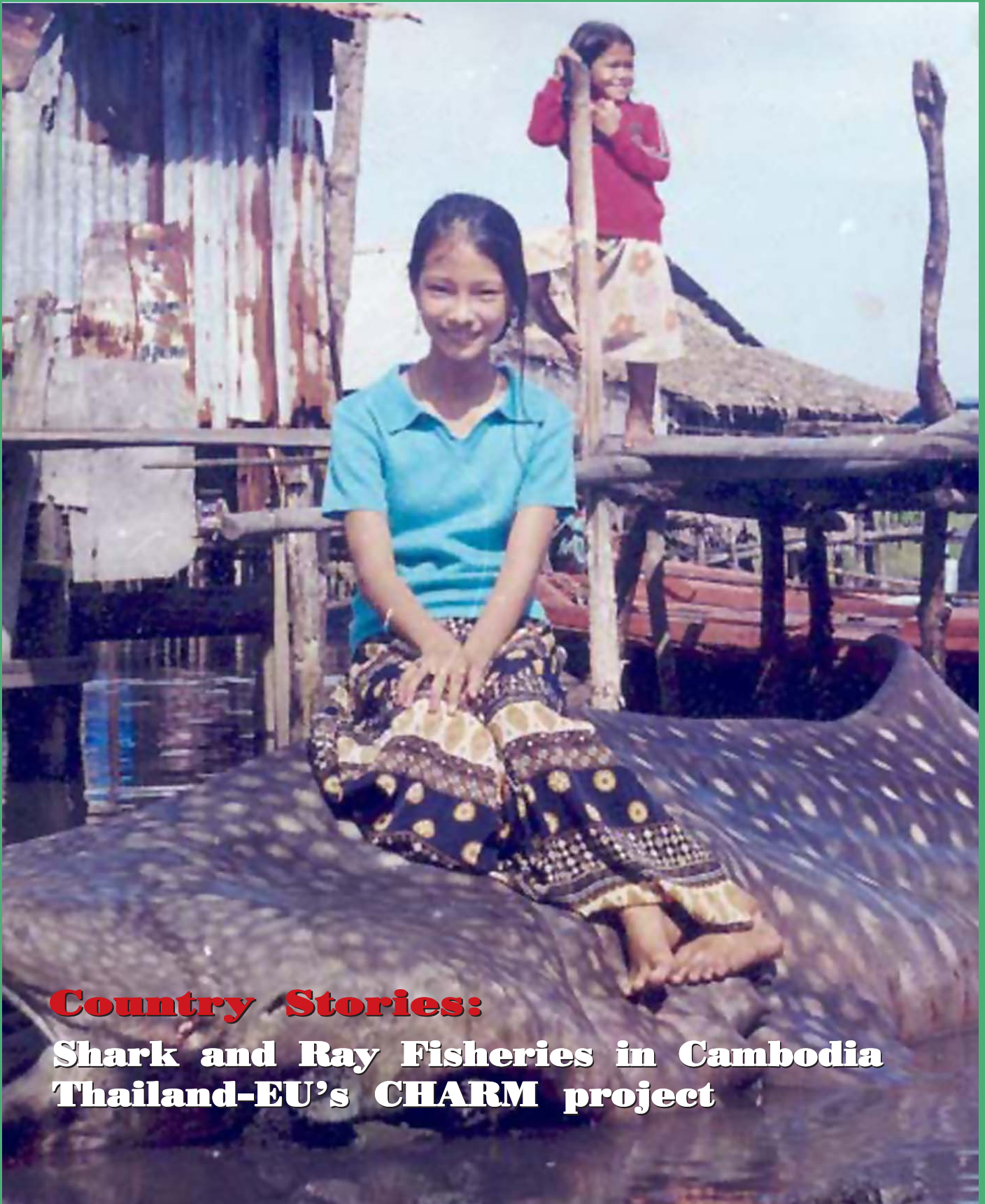


FISH *for the* PEOPLE

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Country Stories:

**Shark and Ray Fisheries in Cambodia
Thailand-EU's CHARM project**



Southeast Asian Fisheries Development Center

EDITORIAL

Policies adopted and pursued by government fisheries management agencies may often differ from recommendations made by scientists and fisheries management experts. But the ultimate goal of both agencies and experts is usually the same – the achievement of sustainable fisheries in their respective countries. Policy makers may find it difficult to decide on specific policies, as the advice they are getting may depend much on the disciplinary background of their scientific and technical advisors. The diverse and sometimes contradictory recommendations made by fisheries biologists, economists or social scientists add to the complexity of harmoniously implementing policies and required actions for priority fisheries issues, especially those related to coastal fisheries management.

Among the qualities usually considered desirable in the public sector is stable administration with efficient services provided to the public. Yet such an approach to public administration tends to encourage a *status quo*, maintaining and protecting existing socio-economic activities along the coast rather than promoting the long-term redistribution of wealth through appropriate fisheries management interventions. Such structural limitations often prevent policy modifications being initiated from within the sector itself. Instead, drastic modification of policies are often triggered by external factors. These may be policy changes at higher levels, conflicts of resource allocation among stakeholders, or external threats by international pressure groups.

SEAFDEC has long promoted sustainable fisheries in the ASEAN region, which it does through the implementation of its various technical programs. As an inter-governmental organization, SEAFDEC can also be considered an external facilitator of the adoption of necessary national actions on those issues promoted by its technical programs. In this connection, SEAFDEC has promoted policy dialogues on priority issues by identifying common regional issues and positions. The Center would also like to facilitate the exchange of experience among Member Countries through such dialogues. It



A young Khmer girl sitting on a whale shark in Koh Kong province (courtesy of DoF Cambodia)

has recognized that gaps exist between SEAFDEC's technical initiatives and national follow-up actions defined by the Resolution and Plan of Action for the Sustainable Fisheries for Food Security for the ASEAN Region, adopted by Member Countries at the Millennium Conference. Typically carried out as project-type activities, the various SEAFDEC technical initiatives have been designed to support Member Countries in their implementation of the Resolution and Plan of Action. It is expected that policy dialogues can lessen these gaps, and should also improve Member Countries' sense of ownership of projects implemented.

