

CO-MANAGEMENT: AN ALTERNATIVE APPROACH TO LOBSTER FISHERIES MANAGEMENT

Stagnation in marine fisheries sector has prompted fishery managers to think of an alternative fisheries management strategy where both government agencies and fishing communities participate in decision making, exercise authority and share responsibility. Fishermen tend to see the rules promulgated by scientists and policy makers as ineffective, unrealistic and imposing. It is being increasingly recognised that fisheries can be better managed when fishermen are involved in management. It calls for a new management philosophy, one in which the fishermen, the traders and the exporters can become active members of the fisheries management team, working in co-operation with Government fisheries managers. Such co-management has gained momentum since last decade, which recognises the need for management decision to be made in collaboration with fishermen who depend upon the resource for their livelihood.

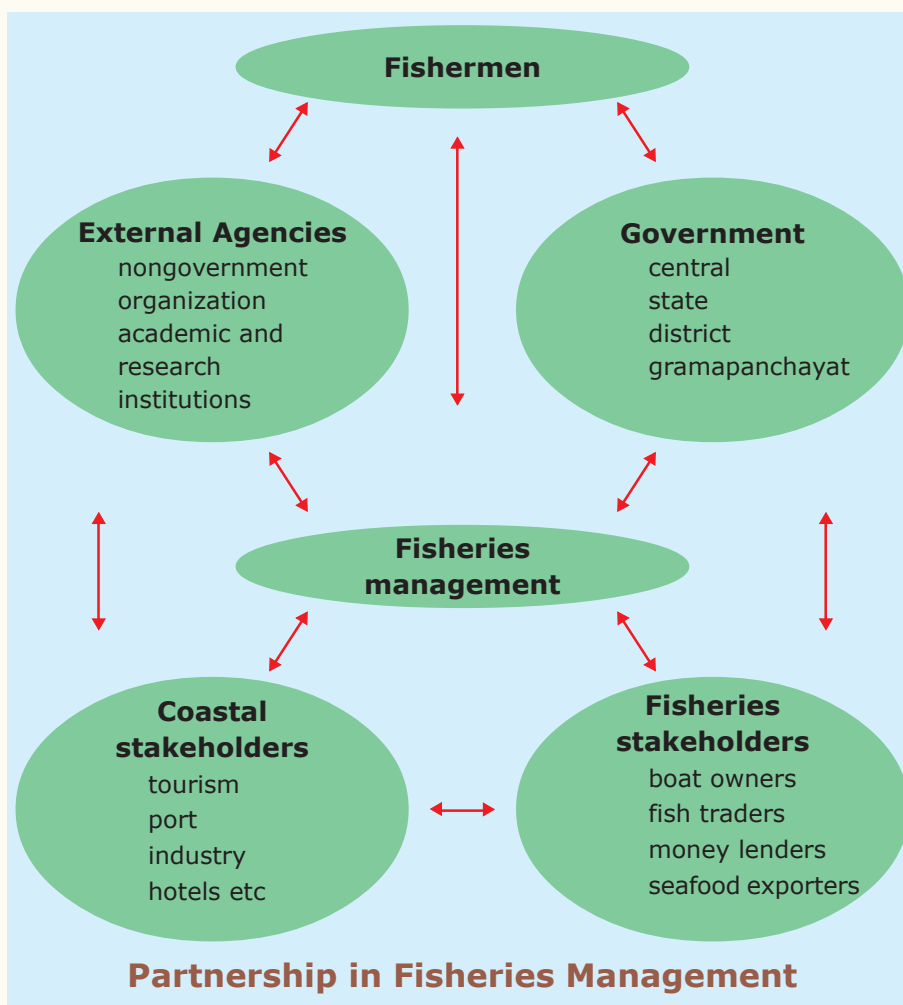
An alternative approach to top-down management

Co-management refers to sharing responsibility by fishermen and Government for the management of the fishery (see the flow chart). The partners develop a formal agreement so as to involve fishing communities in the definition of fisheries management objectives and grant some management power to user groups and coastal communities. The partners may also include other members such as boat owners, fish traders, fish processors and exporters, academic and research institutions and non-

governmental organisations.

Co-management does not mean entrusting total control of fisheries management to fishermen. The responsibility/authority of the Government and fishermen will have to be clearly defined

and depend upon the local conditions. For ex-ample, where a species is endemic to a particular area which forms a regional fishery, such as mussel, a large amount of management responsibility may be entrusted to fishermen. The Government will always hold the balance of power in co-management. Of course, there is no ideal model for co-management, since each situation must take into account institutional capacities, policy objectives in fisheries and natural resources management, political and social context and even past practices. The questions are whether economic efficiency be favoured, or resource sustainability? Employment or production? Co-management in small scale fisheries



is to be seen as a process which ensures sustainability of resources and increase the income of the vulnerable communities.

