

HRD for Fisheries Management: Implications of Integrating Social, Legal and Environmental Aspects.

by Magnus Torell

This article is based on outcomes and recommendations from the ASEAN-SEAFDEC Regional Technical Consultation (RTC) on Human Resource Development in Fisheries Management held in Phnom Penh, Cambodia, 3 to 6 June 2004. The meeting was asked to look beyond technical considerations and give special attention to social, legal and environmental aspects of HRD in fisheries management. The meeting's primary focus was on small-scale fisheries, but participants were encouraged to address the management of large-scale and commercial fisheries and aquaculture as needed.

Filling capacity gaps

In many development initiatives, education, human resource development (HRD) and improved knowledge and capacity are common objectives. But a critical point of departure for successful HRD programmes is to know what is needed for each category of people involved in the process, and how to deliver needed information and learning. This calls for a review of the "capacity gap" faced by each country relative to the task at hand – in this case, fisheries management. This is true everywhere,

in the sense that all countries – both developing and developed – need continuously to upgrade the capacity of people involved in various sectors to meet national and international requirements. For developing countries, there is the added imperative of reducing inequalities between themselves and more developed countries.

HRD in fisheries management is specific to the situation in each country. Consequently, ASEAN-SEAFDEC Member Countries have been encouraged to take initiatives and ownership in addressing HRD issues in accordance with their overall national objectives of fisheries development and management. The challenge for international and regional organisations is to use their position to support or facilitate these national initiatives. An important factor here is for these organisations to embark on processes and dialogues that allow for individual countries to maintain their ownership through all stages, including implementation. To raise awareness and clarify practical approaches and steps in HRD in fisheries management in each country, national consultation needs to be conducted as an initial step towards mapping a way forward.

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The need to address social, legal and environmental aspects in the context of an HRD programme was further underlined during the meeting. Looking at the outcome of the groupwork sessions, a question remains as to how much each country wishes to be dependent on institutions other than traditional fisheries-related organizations to manage your fisheries. This dependence could take various forms – to relieve each country of some of its excess fishing capacity (alternative or supplementary livelihoods), to support monitoring, control and surveillance (coastguards) or quality monitoring control (such as water quality or product quality), to mention a few. One point is that fisheries agencies need to remain focused on fish, fisheries and people engaged in fisheries, and not become diversified into tourism and other sectors, which belong within the domain of other agencies. It is important as such in the overall picture of coastal and rural development to provide an environment in which it is possible to manage fisheries.

HRD should be promoted for the effective integration of habitat management and fisheries management, including the use of ecosystem approaches to fisheries management, habitat rehabilitation, resources evaluation, and preparation of local fishery management plans. This also includes capacity development for villages or communities to assess and monitor the health of their fishery ecosystems using simple but effective methods. One important issue here is to avoid fisheries management and habitat management becoming polarized; rather, common agendas need to be developed for the benefit of all people living in coastal areas.

In embarking on HRD programmes, it is important to follow-up and seek collaboration among institutions at the national level as well as among regional and international organizations (such as SEAFDEC, FAO, NACA, UNEP, UNEP/GEF, AIT, MRC and WorldFish Center) and projects (such as CHARM and FISH), working to raise the capacity in Member Countries. Common efforts are needed to raise awareness and to implement guidelines for responsible fisheries at all levels

through adequate HRD practices. These should be aimed at each target audience in an appropriate form, from the national to the village level, including schools.

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Beyond a regional dilemma



– developing national pilot projects for sharing experiences at the regional level

That HRD requirements are specific to national situations creates a dilemma when developing regional

approaches to HRD. It is difficult to develop detailed programmes that are relevant to all countries, especially in local coastal and rural areas. As a practical approach towards developing and promoting HRD in fisheries management, the meeting suggested that pilot projects in a “representative set of countries in the region” should be promoted. The approach should include opportunities to share experiences at the regional level, and further promote nation-wide HRD in fisheries management.



