

First Regional Symposium on Sustainable Small-Scale Fisheries in the Mediterranean and Black Sea

Outline

- Introduction
- Management and co-management: actual co-management versus participatory advisory schemes
- Overview of traditional fisheries management in the region
- Relevant options for co-management: area-based management; spatial/temporal closures; MCS; communitybased data collection; case studies
- A legal framework for fisheries co-management: how does comanagement fit in national and regional legal frameworks?



From Defeo and Caddy 2001

Small-scale fisheries management

 Spatial heterogeneity of resources and fishery dynamics



Need for fine-scale management

- Disperse and remote landing sites



- Difficulties in monitoring and enforcement
- Often low volumes, low revenues



Limited funds for data collection, research, enforcement



How to tackle this problems?

Challenge to centralized top-down models

- Co-management
- Community-based data collection programs
- Multi-scale, inter- and trans-disciplinary approaches

The Tragedy of the Commons



What's co-management?

Institutional arrangement where responsibility for resource management is shared between the government and user groups



What's co-management?

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			TRUE CO-MANAGEMENT				
CENTRALIZED	INSTRUCTIVE	CONSULTATIVE	COOPERATIVE	ADVISORY	INFORMATIVE	SELF- GOVERNANCE	
	Dialogue	Consultation mechanisms	Coop. in decision making	Govnmt endorses users' decisions	Delegated responsibility to who inform gov	r to users govnmt	

How successful are co-managed fisheries?



Gutiérrez et al. 2011 Nature 470: 386-389

What are the key attributes for success?



Gutiérrez et al. 2011 Nature 470: 386-389

Key for success

- Identify leaders
- Build social capital
- Incentives (community quotas, TURFs)
- Presence CB spatial/temporal closures
- Long-term management and policy
- Monitor the resource and collect data



Traditional management and decentralization

- Document traditional management and self-governance since 1900s:
 - Forest government-community partnerships in India and Kenya
 - Lofoten Islands cod fishery in Norway, Japanese inshore fisheries
 - Cofradias and Prud'Hommies in the Mediterranean
- Co-management depicted as simple partnership arrangements
- However, current experiences indicate that co-management has become more **complex**, **dynamic**, **adaptive**



Prud'hommies

- French professional organizations since medieval times (recognised in 1859)
- 33 Prud'hommies > 1,522 fishing vessels along the Mediterranean coast of France
- Small-scale, multispecies fisheries
- From realization that "one-size-fits-all" approach was inappropriate
- Stricter regulations and better compliance
- Efficient system of penalties for infractions
- Promote effective time/area closures
- Success: presence of leaders, rights to exclude outsiders



Cofradias

- Spanish fishermen Guilds (Cofradias) founded in the 12th Century
- 229 Cofradias cover all the Spanish coastal line and islands
- Some characteristics:
 - Democratic structure (owners and the crew)
 - Good levels of catch reporting and data collection
 - Catch sold in local market with fees to cover administrative costs
 - Can establish their own rules
 - Evolved systems of control, surveillance and enforcement.



Relevant components of co-management

- Access rights
- spatial/temporal closures;
- monitoring, control and surveillance (MCS)
- Traditional Ecological Knowledge (TEK) and data collection programs

Spatial access rights

- Include restricted fishing inside MPA, TURFs
- Particularly important when lack of stock assessment and input control (e.g. TACs) and for low mobility resources
- Not a prerequisite but enhances fisher's sense of ownership, resource stewardship and cooperative management

Spatial / temporal closures

- Commonly used tool by managers for all type of fisheries and management schemes
- However, closed areas or season and spatial rotational management schemes often more effective under co-management
- Time/area closures (e.g., MPA) are successful when strong community involvement, group cohesion and cooperative harvesting strategies.