Bottom-up management plan for lobster fisheries

Lobster is a low- volume, high-value resource mostly exported to international markets. Indiscriminate exploitation by adopting destructive fishing practices and environmental degradation have resulted in drastic decline in landing and the resource is on the

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verge of a collapse. No lobster fishing regulation is in vogue and all sizes including the egg bearing lobsters are caught and marketed. Environmental degradation due to discharge of industrial and municipal waters into the sea and destruction of inshore nursery habitat by various anthropogenic activities have also been responsible for declining resources. The fishing community is aware of decreasing catches and smaller sizes in the fishery but is unaware of the implications of fishing juveniles and egg bearing lobsters. Having understood the serious situation, the CMFRI recommended Minimum Legal Size (MLS) for export of four commercially important species of lobsters and Government of India prohibited export of lobsters below the MLS (see the table). However, this is not strictly enforced and

Minimum legal size for export of lobsters from India (Notification No. 16 (RE 2003)/2002-07 dated 17 July 2003, Ministry of Commerce and Industry, Government of India).

Species	Live/chilled / frozen (g)	Whole cooked (g)	Tail (g)
<i>Panulirus polyphagus</i>	300	250	90
<i>Panulirus homarus</i>	200	170	50
<i>Panulirus ornatus</i>	500	425	150
<i>Thenus orientalis</i>	150	-	45

undersized lobsters are exported illegally. The maritime governments are not serious in formulating and enforcing fishing regulations, as lobster is a low volume resource. In reality, many of the regulations are not understood or followed by the fishermen. Lobsters being a regional resource and mostly restricted to certain regions along the coast, their management through participation of all stakeholders at regional levels was considered as a viable approach.

Fishermen have recognized that the seas where they normally fish contained a limited resource and that they would have to generate rules to conserve the resource if they wanted to continue to make a living. Participation of fishermen and their willingness to take on responsibility are essential to establish an effective co-management regime. There must be sufficient political will to support fisheries co-management as every aspect of co-management has to be financed, especially the capacity building activities of stakeholders and socioeconomic infrastructure. Co-management may not be suitable for every fishery. It is more suitable for regional species, which is almost endemic to an area. Co-management can act as an effective tool to bridge communication between government and fishermen.

What could co-management mean for lobster fishermen?

- Sustainable and responsible fisheries management with the participation of fishermen community, government agencies and other stakeholders
- Improvement in livelihood of communities through integration in local development
- Use of fishermen's knowledge and expertise to provide information on the resource base
- Create awareness on danger of destructive fishing practices,

overfishing and large scale fishing of juveniles and egg bearing lobsters

- A greater sense of ownership over the resource, which can provide a powerful incentive to view the resource as a long-term asset rather than to overfish
- Involvement in formulation, implementation and monitoring of management and regulatory measures resulting in a higher degree of acceptability and compliance
- Localised solutions to local problems through management strategies and regulatory measures that are more appropriate to local conditions

Lobsters, being mostly an export commodity, need strong industrial support for successful co-management. The need for regulatory measures has to come from within the industry and they have to comply with government regulations on MLS notified by the government. They have to discourage fishermen trying to sell egg bearing and undersized lobsters. The seafood industry as a whole will be benefited from the conservation ethic that is proposed. The project taken up by the CMFRI with the funding support of the MPEDA has been trying to implement co-management of the lobster resource through several outreach programmes such as distribution of communication tools such as posters, pamphlets and stickers in vernacular languages with the message of lobster conservation in fishing villages, households, lobster suppliers and exporters; village level participatory meetings and workshops, rallies in fishing villages in which local school and college students are associated and 'V-notching' and releasing of egg-bearing lobsters back into the sea with involvement of fishermen to make them aware of protection of egg bearing lobsters. A videofilm on responsible fishing and conservation of lobsters is being produced in five languages to convey the message to those associated with lobster fishing, marketing and exporting. Regional fishery management councils have been proposed in major lobster fishing villages in Tamilnadu, Veraval in Gujarat and Mumbai in Maharashtra and the respective fisheries departments will be the coordinators.

There is still a great deal of work to be done in exploring the potential for co-management arrangements to contribute to effective management and increased compliance in the lobster fisheries of India.

Lobster Conservation Workshop makes impact among Gujarat Fishermen

The Mangrol Bandar Samaj, Gujarat in a Notification dated 27 January 2006 enforced ban on catching undersized lobsters by fishermen along the Saurashtra coast. Workshops on Sustainable exploitation and conservation of lobsters were held at Veraval, Mangrol and Porbander on 1-2 May, 2003 and on 22 November 2005 at Veraval, which were organized under the MPEDA funded project 'Participatory management and conservation of lobster resources along the Indian coast'. CMFRI has appealed to the various fishermen organisations in Gujarat to desist from capturing undersized and egg bearing lobsters in order to conserve the valuable resource. The co-management approach in lobster fisheries management has made a positive impact on fishermen and this gesture is encouraging as CMFRI has been engaged in creating awareness among lobster fishermen of the country the need for good fishing practices in lobster fishing.

(Article contributed by Dr. E.V. Radhakrishnan, Head, Crustacean Fisheries Division)