The criteria recommended for the selection of those countries address both development stages and fisheries situations in ASEAN-SEAFDEC Member Countries. Specific aspects indicated by the participants included:

- Has significant inland and marine fisheries

- Is at an early stage of developing its management structures for marine fisheries
- Has archipelago fisheries
- Has major fishing industries with a diversity of fisheries and with conflicts between small-scale and commercial fisheries
- Is a land-locked country, and
- Fisheries are in political and economic transition.

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In the selection process, consideration needs also to be given to the ASEAN recommendation to “reduce disparities among the ASEAN Member Countries.”

A quick follow-up on these recommendations would give a list that includes Cambodia (developing management structures), Lao PDR (land-locked), Myanmar (inland and marine), Vietnam (in transition), Thailand (diversity and conflicts) and Indonesia or the Philippines (archipelagic). Selecting six out of the ten ASEAN Member Countries in a representative list of countries also clearly indicates the diversity of fisheries, despite the many commonalities. It is also an indication of the difficulties of creating common detailed HRD programmes for the whole region. Shared experiences from the countries and the pilot activities would help to identify common, generic, elements for an ASEAN-based regional HRD promotion.

The meeting did not go into details of processes involved in selecting specific sites for pilot activities. One group, however, did state the need to develop criteria for determining priority areas. Reference was made to a similar exercise at a workshop held in 2001 in Siem Reap (ICLARM, 2001), Cambodia, where special attention was given to the need to develop criteria for site selection with respect to wetlands/inland fisheries, which could be relevant for the selection of pilot sites in HRD as well. The general criteria defined during that meeting were:

- Areas highly affected by the seasonality of the hydrological (water) regime, i.e. differences in land’s use between dry and wet seasons.
- Groups or villages using the resource, or affected

by its use

- High level of complexity
- Several sectors overlapping geographically
- Several legal and institutional issues overlapping geographically, and
- Opportunity to link with other ongoing development initiatives or interventions by the government, NGOs or other international bodies

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In the following section, important concerns raised by the groups are presented, together with comments made by the whole group. Reflections emerging after the meeting have been added as well.

Understanding the status and trends of fisheries

During the meeting, the importance of understanding the status and trends of fisheries was highlighted, specifically in terms of fishing boats, gear, people engaged in fishing and availability of resources. Reference was made to the usefulness of indicators as tools to assess status. The understanding of status and trends should also include socio-economic considerations and analyses of the (usually excessive) numbers of people fishing and their fishing patterns, together with reviews of livelihood patterns. This also implies that one should embark on the use of economic and social indicators as well.

When trying to assess the status and role of fisheries in a given situation, it is important to understand the social context, noting differences between peoples engaged in small-scale or family fishing and those employed in large-scale or commercial operations. Household structures need to be reviewed, together with the relative dependence on fisheries, ownership of boats and gear, land tenure and access rights relative to existing legal provisions.

There are problems in actually getting enough reliable data to do proper aggregated valuations of every aquatic resource and fishery. It is interesting to quote from the ICLARM/WorldFish Centre in the Annual Report for 2002 (WorldFish Centre, 2003) which states that “valuations in an aggregated way, given the total lack of data for some and very unreliable data for many/all of the key resources and key uses, are not possible.” The assumption on which this blunt statement was based was that “what is recorded (if anything) is what is produced and/or used and consumed by the rich or less poor people, whereas products and uses not recorded are those on which poor people depend – which again



Reflections on the outcomes of group discussions

During a special session at the Regional Technical Consultation, participants were divided into three groups. One group discussed the HRD implications of managing overfishing capacity; another focused on strengthening local fisheries management capacity, while the third group considered HRD requirements in terms of integrating fisheries management into habitat management. Several issues were identified by all three groups, such as the need to manage and reduce fishing capacity, the need to develop alternative or supplementary income opportunities, and the need to address legal and institutional issues.

leaves them and their livelihoods at risk to be bulldozed by “developments” due to ignorance as to the importance and values of those resources and uses.” The statement in a way reflects the general problems generating good information on which to estimate the importance of aquatic resource and fisheries both locally and nationally.