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Editors in Chief (Fish for the People)
SEAFDEC Secretariat
Kasetsart University Campus
P.O. Box 1046 Kasetsart Post Office,
Bangkok 10903, THAILAND
fish@seafdec.org

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Recently, a Seminar on ASEAN–Japan Cooperation for Sustainable Fisheries through SEAFDEC was organized in Tokyo. Three fisheries-related Ministers and most of the Director-General of Fisheries from SEAFDEC Member Countries participated in this important initiative for encouraging policy dialogue in the region, held in December 2003.

An important recommendation made at the seminar was to conduct a comprehensive review exercise on progress towards the national implementation of the Resolution and Plan of Action. Such serious commitment by ASEAN Member Countries will contribute to improving the link between SEAFDEC project activities and further implementation of the required national actions.

The seminar also recommended enhancing regional technical cooperation among SEAFDEC Member Countries on Human Resources Development (HRD) issues through an appropriate framework and logistic provision. As a direct follow-up activity of the seminar, a Regional Workshop on Human Resources Development for Fisheries was organized in March 2004 under the ASEAN-SEAFDEC mechanism. Conclusions were reached on various issues, including the development of a HRD inventory and the networking of HRD programs among Member Countries. Such actions will help in reviewing and mobilizing these programs for their effective regional use, and greatly facilitate national implementation of the Resolution and Plan of Action.

Finally, the seminar envisioned ASEAN becoming a “leader in sustainable tropical fisheries for the people.” This regional vision of fisheries needs still to be endorsed at the higher level of ASEAN decision-making. A good understanding of the status of ASEAN fisheries will be necessary to provide a solid basis for defining adequate regional policies, distinct from these of commercial and industry fisheries in the temperate zone. If ASEAN does not adopt and promote such a vision, it will be hard to develop specific fisheries policies relevant to the tropical and small-scale fisheries typical for Southeast Asia.

While SEAFDEC will continue to promote appropriate policy dialogues among its Member Countries, it is also essential to keep an open discussion with a wider range of stakeholders. This will ensure that policy-makers receive valuable inputs to the determination of actions to be collaboratively promoted through ASEAN-SEAFDEC mechanisms. As a reader of *Fish for People*, a publication aimed at all those who share our concern for fisheries in the region, your views on critical fisheries issues are of great interest to us. Please do share your ideas with us by email: fish@seafdec.org.

Yasuhisa Kato

FISH for the PEOPLE is a special publication produced by the Southeast Asian Fisheries Development Center (SEAFDEC) every four months as part of the ASEAN-SEAFDEC Special 5-year Program to promote sustainable fisheries for food security in the ASEAN region.

The contents of this publication does not necessarily reflect the views or policies of SEAFDEC or the editors, nor are they an official record. The designations employed and the presentation do not imply the expression of opinion whatsoever on the part of SEAFDEC concerning the legal status of any country, territory, city, or area of its authorities, or concerning the legal status of fisheries, marine and aquatic resource uses and the delimitation of boundaries.

Fisheries Management in Southeast Asia: Where Indicators Come in

by Yasubisa Kato



(Photo: courtesy of Theo Ebberts)

Introduction

Essential actions for the sustainable management of fisheries have yet to be effectively implemented by relevant government authorities. In light of this, international fisheries societies are increasingly stressing the importance of developing indicators as a basis for further appropriate management actions. There are many reasons why essential fisheries management actions have not yet been effectively promoted, despite concerned government management authorities fully recognizing the seriousness of existing problems, including the decline of fisheries resources and the unregulated character of the fisheries industries.

One main reason for the lack of progress is socio-economic: critical management actions that must be imposed will certainly have a negative impact on fishers in the short term. This is particularly so in the

case of one of the most serious problems, namely excess fishing capacity. With too many people in competition to catch declining fisheries resources, one necessary action is to reduce the numbers of fishers and fishing boats corresponding to available resources. Although such action will have a very serious effect on some fishers, it is essential for the long-term sustainability of fisheries.

“International fisheries societies are increasingly stressing the importance of developing indicators”

Because of the probable negative socio-economic impacts, government agencies usually adopt a cautious approach, and avoid such large-scale drastic social problems along their coast. Although the need to manage fisheries is not a new issue, government agencies in ASEAN and in other parts of the world have neglected

to take actions to build mechanisms necessary for the systematic management of their fisheries. These agencies are in any case reluctant to take preventive management measures to avoid future and long-term fisheries problems. Only in cases where severe management problems and social conflicts have achieved prominence have government agencies eventually been forced into taking action, and carrying out management interventions to solve none but the most immediate problems.

“Critical management actions that must be imposed will certainly have a negative impact on fishers in the short term ... particularly so in the case of excess fishing capacity”

Underneath fisheries management

One of the main reasons for the current attitude of governmental agencies dealing with fisheries management can be attributed to the fact that the required scientific information on fisheries is not always readily available, and in most instances a system to monitor and assess the status and trends of fisheries does not even exist in the government structure. One existing mechanism for collecting information on fisheries is fishery statistics. But such a system was created long before management requirements were placed on national agendas, and existing fishery statistics frameworks are often inadequate for the requirements of current fisheries management objectives. Fisheries statistics provide information on the general outlook and status of the fisheries sector at the national level, mainly as a historical record. But for management interventions, government agencies need precise and timely information for each respective fishery (such as shrimp trawl or mackerel purse seine fisheries), in specific localities, in order to properly assess a given fisheries situation.

“For management interventions, government agencies need precise and timely information for each respective fishery”

Another central source of information for fisheries management is research. The limitation here is that research is normally dictated by the scientific interests of individual researchers, not strategically guided by government policy to meet management requirements. In light of the urgent needs of government agencies to solve emerging fisheries problems, there are prospects for creating special task forces mobilizing researchers, but these are often on a temporary basis. Government requirements, on the other hand, are for a stable mechanism for dealing with fisheries management.

Considering the general situation and the lack of appropriate systems in government structures to provide the required information, the proposal to develop and use indicators for fisheries management can be considered as a temporary initiative to meet the most urgent information gaps. This should hold true until the mechanism and concepts, which are being developed by respective government agencies, can be implemented to establish preventive management measures and ensure the long-term sustainability of fisheries in each country.

