Marine capture fisheries – global demand and local impacts

Challenges in managing small-scale fisheries to benefit coastal communities now in the future

Global demand and local impacts













Growing global demand for fish



Growing Resource Use Conflicts between Small and Large-Scale Fisheries



A. Berkes et al 2001; B. FAO 2000; ICLARM 2001; Berkes et al. 2001; C. Berkes et al. 2001; Tyedmers et al. 2005; D. Kelleher 2005

Decreasing food security

Contribution of fish to human diet, 1995





USAID-Funded Coastal Management Projects in the Philippines

Coastal Resource Management Project (CRMP)

- □ 1996 2004
- Build local capacity to manage coastal resources along 3,000 km of shoreline covering over 100 local government units
- Fisheries Improved for Sustainable Harvests (FISH Project)
 - 2003 2010
 - Develop ecosystem-based fisheries management approaches in four target areas of the country
 - Marine fish stocks increased by 10% over baseline levels in focal areas



Growing demand for Philippine fisheries (Capture and aquaculture production)



External assistance to develop commercial fisheries and aquaculture



Loss of mangrove habitat from aquaculture development





Expansion of Commercial Fishing Fleet: Bigger and more vessels, move inshore



Total tonnage: 150,260



Total tonnage: 216,090 (+43.8%)



Total tonnage: 270,281 (+68.8%)

2000







Response of small-scale fishers: increase efficiency



Illegal Fishing in Municipal Waters

LEGEND:

>



Increase in price of scad (galungong)



Coastal law enforcement is essential to restoring small scale fisheries





CLE Continuum

Preventive.....Corrective



Increasing Philippines population



Declining per capita fisheriesrelated food available for consumption



Challenges the Philippine Coastal Zone

- Unplanned or poorly planned coastal development
- Land-based sources of pollution
- Overfishing and coastal habitat destruction
- Increasing resource use conflicts
- Weak implementation and enforcement
- Increasing population



Building local capacity for coastal

management

- 850 coastal municipalities
- 18,000 km of shoreline
- 300,000 sq km of municipal waters





Active involvement of the community in local management of coastal resources

- Issue identification
- Baseline assessment
- Planning
- Implementation
- Monitoring





Local government must continue to invest in management to sustain diverse benefits derived from coastal resources



Management must contribute to economic returns and livelihood



- Recognize the value of coastal resources and return on investment from management
- Generate revenues from conservation of protected resources
- Integrate alternative livelihood within the framework of coastal resource management





CRM as a governance process

Level 1 - Beginning CRM

Acceptance of CRM as a basic service

- ✓ Multi-year CRM drafted
- ✓ Baseline assessment conducted
- CRM-related organizations formed and active
- Annual budget allocated for CRM
- Shoreline/foreshore management measures planned and initiated
- At least 2 CRM best practices planned and initiated

Level 2 - Intermediate CRM

Implementation of CRM plans underway with effective integration to local governance Level 3 - Advanced CRM

Sustained long-term implementation of CRM with monitoring, measured results, and positive returns



111 coastal municipalities, 3,000 km+ achieving benchmarks for CRM Levels I and II



Growth mechanisms

- MPA and network
- Environment friendly
- enterprise
- Species-specific management
- Closed areas

Control mechanisms

- Gear restriction and size limit
- Registration and licensing
- Closed seasons
- Zoning of fishing areas
- Law enforcement
- Local legislation and policies

Maintenance mechanisms

- Management planning
- Capacity-building and institutional development
- Inter-LGU management arrangements
- Constituency building

Danajon Bank, Central Philippines

Trawl survey - Danajon Bank (May 2004 and May 2006)



Comparison of CPUE – Danajon Bank (2004 and 2006)

		CPUE]
Gear	Local name	2004	2006	1
Danish seine	liba-liba	23.4	65.2	
Drift gillnet	palutaw, paanod, Pamo	6.5	12.7	,
Fish trap	bubo	8.2	15.5	
Hook and line (simple)	pasol	1.8	2.2	
Multiple handline	bira-bira, undak	2.8	3.1	
Set gillnet (with plunger)	dumbol	11.2	11.8	
Spear w/compressor	pana-compressor	21.6	27.1	
Squid jig	ulang-ulang	1.7	1.8	
Bottomset gillnet	palunod, palugdang	15.3	7.6	
Bottom-set longline	palangre, kitang	4.8	3.5	
Crab gillnet	pukot panglambay	3.6	2.3	
Crab liftnet	sapyaw (sa lambay)	3.8	3.2	
Crab pot	panggal panglambay	5.8	3.5	
Drive-in gillnet	ariba-ariba, pamanban	15.8	10.4	
Fish corral	bungsod, tower	5.5	3.0	
Squid trap	bubo sa nokos	4.4	3.7	in a
Trammel net	triple net	6.0	5.2	



Change must be adaptive building on lessons learned and outcomes of previous steps