Monitoring, control and surveillance

- MCS is critical but often lacking in SSF
- Co-management allows fishers to assume greater responsibility in MCS and reduces the responsibility borne by management authorities.
- Self-enforcement of rules and regulations are typical of successful co-management of small-scale fisheries

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TEK and data collection

- Information (TEK, field data) to assess the state of the resource and to monitor effectiveness of regulations
- Community-based data collection programs (CBCP) are cost-effective mechanisms to move towards data-rich situations

Relevant components of co-management

- 3 Latin American small-scale fisheries under comanagement
- 2 success (Chile, Mexico); 1 failure (Galápagos, Ecuador)



Co-management in Chile

- "Loco" Concholepas concholepas
- 15-yr sustainable management of "loco" (1993-2008)



Catches at similar levels to development phase of the fishery, whereas the price per ton significantly increased during the co-management period

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Co-management in Chile

KEY FOR SUCCESS

- TURFs only for well-organized fisher associations
- Management redundancy: closures, legal sizes, TAC for each community
- Marine reserves: conservation + management



- Well-organized fisher groups with strong leadership and compliance rules
- Government, users (and scientists) co-operate in decision making

Co-management in Mexico

- Lobster fishery with exclusive rights to Cooperatives
- 106 "campos" allocated to families with exclusive fishing rights



- Certified as sustainable by the Marine Stewardship Council

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Co-management in Mexico

KEY FOR SUCCESS

- Well-defined territorial permits
- High geographic isolation: selfhelp approach to community development
- Grounds inheritable and transferable within the community
- High enforcement and monitoring levels (data!)
- Strict community rules: penalties and self-policing strategies
- Legal individual sizes and weights: quality over quantity



"Work, respect and trust: strength of the alliance"

Co-management in Ecuador

- Law explicitly supporting co-management: Participative Management Body or "Junta"
- Within Galapagos Marine Reserve of 133,000 km² (20% NT)



After co-management:

CPUE and density decreased; unit prices high due to limited availability

2007: fisheries close to collapse, despite the full comanagement arrangement

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Co-management in Ecuador

KEY FOR (UN) SUCCESS

- Co-management in law; institutionalized cooperatives; national park
- Annual assessments required by law

However:

- Lack of management framework
- No long-term management policy
- No TURFs allocation or individual quotas
- Weak group cohesion and no (unreliable) leadership
- Weak enforcement (no formal or informal MCS)



Community-based data collection program

- Cost and time effective
- Needs capacity building and calibration/validation
- Adapted to different social-economic and cultural ٠ context
- Pre-cursor for community-based, co-management ٠

FISH and FISH		Constant of the	
Ghoti Ghoti papers			
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Ignore fishers' knowledge and miss the boat		The second	- COP

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Schroeter, Gutiérrez, Hilborn 2009 Mar. Coast. Fish. 1: 23-28

leader

2007 2008 2009

Year

100% 90%

80% 70%

60% 50%

40%

30% 20% 10%

Divers involved in data collection

Community-based data collection program

San Diego, CA – USA

- Fishery-dependent and -independent
- Almost 100% participation ٠
- Fine spatial and temporal resolution ٠
- First stock assessment of the San Diego sea urchin fishery

Praslin – Republic of Seychelles

- Fishery-dependent ٠
- Capacity building ٠
- Community empowerment
- Resource stewardship ٠



Gutiérrez, Bijoux, Robinson 2011 (GEF-FAO)

Are legal frameworks necessary?

- An existing enabling legal environment is essential
- However, the existence of formalized legal frameworks are not a pre-requisite for the implementation of comanagement *per se*.
- Political will is the key to the establishment of comanagement mechanisms. It must be reflected in attitudes and behaviour, as well as support within policy, legislation and actions specific to the fisheries sector.

Capacity building

Aimed at support main co-management actors to:

- Understand what co-management entails and how to organise to participate proactively;
- Master knowledge and information about the resources, including knowledge of environmental problems, needs, and opportunities
- Foster participatory and communication skills, methods for participatory learning
- Become a recognised and legitimate actor, which in most cases will imply taking on a legal identity (e.g., cooperatives);
- Deal effectively with administrative tasks (meetings, records, accountings, financial reports, proposals, etc.)

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