“...indicators for fisheries management can be considered as a temporary initiative to meet the most urgent information gaps”

Using indicators in Southeast Asia

SEAFDEC recently organized the Second Regional Technical Consultation on the Use of Indicators for the Sustainable Development and Management of Capture Fisheries. The consultation was held in Kuala Lumpur during 9-11 March 2004, with participants including government experts invited from both ASEAN Member Countries and relevant international organizations, such as FAO. The objectives of the meeting were to review the progress of case studies using indicators in selected ASEAN Member Countries (see Box 1), and to discuss how to further promote their use as a basis for establishing an appropriate fisheries management framework in Southeast Asia.

The outcomes of the discussion which took place in the meeting are summarized in Box 2. The main issues are elaborated upon in the following paragraphs.



Box 1. Pilot projects using indicators in ASEAN-SEAFDEC Member Countries

During the first Regional Technical Consultation organized in September 2002, five pilot projects to promote the use of indicators for the sustainable development and management of capture fisheries were accepted for implementation in ASEAN-SEAFDEC Member Countries.

Since September 2003, **Brunei Darussalam** has been studying the use of indicators for the management of its trawl fishery. Existing data on the fishery selected are being compiled, and regular sampling programs are planned.

In July 2003, **Indonesia** initiated a study on a traditional demersal fishery in Pekalongan, Central Java. Existing data on the selected fishery are being compiled, and regular sampling programs are scheduled.

In early 2003, **Malaysia** started a pilot project, focusing on trawl fisheries (covering vessels of <40 GRT) in the States of Kedah and Perlis on the north-west coast of Peninsular Malaysia. Fleet, socio-economic and environmental indicators have been selected, and agreed upon following a series of meetings, discussions and workshops with stakeholders.

In December 2002, **the Philippines** started a project on the ring net fishery operating from Danao City, Cebu. This pilot project focuses on the small pelagic fishery. Resource and biological indicators have been selected. Existing data on this fishery are being compiled, and new data collected under an already initiated regular sampling program.

In July 2003, **Thailand** started a pilot study on the trawl fishery in Pranburi, Prachuab Khiri Khan Province. A meeting with stakeholders has already been held. Stakeholders including fishers are actively involved in this project. Existing data are being compiled, and new data collected through a regular sampling program. Resource, fleet, and socio-economic indicators have been included in the study.

Indicators: a working definition for the region

'Indicators' are not special technical issues, but general conceptual tools for indicating and understanding the status and trends of particular fisheries. FAO did in fact develop both a definition and a set of guidelines for indicators, taking into consideration their wider application for various governmental actions, with a special consideration for fisheries management. But such clarification at the global level is sometimes too theoretical, since it is intentionally conceived to be as broad as possible. Consequently, it lacks practical relevance for specific fisheries of Southeast Asian countries, where fisheries are mostly small-scale, use a diversity of fishing gear, and target multiple fish species.

The meeting therefore concluded by developing a set of Guidelines on the Use of Indicators for Improved Marine and Inland Fisheries Management in the ASEAN Region. These will support various types of promotional work and the application of the indicators in ASEAN fisheries.

“...developing a set of Guidelines on the Use of Indicators for Improved Marine and Inland Fisheries Management in the ASEAN Region”



Box 2. The 2nd RTC on the Use of Indicators for the Sustainable Development and Management of Capture Fisheries in the ASEAN Region – Conclusions and Recommendations*

1. Indicators should be used as effective planning, communication, monitoring and evaluation tools in fisheries management.
2. Use of indicators should be integrated into fisheries management plans. There should be clear linkages between indicators and management objectives, with special consideration to the reduction of excess fishing capacity.
3. In using indicators for fisheries management, due consideration should be made to linkages, relationships and combinations of various indicators and groups of indicators in order to provide better understanding of management problems and solutions.
4. The active involvement of stakeholders (meaning those contributing to or influenced by the outcome of fisheries management process) should be promoted, as should close consultation and communication among stakeholders. This is necessary in order to ensure their common understanding, awareness, consensus building and cooperation in selecting and using indicators, thereby enhancing their compliance in fisheries management.
5. Close coordination between a long-term routine data collection system and scientific research as well as cooperation with stakeholders in the provision of data and information should be promoted in order to develop indicators in sustainable manner.
6. Capacity building to enhance understanding of stakeholders as well as to develop the capacity of fishery officers, researchers and managers to facilitate the use of indicators for fisheries management should be conducted.
7. Guidelines on the use of indicators for improved marine and inland fisheries management in the ASEAN region should be developed, to support future promotion in the development and use of indicators.
8. While appreciating the progress of pilot projects in Brunei Darussalam, Indonesia, Malaysia, the Philippines and Thailand, all Member Countries are encouraged to further promote the implementation of pilot projects. The results of pilot projects will be useful for the formulation of the guidelines.
9. The complete work plan for 2004 and 2005 was adopted for future implementation, in order to ensure the successful implementation of the Special 5-year Project on the Use of Indicators for the Sustainable Development and Management of Capture Fisheries in the ASEAN Region.
10. There should be closer collaboration and cooperation among actors to promote the use of indicators for improved fisheries management in the ASEAN region. Actors include SEAFDEC Member Countries, and national and international bodies such as Assessment of Living Marine Resources of Vietnam (ALMRV), World Fish Center (WFC) and the Food and Agriculture Organization of the United Nations (FAO).
11. Considering the close correlation between the use of indicators and reduction of excess fishing capacity, Member Countries are encouraged to participate in the Technical Consultation on the International Plan of Action for the Management of Fishing Capacity (IPOA-Capacity), to be conducted by FAO in June 2004.

* May differ slightly from the formally adopted text



Identifying appropriate indicators

Based on the findings of the case studies conducted in the ASEAN Member Countries, appropriate applicable indicators or combination of groups of indicators are being identified. Not only scientific data are required to understand each particular fishery in each locality, especially for coastal fisheries. There are also socio-economic and financial implications. In addition, the systematic involvement of a wide range of experts and stakeholders must be considered for the collection and analysis of the data gathered through indicators.