The implications of understanding the status and trends of fisheries in terms of HRD cuts across several sectors and various levels, from the local to the national, using techniques and survey methods that are broader than those used just for fish and fisheries. As indicated by the WorldFish Centre, there is also a need to develop new methods and technique that are easy to use and apply at low cost in rural areas. This might also imply that non-fisheries agencies in charge of certain surveys and censuses would need to be trained to include fisheries aspects in their work. The importance of understanding the status and trends of fisheries is apparent both as a basis for decision-making and planning at various levels and as a source of important information for training and HRD programmes.

“Understanding of the laws and regulations relevant to fisheries is an important part of HRD for fisheries management.”

Laws and regulations

All countries have legal frameworks under which laws and regulations of relevance to fish and fisheries are organized, although some countries may not have well developed laws specific to fisheries. It is important to note that laws relevant to fish and fishing operations are broader than just fishing laws per se. They include land laws, water laws, health laws, environmental laws and even constitutions. For example, Malaysia’s constitution clearly states that offshore and coastal fisheries are federal matters while freshwater fisheries are state matters. Importantly, many non-fisheries laws and regulations, including the constitution, either explicitly or indirectly state people’s right to use and access natural resources in more general terms. In general, both fishing laws and forestry laws outline restrictions to the use of natural resources by giving directives on access, including seasonal restrictions, gear restrictions, and licenses for concessions or for operation of fishing vessels (moving from open access to more restricted access). In this way, rights-based fisheries are basically restrictions on those who do not have the right to fish in certain areas, or the

right to fish with specified methods.

Understanding of the laws and regulations relevant to fisheries is an important part of HRD for fisheries management. In many situations, it is also important to extend this knowledge to laws and regulation of countries importing fishery products, UN conventions, international laws, regional agreements and resolutions in addition to the understanding and knowledge of



national laws and regulations. The context and ways in which HRD is promoted differ considerably depending on whether it is done at the local, provincial or national level. Even appropriate knowledge of international laws and requirements should be communicated to the local and provincial levels.

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Promoting co-management approaches

Promotion of co-management approaches in fisheries

management was recommended during the meeting to facilitate consensus building among government authorities and stakeholders in areas such as managing fisheries and fishing capacity. Consensus building needs to include identification of management actions to reduce fishing capacity (particularly in destructive fishing) and supplementary and alternative livelihoods (such as aquaculture, tourism or agro-business).

In this context, the institutional and legal implications of various activities need to be clarified, together with the development of an understanding on the institutional structures needed to support co-management. In the search for alternative and supplementary income opportunities, this would imply looking into sectors other than fisheries, and facilitating exit from fisheries into another sector. Social implications have been mentioned above, and need to be reiterated. Co-management concepts are usually applied or tested in small-scale, village-based settings that do not affect the large-scale commercial side. In the overall management of fisheries, there would be a need to consider co-management scenarios for large-scale commercial operations – boats operating from and landing in more urban areas with fleets and boats owned by people based in larger cities and operated by migratory fish-workers, many of whom may actually come from other countries. In national planning for sustainable fisheries at the central level, the development perspectives of small-scale and large scale fisheries need to be balanced against the benefits to the country as a whole as well as to individuals engaged in fishing.

