

Coastal Environment Profile of Lopez Jaena, Misamis Occidental, Philippines

Dr. Asuncion Biña-de Guzman
Mindanao State University-Nouwan

Geography

Lopez Jaena is one of 14 coastal municipalities in the province of Misamis Occidental

Geography, Population & Resources

- Municipal land area of 15,327.38 ha, most of which (94%) is devoted to agriculture
- Total population of 20,948 in 4,308 households (2000 national census)
- Total coastline of 10 kilometers
- Nine out of its 28 barangays are coastal, characterized by wide, emergent reef flats and fringing reefs
- Current mayor = Hon. Zenaida S. Azcuna
- Fourth-class economy

- A small rocky islet called Kapayas Island is found 1.5 km away from the mainland
- Teems with fish, invertebrates and rich marine vegetation – one of the richest mangrove and seagrass ecosystems in the whole province.

Coastal Resource Management Programs

- During the 1990s Lopez Jaena had been the leader in coastal protection, fisheries law enforcement, and rehabilitation under the leadership of Mayor Melquiadez S. Azcuna Jr.
- Recipient of several capacity building assistance programs
 - 1996-1998 - the University of the Philippines' Center for Integrative and Development Studies (UP-CIDS) implemented a community-based biodiversity research and conservation program in Lopez Jaena (part of the UP-CIDS-NAST Biodiversity Conservation Program (BCP))

- Long history of CRM-related activities:
 - Daisog River Reforestation Project (funded by CARE-Philippines)
 - Sustainable management, development and conservation of municipal waters and fishery resources
 - Establishment of 3 marine protected areas (Kapayas Island, Mansabay Bajo and Sibula) with total area of the 63.5 ha
 - Coastal Environment Education Workshop for MFARMC members and fishermen associations and cooperatives
- Has a functional FARMC (Fisheries and Aquatic Resources Mgt. Council) and Bantay Dagat task force

Taken the lead in livelihood enhancement projects

- Community assistance projects supported by the Philippines-Australian Livelihood Support (PALS) program (2000-present)
- Collaborative project with MSU Naawan on cage culture of rabbit fish (*Siganus guttatus*) and milkfish (*Chanos chanos*).
- Establishment of a siganid hatchery for fingerling production in Barangay Biasong
- GET EXCEL Tilapia Satellite Hatchery assisted by BFAR-X in Don Andres Soriano as showcase project to impart fish farming technology to farmers and fisherfolk

- In 2005, was established as pilot site for the establishment of an Integrated Coastal Resources Management Center in Northern Mindanao under the DOST-PCAMRD.



• Training in Participatory Coastal Resource Assessment (PCRA) with the assistance of MSU Naawan (under the ICRM Project)

Generation of updated profile on coastal resources

- Coral Reefs
 - Cover of coral & other lifeforms
 - Fish diversity, abundance and biomass
 - Seagrass cover & diversity
 - Mangrove diversity, abundance & community structure
 - Municipal fisheries production

Coastal Resource Map

- coral reef - 324. ha
- aggregate seagrass meadow - 526.2 ha
- mangrove cover - 143.0 ha (mix of natural & planted forest)

Coral and Other Benthos

Station	Live Coral (%)	Dead Coral (%)
Capayas Is. MS	~55	~30
Mansabay Bajo MS	~30	~30
Loo, Mansabay Bajo	~40	~15

The figures indicate that cover of live coral in 3 sites range between fair (~30%) and good (~55%).

Fish Communities

- Fish Diversity
 - 146 species belonging to 23 families
 - Target food fish = 40 species; the rest are small, colorful demersals
 - Most common are damselfishes and wrasses
- Fish Abundance
 - Average of 1,464 ind./1000m² – moderate abundance
- Fish Biomass
 - Average of 41.92 t/km² - high biomass

Seagrass Resources

- Diversity - 8 seagrass species
 - dominated by *Thalassia hemprichii* (60.3%)
- Seagrass cover for all species: 48.23% average, highest in Katipa (72.61%) and lowest in Puntod (21.27% cover)
- 43 species of seaweeds (mean cover of 66.97%, *Sargassum* sp. the most abundant seaweed species)
- Bivalves the most abundant macro-invertebrates, but very few are economically important

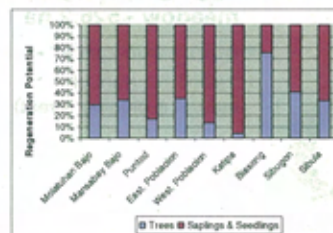
Mangrove Resources

- Mixed forest with 23 mangrove species & 3 associates
- Natural (Sibula, Sibugon, Katipa & Puntod)
- Reforestation or plantation forest (Biasong, Eastern Pob & Mansabay Bajo)

Location	Area (ha)
Sibula	17.3
Sibugon	25.0
Biasong	4.7
Katipa	14.0
Western Poblacion	14.5
Eastern Poblacion	28.8
Puntod	17.3
Mansabay Bajo	13.8
Molatuhan Bajo	17.1
Total	143.0

Relative Abundance

- ★ The most common species across barangays are *Rhizophora mucronata* (41%), *Avicennia* spp (32%), *R. apiculata*, and *Sonneratia alba*.



The dominance of seedlings and saplings:

implies the large capacity or potential of the mangrove community to regenerate

MSU-Naawan

- Zonal Center for PCAMRD regional networks (Zone 4)
- NAFES Regional Center for Fisheries Education
- CHED Center of Development for Marine Biology
- Fisheries Review Center

RDE projects

Siganid Project

Hatchery production of *Siganids* (kitong) tanks (Technology verification)

Siganus gutatus

Tilapia Project

Refinement of tilapia hatchery technology of GET EXCEL strain: Masculinization by egg immersion technique

Pahè Project

Study 1. Morphometric Characterization and Performance Evaluation of *Macrobrachium rosenbergii* Stocks and Closely Related Species Found in the Philippines
Study 2. Larval culture of *Macrobrachium rosenbergii*



Freshwater prawn (pahè) *M. rosenbergii*

Pigok Project

Breeding and Larval Rearing of the Tapiroid Grunt "Pigok" *Mesopristes cancellatus*



Freshwater fish, pigok
Mesopristes cancellatus

Seaweed project

- Farming and Strain Selection of the seaweed *Kappaphycus* and *Eucheuma*
- CAPE for Seaweed production in Lanao del Norte



Integrated Coastal Resource Management (ICRM) Projects

Project 1. Integrated Coastal Resource Management Center for Northern Mindanao: Piloting Lopez Jaena, Misamis Occidental

Project 2. Sustainable Fisheries Management Program for Lake Mainit



Funded by DOST-PCAMRD