For example, if data and information in a specific locality is limited to the total amount of fish catch for particular fisheries, it will not tell us the status and trend of fisheries or fisheries resources. If time series of such data are available and show that the trend is on increasing, it will not tell us whether the resources are improving or the numbers of fishing boats is increasing. What is needed is a combination of data on the amount of fish catch and the number of fishing boats involved in such fisheries. If both types of data are available, it is then possible to calculate a time series of catch per unit efforts ($CPUE = \text{Catch:C} / \text{Effort:E}$), which will simply indicate the trend of fisheries. On the one hand, if the weight of catch is used for “C”, CPUE will indicate the catch efficiency. On the other hand, if the value of the catch is used for C above, CPUE will then indicate the profitability of the fisheries. In both cases, CPUE will indirectly indicate the level of resource exploitation.

“The systematic involvement of a wide range of experts and stakeholders must be considered for the collection and analysis of the data gathered through indicators”

The classic biological indicators, including species composition, maturity, and size frequency data, can assist in improving the understanding of the fisheries. Yet comparative study, especially cost/benefit analysis of the various fishing methods or other livelihoods, will also indicate the relative economic status of the fisheries in the coastal communities.



Second Regional Technical Consultation on the Use of Indicators for the Sustainable Development and Management of Capture Fisheries, Lumpur, Malaysia, from 9 to 11 March 2004

Needs for consultation with stakeholders

The ultimate goal of the use of indicators is to understand individual fisheries, not national fisheries as a whole. Such an understanding will be used as a basis for the necessary management actions to ensure sustainable fisheries and the improvement of the livelihood of fishers in the long-run. To help reaching this objective, the indicators used must be simple enough for a wide range of stakeholders, including



able Development and Management of Capture Fisheries, held in Kuala

related to costs and income, which often scare stakeholders away, since the information thus gleaned might be used for taxation purposes. Therefore, full consultation with stakeholders, especially concerning the objectives and use of indicators, will facilitate data collection and support compliance of the management measures to be implemented.

Conclusion

The ASEAN Member Countries will continue to exert their efforts to achieve the sustainable use of fisheries resources through the implementation of appropriate management frameworks. It should nonetheless be recognized that the basis of these actions, which is to understand the status and trend of individual fisheries, are not simple issues, since the full collaboration of stakeholders throughout the process is required.

About the author

Yasuhisa Kato, Ph. D. in population dynamics and marine ecology, was successively President of Overseas Agrofisheries Consultants Co., Director of the FAO's Operation Services and later on Policy and Planning Division. He is today Special Advisor for SEAFDEC, based at the Secretariat, Bangkok.

fishers, to fully appreciate them. Besides, if the full cooperation with these stakeholders is not achieved, the compliance or enforcement of the management measures will hardly be achievable.

The involvement of and consultation with stakeholders in the collection of information and its analysis is plainly one of the most important prerequisite for the use and application of indicators. Researchers have frequently found some difficulties in collecting socio-economic data and information, especially those

Sida's Marine Initiative and Swedish support for cooperation with ASEAN – SEAFDEC

by Magnus Torell



A New Agreement and Support

On 29th August 2003, an Agreement was signed between the National Swedish Board of Fisheries (NBF) and SEAFDEC for Human Resource Development on the Support of Implementation of the Code of Conduct for Responsible Fisheries Management for the ASEAN Region. Activities under the Agreement are funded by the Swedish International Development Cooperation Agency (Sida). The Agreement lasts from 2003 to 2006, and marks the starting point for Sida cooperation with SEAFDEC. It will be implemented through the NBF for immediate follow-up.

“an Agreement was signed ... for Human Resource Development on the Support of Implementation of the CCRF for the ASEAN Region”

This article describes the context within which the support is being provided, seen from the perspective of a Sida proposal named Marine Initiative. The article draws on documents pertaining to the Marine Initiative, which was launched in 2001 by Sida's Department for Natural Resources and Environment.

Why the Marine Initiative?

The need to improve the management and conservation of natural resources and the environment in marine and coastal areas, including larger river and lake systems, is nowadays widely recognized. Issues and opportunities related to living aquatic resources and fisheries are very much part of this picture. The outcomes and recommendations from the World Summit for Sustainable Development (WSSD) in Johannesburg in 2002 are a good reflection of this common understanding, with clear targets set for marine fisheries and overcapacity within the fisheries sector.

Since the Stockholm Conference in 1972, Sweden has participated actively in international fora like the WSSD and in negotiations to develop international conventions, and plans of action for their implementation. Sida has also been supportive of various regional approaches for strengthening marine and coastal programs, and initiatives for aquatic resources management in general. Central to the Marine Initiative, and to Sida's belief, is the notion that a regional approach to the management and conservation of marine and coastal resources and the environment is of prime importance. Marine resources, including living aquatic resources and their utilization, have a trans-boundary and regional dimension that requires such a regional approach. Environmental pollution in one country, for example, affects other countries, and in many cases, common fish stocks are harvested on both sides of a border.

“Central to the Marine Initiative, and to Sida’s belief, is the notion that a regional approach to the management and conservation of marine and coastal resources and the environment is of prime importance”

The Marine Initiative is a response both to the need to improve the management of aquatic resources and to the structural problems behind the continuing degradation of the environment. It aims to remedy the causes of such problems, including the divided and uncoordinated responsibilities in managing the development and protection of marine and coastal areas; a division that spans over many sectors, many functions, and includes several levels of decision-making.

The shift in Sida’s approach to development and management

The Marine Initiative was developed in response to instructions from the Swedish Government to Sida. The Department for Natural Resources and Environment at Sida was the leading unit in the formulation and launching of the initiative.