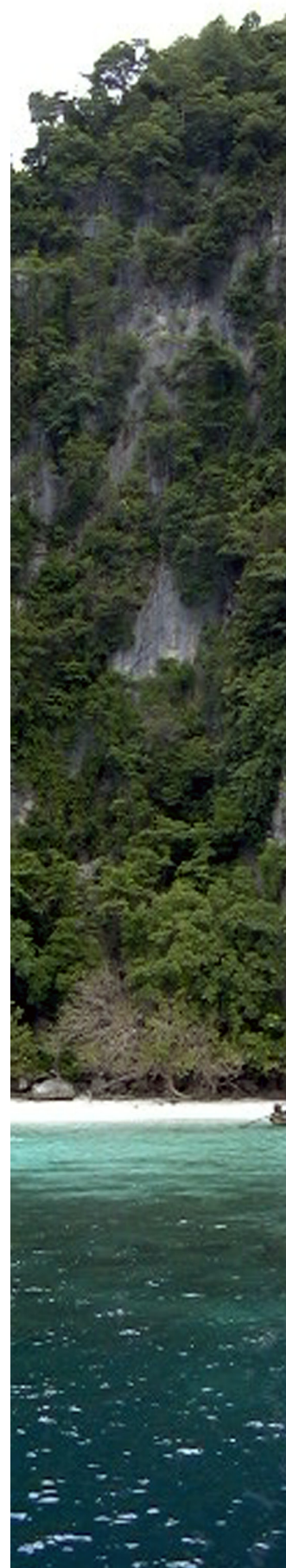
The aspects suggested to be considered for HRD imply a whole range of items, including many disciplines at all levels, but with a special focus on those directly involved: users and local authorities. Special requirements, legal provisions and institutional structures at the local level imply differences from country to country in the detailed approach. This includes due involvement of local representative bodies such as tambon administrative organisations (TAO) in Thailand, commune councils in Cambodia, people's committees in Vietnam, and local government units (LGU) in the Philippines. In a country such as Cambodia, there are specific sub-decrees for community fisheries and community forestry that need to be addressed in any HRD programme on co-management or locally-based management. In this respect, one group made reference to the need


to include HRD in establishing and managing cooperatives and local organisations, in motivating communities, in training in project management skills and in training at various levels to integrate local and provincial plans into national plans. Another important element of increased local responsibility in management is to build capacity to assess what is in their waters, and methods to assess and monitor at the community level.

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Institutional aspects

HRD and capacity building are both basically concerned with building institutional capacity and are means to promote institutional development. Reference to institutional arrangements were made under various points and will not be developed further here. Rather, it is worth repeating the notion that one critical element in the implementation of HRD programmes is to know what is needed for each category of people or institution, and how to deliver needed information and learning to the right target groups. This is not that easy, as different groups mentioned. Given the increasing complexity of institutional arrangements, there are in many cases unclear





jurisdiction and mandates, and legal frameworks may be unclear and overlap. Project allocation of funds can, with good intentions, end up helping to build capacity in places where there is no full mandate to implement certain tasks.

Replacing open access with limited access

To replace open-access fisheries regimes with limited access is frequently mentioned as one of the key tasks in moving towards more sustainable fisheries. Licensing systems are usually appropriate for commercial and larger scale fisheries, although regulations based on the allocation of rights to groups and individuals would be more appropriate for small-scale fisheries. As discussed above, licenses and rights allocations are basically ways of excluding others. Land-tenure and access rights relative to existing legal provisions need to be assessed for their relevance to the development of right-based fisheries system. It is also necessary to address social, economical and legal implications for those who are wholly or partially excluded from fishing. How to balance restrictions at the village level with restrictions on larger-scale urban-based commercial boats is another critical issue, and implies a need to have suggested implementation schemes based on national planning strategies and perspective.

In order to be effective, restrictions on people entering fisheries, or provisions for people being forced out, need to be

matched by interventions and plans in other sectors for creating alternative and supplementary income opportunities, thereby helping to limit entry while at the same time facilitate exit.

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The call for HRD in different fields and at different levels is evident, and apart from technical considerations related to issues such as boats, gear and seasonality, there is a need to focus on legal issues to fit rights-based systems into national legal frameworks, and the need to build capacity to integrate fisheries into national and local plans. In dialogue with other relevant bodies, HRD should be implemented to promote alternative and supplementary income opportunities.

HRD would also be needed to look into measures to control and regulate fishing capacity, such as freezing the number of fishing boats. Also in this context, land-tenure and access rights relative to existing legal provisions need to be followed up, especially with regards to small-scale coastal and inland fisheries. For large-scale and commercial vessels, freezing would in principle be more straightforward, and investors would have more opportunities to move their capital elsewhere. The situation in small coastal fisheries is more complex, and schemes to freeze and reduce capacity would need to be considered with packages to facilitate exit, including alternative and supplementary income opportunity to mitigate social and economic effects at the household and village levels. Subsequent and corresponding HRD at different levels and institutions would be needed.

