brackishwater pond area and (b) contribution of municipal fisheries and aquaculture to total fisheries production in the Philippines, 1976–1990 (Primavera, 1997).

Source: Primavera, J. 2000. Development and conservation of Philippine mangroves: institutional issues. *Ecological Economics*, 35 (2000): 91-106.

Project objectives and schedule

In support of the K&C Global Mangrove Watch, for each of the identified sites, the project aims to:

1. Generate mangrove extent and change maps
2. Determine rates of change and describe sources of these changes in mangrove areas

Project milestones (tentative):

2012: Initial maps of mangrove extents and change detection

2013: Field measurements; mangrove assessments; map validation

2014: Reporting of results; documentation; final maps

ALOS

K&C Initiative
An international science collaboration led by JAXA

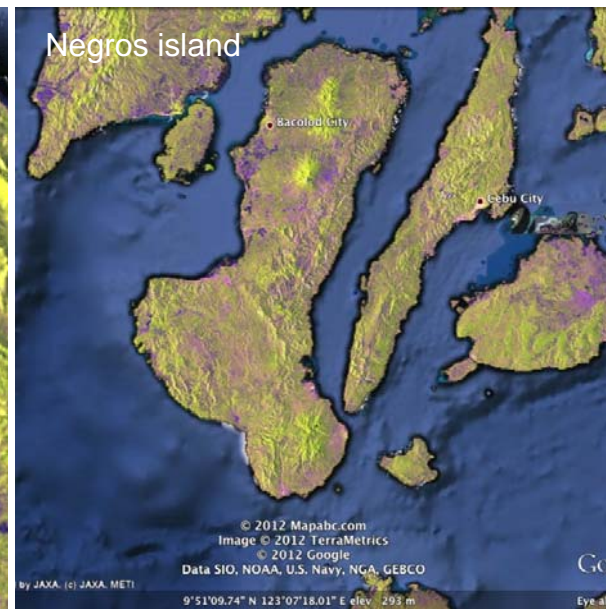
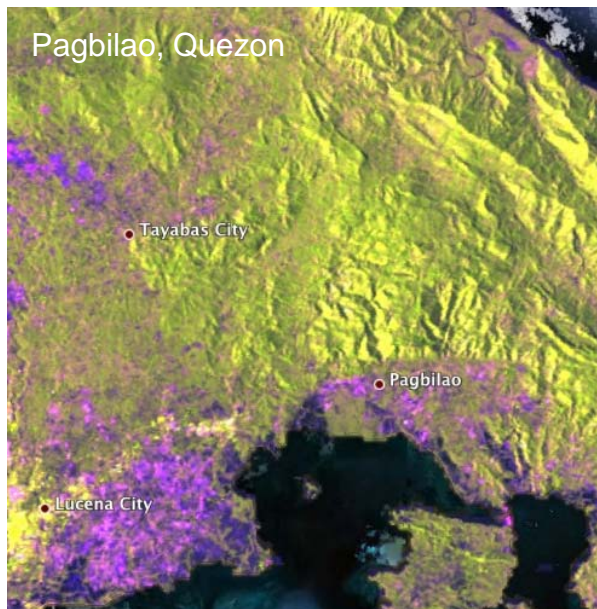
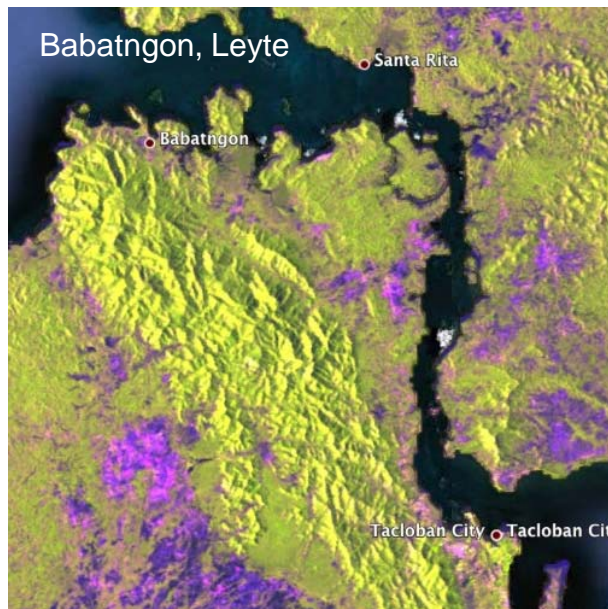
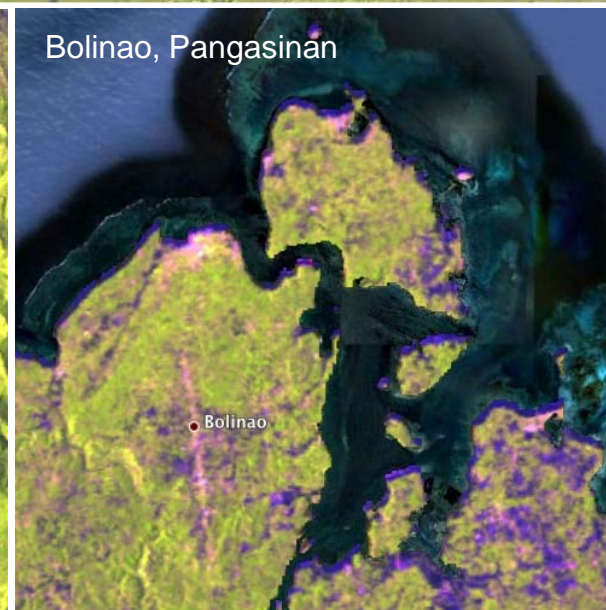
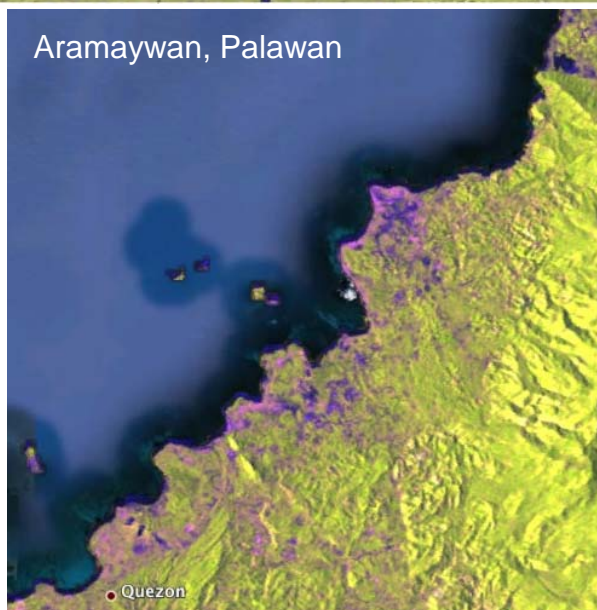
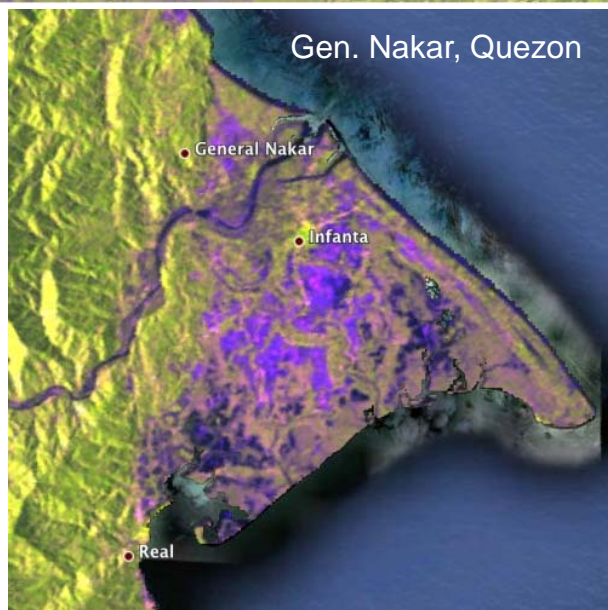


Image source: Japan Aerospace Exploration Agency; Analyzed by JAXA © JAXA, METI

Support to JAXA's global forest mapping effort

- Field measurements in mangrove sites, including geo-coded photographs
- Validation of JAXA's mangrove forest cover and change maps
- Contribution to rule-set development and improvement for mangrove characterization and change detection

Deliverables

- Mangrove extent and change maps using 2007-2010 ALOS/PALSAR data in identified project areas generated
- Mangrove change rates determined
- Image processing methodologies and accuracy assessments documented