The Marine Initiative builds on Sida’s long involvement in and experience of Swedish support to regional programs. The Initiative is also a reflection of a general change in Sida’s approach to deciding which regional marine programs it supports. Several examples of Swedish support to regional programs in South and Southeast Asia demonstrate Sida’s new approach to development and management can be given:

- The Bay of Bengal Program, which went through several phases, switching from a technology development focus to more social and people-focused approaches, with a constant clear fisheries sector base
- Coastal Environment Management in the South China Sea (through the ADB)
- Mekong River Commission (Environment Program)
- AIT Aqua Outreach (through the Asian Institute of Technology in Thailand)
- World Fish Centre (ICLARM) Mekong River Region Wetland Approach



- International Coral Reef Initiative (ICRI)
- Present agreements with SEAFDEC, FAO and UNEP COBSEA on fisheries and environmental aspects.

“The Marine Initiative builds on Sida’s long involvement in and experience of Swedish support to regional programs”

These programs reveal a trend from single sector programs, with an initial focus on technology development, with a gradually increasing social focus, towards more environment-based programs and onwards to the present objective of this initiative, which aims to address both fisheries sector and environmental issues by trying to find a balance between fisheries and environmental conservation.

The overarching framework of the Marine Initiative has been defined as follows:

- **The Challenge** – that achievement of sustainable development and alleviation of poverty is not possible without healthy and productive coastal areas and oceans.
- **The Ambition** – that supported activities will contribute to the reduction of poverty through improved food security, based on sustainable use and production, while maintaining the natural resource base.
- **The Vision** – that healthy, well managed and productive seas and coastal ecosystems are prerequisites to building stable and sustainable economies and income-generating opportunities in coastal states.

Sida’s basic principles and approaches

To enable more detailed program planning and dialogue with institutional partners in different parts of the world, Sida has defined a set of basic principles and approaches:

- More effective coordination, and the integration of the management of various sectors is needed.

- Due to their inherent trans-boundary character, marine and coastal interventions demand coordination between global, regional and national initiatives.
- The utilization of natural resources in marine and coastal areas must be sustainable. This requires clear and well-planned institutional framework as well as regional and national plans of actions. These will allow for development while at the same time minimizing negative effects on the ecosystems and the environment.



- Conflict mitigation efforts should be prioritized with regards to the management of shared and common resources within and between countries.
- Planning, development and management of specific ecosystems and natural resources should be implemented through decentralization of responsibilities and financial resources to the level of utilization.

“...many regional bodies responsible for either environment or fisheries have struggled to fulfil their mandates and ambitious targets”

A general impression emerging from the preparatory work for the Marine Initiative was that many regional bodies responsible for either environment or fisheries have struggled to fulfil their mandates and ambitious targets, for many different reasons. There have been



problems adapting and adjusting legal and institutional frameworks, in addition to matters such as the limited availability of human and financial resources. The latter is a result of the difficulty of obtaining financial and human resources from member countries for which these resources are often very limited. To remedy this issue, development and technical assistance could be instrumental, during the establishment and build-up stage of these regional organizations, to support ambitions to develop efficient partner institutions,

especially with regards to fisheries and the marine environment. The aim would be to provide platforms for long-term interventions based on resources available in member countries. Activities to facilitate better and more efficient links between different regional organizations should be given attention and supported.

In the development of the Marine Initiative, a geographical focus on Africa, Central America and the Caribbean and Southeast Asia emerged. After Sida had adopted the Marine Initiative, the Department for Natural Resources and Environment obtained mandates from Sida's Africa, Asia and Latin America Departments. These mandates were to elaborate program development and subsequent agreements. Program development was embarked upon and led to activities in prioritized issues and areas, on a scale appropriate to respective regional aspirations and economic situations.

“...financial and human resources from member countries [for regional organizations in developing countries] are often very limited”

During the preparations and dialogues with various institutions, various aspects were identified as critical for assessing the suggested activities and for the organizations supported. These aspects included:

- The specific importance of the marine environment and aquatic resources for the region in question, especially in regard to poverty alleviation, the overriding target for Sida support.
- “The climate” of regional cooperation, meaning the rate at which ownership is established among member countries, both formally and informally.
- The relevance of the agenda of each organization in terms of its remit and mandate.
- The possibilities of making concrete links with planned or ongoing ambitions to establish regional river commissions for shared water and related resources (links under ICARM, i.e., Integrated Coastal and River Management).

- Links and possible connections to other regional organizations and the need to adapt some type of ecosystem approach.

- The possibility of supporting developing countries to fulfil their commitments to implementing different international conventions, codes and agreements¹.

“The present approach will move away from a primary concern with marine pollution and embark on a path by which a balance between development and environment will be sought”

As mentioned above, after an early period of support that was primarily sector based, the present approach will move away from a primary concern with marine pollution and embark on a path by which a balance between development and environment will be sought with regards to development in marine and coastal areas. To be able to address various questions related to societal development in coastal areas, there is, for instance, a need to improve coastal planning. Regional environmental and resource management programs also need to cooperate with various sectors and representatives for regional and national interests such as line agencies, regional conventions, regional fisheries

bodies, as well as the private sector and civil society in general. Communication between regional organizations is also necessary in order to draw upon experiences of success.

Efforts to bring various regions on a par with global development and the implementation of international conventions and agreements is an important task. In this context, the Code of Conduct for Responsible Fisheries is a central instrument in the management of aquatic resources and environmental protection. With global agreements as a source of reference, there is a need to strengthen regional cooperation and coordinated management in support of the capacity of coastal states to improve management of their fisheries resources.

“The Code of Conduct for Responsible Fisheries is a central instrument in the management of aquatic resources and environmental protection”

Coastal states and other parties involved in fishing are responsible for agreeing on sustainable management measures, even though actual implementation remains a national undertaking. It is these responsibilities that makes regional cooperation and the promotion of a national policy in harmony with regional and international agreements imperative. These



¹ In addition to the Law of the Sea Convention (UNCLOS), others include the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), the Ramsar Convention, shipping related conventions such as MARPOL and OPRC, the Convention on Migratory Species of Wild Animals, the Precautionary Principle, and the Code of Conduct for Responsible Fishing (CCRF).

responsibilities are often difficult to live up to and make the development of regionally coordinated management difficult. In general, support should be allocated to strengthening regional mechanisms through support to regional “secretariat functions” and to facilitating exchange of information, compilation of scientific information, organizing workshops and negotiations, and human resources development. This could include assistance in bringing information to wider audiences, including information on the status of available resources and the environment, fishing capacity, and the social and economic importance of small-scale and large-scale fisheries.