Integrating fisheries management into habitat management

During the meeting, one group looked specifically at aspects of integrating fisheries management into habitat management. This includes fisheries issues involving habitats such as coral reefs, mangroves, sea grass, and wetlands and floodlands, in particular those used as spawning grounds, nursery grounds, feeding grounds, and fishing grounds, and those located along migratory

routes.

“In priority areas, habitat surveys should be conducted to (...) provide a basis for further development and establishment of refugia”

The points raised by the group, and the consequent need for HRD, echoed much of what was discussed in other groups, pointing to a need to review existing fishing practices, review livelihood patterns, review fishing capacity and fishing patterns, and reduce fishing pressures through limiting entry and facilitating exit while pointing to the need to identify alternative and supplementary income opportunities.

Being a bit more site-specific, the group looked into aspects to consider when developing schemes for the integration of fisheries management into habitat management in a given area. These aspects included identified needs to:

- Review existing areas and management activities
- Develop criteria for determining the priority areas
- Conduct research and identify commercial species, endangered and threatened species, and migratory and trans-boundary species
- Identify spawning, nursery and feeding grounds
- Select priority areas for fisheries management
- Consult with stakeholders on selection of priority areas and management, and
- Review legal and institutional mechanism for management of priority areas.

In priority areas, habitat surveys should be conducted to determine their function in regards to spawning, feeding, nursery grounds, and connective corridors for important commercial, threatened, and migratory species. The outcomes of the surveys should provide a basis for further development and establishment of *refugia* (areas managed for the maintenance of fish stocks) for each country, and also bilateral or sub-regional *refugia* (in the context of inland fisheries refuge).

In addition to the HRD requirements mentioned above, specific reference was made to the need to

establish and build up capacity to conduct surveys; to disseminate knowledge and experience on how to apply the eco-system approach; to build capacity to establish *refugia* for fisheries management; to be trained in land-used management and spatial planning; to raise awareness about sustainable fisheries among all stakeholders; to build capacity in the application of stock enhancement following bio-safety protocol; to build capacity to identify and explore under-exploited resources; to build capacity to provide alternative employment/ business outside of the fisheries; and to build capacity to conduct resources valuation.

Incorporating social, legal and environmental aspects

As reflected by the report of the meeting, HRD in fisheries management should be developed at all levels considering:

- **Legislation, law and regulations** – implications of international initiatives and conventions, structures and rules of local management, co-management approaches, functions of right-based fisheries and rights of resource users, institutional roles and responsibilities;
- **Social and economics** – implications of limiting access, reducing and managing fishing capacity, facilitating exit from fisheries, supplementary and alternative livelihoods, co-management concepts, survey and research techniques, including consultation and participation; and
- **Environment** – habitats and reproduction areas, migratory routes and interconnectivity, supplementary and alternative livelihoods.

“HRD activities should not only focus on different levels and sections of government-related functions but also on other stakeholders such as those engaged in fisheries and fisheries-related activities...”

In developing HRD in fisheries management, in-country coordination among agencies concerned both at the national level (fisheries, environment, forestry and other authorities as well as and other relevant

institutions) and at the local level (local administrative organizations) should be promoted. However, HRD activities should not only focus on different levels and sections of government-related functions but also on other stakeholders such as those engaged in fisheries and fisheries-related activities, the private sector, NGOs, processing facilities and industries, consumers and other people with an interest in fisheries, aquatic resources and the aquatic environment. The importance of some of these stakeholders needs to be recognized in this context, as they often constitute groups that put political pressure on the authorities to implement restrictions on the fishing sector that actually limit fishing efforts for certain species or specific areas – pressure that sometimes is based more on intuition than scientific evidence.

About the author

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Further Readings:

ICLARM (2001). Proceedings of the Workshop on Locally-Based Management of Natural Resources (especially living aquatic resources), 10-11 April 2001, Siem Reap, Cambodia.

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