Sida agreements in four regions under the umbrella of the Marine Initiative

The geographical focus of the Marine Initiative refers to four distinctive regions. Following the preparatory phase, decisions on support have been taken and agreements either signed or prepared in all four regions. These have implied a set of agreements with FAO, for regional fisheries bodies, and with UNEP, for support to established regional seas programs, for Central America and the Caribbean, East Africa and West Africa regions.

In Southeast Asia and the ASEAN region, agreements were signed during 2003 with:

- The Southeast Asian Fisheries Development Center (SEAFDEC) for Human Resource Development on the Support of Implementation of the Code of Conduct for Responsible Fisheries Management for the ASEAN Region;
- FAO and the FAO Regional Office for Asian and Pacific (FAO RAPI) for Strengthening the Capacity in Fisheries Information Gathering for Fisheries Management;
- The UNEP Coordinating Body for Seas of East Asia (COBSEA) for support to the implementation and development of the regional Action Plan.

Sida-SEAFDEC agreement for Human Resource Development

The support is targeted at ASEAN Member Countries, which are currently producing 11% of global fisheries products. For the past five years, the established ASEAN fisheries framework has been coordinated by SEAFDEC, and the special focus for both the region and national governments is on the implementation of the Code of Conduct for Responsible Fisheries (CCRF).



During the Millennium Conference in November 2001, a capital landmark for the region, a Resolution and Plan of Action on Sustainable Fisheries for Food Security for the Region was adopted by ASEAN's fisheries-related ministers. This is considered as a common regional fisheries policy for the region alongside the Code of Conduct. The commitment by governments, through the Resolution, to promote sustainable fisheries both in the region and in each of the countries levels facilitates the promotion and implementation of activities related to the Code of Conduct.

In the same spirit, SEAFDEC is implementing a program for the Regionalization of the Code of Conduct for Responsible Fisheries (RCCRF) as one of the ASEAN- SEAFDEC collaborative programs. The program aims to formulate regional guidelines for the implementation of selected Articles of the Code of Conduct in order to accommodate regional priorities, needs and specificities. The existence of the Resolution and Plan of Action and the Guidelines (in effect, technical clarifications) related to the Code of Conduct has enhanced regional and national awareness about the Code of Conduct. Swedish support will be used to further promote the implementation of issues related to fisheries management in the RCCRF through appropriate human resource development activities.

“If the required actions to manage the fisheries as proposed in the Regional Guidelines to the Code of Conduct are not implemented, fisheries resources will further decline, and the aquatic environment will continue to deteriorate”

It is necessary to accommodate in the Code of Conduct specific regional features of fisheries in tropical and developing countries. Additional steps must also be taken to adjust or elaborate regional guidelines to the Code of Conduct so that it becomes useful as a practical framework for developing countries. The harmonization of fisheries management in developing countries, with both the protection of the aquatic environment and an effective implementation of the Code of Conduct, is of great importance. Actual

implementation is critical for the achievement of global sustainable fisheries and for support in attaining targets set at the WSSD in Johannesburg.

Fuelled by increasing domestic and international demand for fisheries products, the fisheries sector in developing countries, especially in Southeast Asian countries, has grown rapidly to become an important element of economic development. At the same time, it has been recognized that the status of fisheries resources has deteriorated through increased and unregulated fishing. If the required actions to manage the fisheries as proposed in the Regional Guidelines to the Code of Conduct are not implemented, fisheries resources will further decline, and the aquatic environment will continue to deteriorate. This deterioration will first affect those engaged in small-scale fisheries, who are the large majority of those engaged in the sector, and who presently are already suffering from declining catches and income, subsequent to the decreasing fisheries resources.

A drastic change in the course of action is needed. Effective implementation of the RCCRF could be instrumental in this process. It is a social and environmental necessity to mitigate the impact of fisheries on the aquatic environment and to improve the general poverty status of those involved in small-scale fisheries.

The broad objective of the Swedish support is to facilitate the national implementation of issues related to fisheries management in the CCRF through appropriate human resource development activities. These include in particular awareness building, training and capacity-building activities. More specifically, the support from Sida aims:

1. To enhance awareness of the necessity of appropriate fisheries management to achieving sustainable fisheries
2. To advise stakeholders on the mechanisms of innovative fisheries management systems
3. To promote various human resource development activities on fisheries management among identified target groups, and

4. To identify various options for alleviating the problems caused by the excessive levels of fishing capacity.

As both the Code of Conduct itself and the Regional Guidelines cover a wide range of issues, and as different types actions are required in achieving sustainable fisheries, activities and recommendations under specific programs need to be focused through identification of problem areas and related target group. Priority setting exercises are important in support of ASEAN Member Countries' promoting and implementing activities leading towards sustainable fisheries and alleviation of poverty. Such priority areas includes reduction of over capacity in fishing, approaches to regulating the current open access regime, and decentralized fisheries and environmental management.

“Priority areas includes reduction of over capacity in fishing, approaches to regulating the current open access regime, and decentralized fisheries and environmental management”

Through implementing activities, it is envisaged that the Sida support will contribute towards:

- Building a consensus among ASEAN Countries
- Implementing the ASEAN-SEAFDEC Collaborative Program, and
- Enhancing ownership and collaboration among ASEAN Member Countries.

About the author

Magnus Torell, a Swedish national, is employed with support from Sida, Sweden, as a Senior Advisor to SEAFDEC. Before joining SEAFDEC in 2003 he was for seven years with ICLARM (now the World Fish Centre). He came to ICLARM from Sida, in Stockholm, employed as a Senior Programme Officer for eight years. He hold two academic degrees, one in Law and one (PhD) in Economic Geography.





The SEAFDEC Working Group on Regional Fisheries Policy

by Josephine Kato
by Sammy A. Malvas

Introduction

SEAFDEC, the Southeast Asian Fisheries Development Center, is an autonomous intergovernmental body established as a regional treaty organization to promote sustainable fisheries in Southeast Asia. The Secretariat, based in Thailand, is its administrative arm. Four technical departments are hosted by Member Countries: the Training Department in Thailand; the Marine Fisheries Research Department in Singapore; the Aquaculture Department in the Philippines; and the Marine Fisheries Resources Development and Management Department in Malaysia. Staff hired and employed in the Departments are mostly local.

“A legitimate concern has been that other Member Countries might not recognize the validity of policy options, in relation of proposals taking insufficient account of actual national situations”

As an organization, SEAFDEC’s existence is supported financially by contributions by Member Countries and by various donors involved in the implementation of regional programs, projects and activities. Its funding is partly supported by the host governments of its technical departments, in the local currency. Such unique mechanism has made SEAFDEC more stable despite the financial crisis experienced in the region and enabled its survival through the years.

The Secretariat, as the administrative arm of SEAFDEC, has to coordinate and oversee the general policy and planning of the Center, generate and formulate regional fisheries policy concepts, and coordinate the development and implementation of programs seen as of first priority in the region by the respective Departments. However, as most Secretariat staff are locally hired, a legitimate concern has been that other Member Countries might not recognize the validity of policy options, in relation of proposals taking insufficient account of actual national situations. To

enhance the Secretariat's coordination and policy formulation functions, the setting up of a group composed of staff from all Member Countries was believed necessary. The SEAFDEC Working Group on Regional Fisheries Policy was established in response to this need.

Inception

The origins of the Working Group on Regional Fisheries Policy (WGRFP) can be traced to the 30th Meeting of the Council of the Southeast Asian Fisheries Development Center in March 1998. The meeting tackled the need for a mechanism of cooperation between ASEAN Member Countries and SEAFDEC for the development of sustainable fisheries in the region. The proposed mechanism was envisioned as having two stages: strengthening SEAFDEC regional functions, and preparing a working mechanism within ASEAN Member Countries. The establishment of the Working Group was proposed as one of the major undertakings under the first stage. Council Members approved the proposal, marking the establishment of the WGRFP.

“The establishment of the Working Group was proposed as one of the major undertakings under the first stage [i.e. strengthening SEAFDEC regional functions]”

Composition

In the proposal presented during the 30th SEAFDEC Council Meeting, the number of Working Group members was initially set at four, selected from among the Member Countries. It was considered as an effective size, at least until the appropriate mechanisms were settled down. Establishing the Working Group took time, due to various administrative difficulties, communication among Member Countries, and their eventual nomination of candidates. The first Working Group member from the Philippines arrived at the Secretariat in October 1998, followed by delegates from Thailand, Vietnam and Malaysia. The Working Group on Regional Fisheries Policy was officially inaugurated at the SEAFDEC Secretariat in October 1998.

Membership has expanded progressively with increasing recognition by Member Countries of the Working Group's relevance. At present, the Working Group is composed of members from Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand, and Vietnam. Other SEAFDEC Member Countries like Brunei and Singapore have not been able to send representatives due to limited available staffing in relevant government agencies, but nevertheless they do participate in the activities of the Working Group on a short-term basis.

Given the difficulties of nominating senior level officials, and in view of the cost of seconding officers, Member Countries make sure that staff come from the middle-level positions of concerned government agencies, are of high calibre, preferably with international experience, and with a good command of English. Seconded staff are expected to have the potential to be involved in future policy-making processes. The secondment period is for a period of six months, renewable for a subsequent period of six months depending on performance, as evaluated by the SEAFDEC Secretariat and the Special Advisor, Dr. Yasuhisa Kato.

Working mechanism and terms of reference

The WGRFP is stationed at the SEAFDEC Secretariat in Bangkok, Thailand. Currently, the Working Group is under the direct supervision of the Policy and Program Coordinator (PPC) of the Secretariat. It is supervised by the Secretary General, under the leadership of the Special Advisor.

The primary tasks envisioned for the Working Group include a) giving timely advise to the Secretary General of SEAFDEC and Department Heads on relevant regional and global and, if necessary, suggest appropriate actions to be taken; b) prepare draft regional fisheries



policies for the Southeast Asian region; and c) coordinate the implementation of regular and extra-budgetary funded regional programs with concerned Departments. With these in mind, the Working Group's Terms of Reference were crafted as follows:

1. Careful identification and prioritization of fisheries issues, and monitoring of activities on issues at global, regional, and national levels, with periodic reporting of the issues to National Coordinators of ASEAN-SEAFDEC Member Countries;
2. Initiation and promotion of the formulation of regional fisheries policies, including the preparation and finalization of required working papers and position papers;
3. Facilitation and promotion of activities and cooperation with other organizations such as ASEAN; and
4. Coordination, formulation and implementation of regional programs with SEAFDEC Member Countries.

“Over the years, SEAFDEC and its Member Countries have acknowledged the important role played by the WGRFP in overall SEAFDEC regional functions”

Each member of the Working Group serves as liaison officer for their respective governments and ensures coordination between SEAFDEC, its Departments and Member Countries. Each member is also assigned responsibility for specific technical issues, on which they serve as the focal person to coordinate identified activities. They are also consigned to coordinate and monitor certain projects such as those under the ASEAN-SEAFDEC collaboration mechanism – the Fisheries Consultative Group (FCG) and those projects under the Special Five-Year Program. In addition, the Working Group also provides technical inputs in the preparation of each issue of *Fish for the People*.

Significance of the Working Group's work

The WGRFP's importance is two-fold. First, in carrying out its mandate and its terms of reference, it has contributed substantially to identifying relevant international issues with regional or national implications. Second, it has been involved in formulating policy proposals relating to those issues. The Working Group has also been involved, in one way or another, in assisting the SEAFDEC Secretariat in program



Members of the Working Group on Regional Fisheries Policy in 2002 (above) - from left to right: Mr. Myint Pe (Myanmar), Mr. Mao Sam Onn (Cambodia), Ms. Saadiah bt Ibrahim (Malaysia), Dr. Mala Supongpan (Thailand), Mr. Vu Dzang Tien (Vietnam), and Mr. Severino Escobar, Jr. (Philippines);

and the current Working Group members (right) - from left to right: Mr. Than Oo Wai (Myanmar), Dr. Smith Thummachua (Thailand), Ms. Tran Thi Tuyet Lan (Vietnam), Mr. Trian Yunanda (Indonesia), Mr. Sammy A. Malvas (Philippines), Mr. Buoy Roitana (Cambodia), and Mr. Abdul Rahman bin Abdul Wahab (Malaysia).



formulation and development, and in monitoring the progress of various regional programs. Over the years, SEAFDEC and its Member Countries have acknowledged the important role played by the WGRFP in overall SEAFDEC regional functions. The increase in membership from four to seven may also be an indication of a continuing and growing commitment by Member Countries, and their recognition of the importance of the work being carried out by the Working Group.

The establishment of the Working Group, and the secondment of staff by Member Countries, is also a means of human resource development. Staff seconded to the WGRFP get valuable experience in policy formulation and technical discussions, and exposure to regional fora. They have the chance to widen their perspectives while working on relevant international, regional, and even national issues, and are able to analyze and formulate policy recommendations for consideration by higher policy and decision-making bodies. They are exposed to wider



From top to bottom: Ms. Nor Ainy Mahyuddin, Working Group member from Malaysia, making her presentation during the ASEAN-SEAFDEC Conference in 2001; Working Group Members at the Preparatory Meeting on Issues Related to Fish Trade and Environment in Hat Yai, Thailand in 2004; and the Working Group Members during the ASEAN-SEAFDEC RTC on Fishery Statistics in Hua Hin, Thailand in 2004.



international and regional issues related to issues including fisheries management, aquaculture, fish trade and the environment, utilization of fish and fishery products, and regional and international policy

formulations. The work also requires serious coordination and constant communication with the Member Countries, the Departments, and with other regional and international organizations, including

funding and donor agencies. Working Group members are able to establish linkages and gain better appreciation of the relevance of coordinated works. The experience is most useful when seconded staff return to their respective countries after completing their service on the Working Group.

Because of the experience gained by serving on the Working Group, former members are frequently tapped by other international organizations in the region, including FAO; others have been promoted in their respective government units. In this sense, the Working Group has also become a stepping stone for professional and career advancement.

The future

The WGRFP will continue to be a SEAFDEC program under the management of the Secretariat. During the recently concluded SEAFDEC

Past and present WGRFP members

Cambodia

Mr. Mao Sam Onn June 2002 – June 2003
Mr. Buoy Roitana July 2003 – present

Indonesia

Mr. Saut Tampubolon May 2002 – Nov 2002
Mr. Bambang Edi Priyono April 2003 – February 2004
Mr. Trian Yunanda May 2004 – present

Malaysia

Mr. Abdul Hamid Yasin May 1999 – April 2000
Mr. Nik Ab. Wahab bin Mat May 2000 – April 2001
Ms. Nor Ainy Mahyuddin May 2001 – April 2002
Ms. Saadiah bt Ibrahim June 2002 – June 2003
Mr. Abd. Rahman bin Abd. Wahab February 2004 – present

Myanmar

Mr. Khin Ko Lay August 2000 – July 2001
Mr. Myint Pe October 2001 – March 2003
Mr. Aung Htay Oo April 2003 – April 2004
Mr. Than Oo Wai May 2004 – present

Philippines

Mr. Rafael V. Ramiscal September 1998 – October 2000
Mr. Severino Escobar, Jr. February 2001 – June 2003
Mr. Sammy A. Malvas September 2003 – present

Thailand

Mr. Choomjet Karnjanakesorn December 1998 – November 1999
Dr. Mala Supongpan January 2001 – May 2003
Dr. Smith Thummachua January 2004 – present

Vietnam

Mr. Phan Hong Dung March 1999 – March 2000
Mr. Nguyen Lam Anh May 2000 – November 2001
Mr. Vu Dzong Tien June 2002 – June 2003
Ms. Tran Thi Tuyet Lan July 2003 – present

Program Committee Meeting in Manila, members of the Committee reiterated the two main functions of the Working Group, in liaising with Member Countries and assisting SEAFDEC in the coordination of regional programs, and emphasized their importance. The Committee also supported the suggestion that members be assigned to specific technical issues and topics in order to further enhance the effectiveness of the Working Group.

“...the two main functions of the Working Group [are] in liaising with Member Countries and assisting SEAFDEC in the coordination of regional programs”

In essence, the future success of the Working Group will depend on how well it continues to carry out its functions, the benefits it provides to SEAFDEC and its Member Countries, and how it can be sustained financially. The WGRFP has played an important role in the coordination process of SEAFDEC and development of fisheries policy options for the region. In many instances, SEAFDEC and Member Countries have recognized the significance of the functions fulfilled by the Working Group, and the relevance of its tasks to national and regional initiatives, not to mention its direct contribution to the country’s human resource development program.

As long as there are regional fisheries-related issues to be addressed, programs to implement and coordinate, and a need for a region-wide manpower development, the WGRFP will continue to fulfil a most useful function. It is also anticipated that the Working Group members will continue to support the regional programs even after their assignment periods, since they will be responsive to the importance of regional collaboration along their carrier in their respective government.

About the author

Sammy Malvas is the current WGRFP member from the Philippines. He is working with the Policy and Economics Division of the Philippines’ Bureau of Fisheries and Aquatic Resources (BFAR). His expertise is in the field of ecological marine management, specifically dealing with environmental risk assessment and ecotoxicology.



FISH *for the* PEOPLE



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There, you will be able to download previous issues of *Fish for the People* in PDF format and consult up-to-date information on the publication.

INVITATION TO CORRESPONDING WRITERS

With several issues of *Fish for the People* already published, we hope that we have given you a good idea of the aims and general tone of the publication. So far, we have relied mostly on contributions by SEAFDEC staff. We are now inviting contributions from other writers interested in promoting relevant issues on fisheries in developing countries. While the publication will continue to focus on the Southeast Asian region, future issues can address relevant issues from other tropical regions.

Fish for the People is a policy-orientated publication. It is not a forum for publication of research findings, nor is it intended to provide detailed technical information. The publication targets not only experts or scientists, but also other traditionally less technically-oriented fisheries stakeholders, such as policy-makers, donors, government staff, managers, and more generally, an informed lay public with an interest in how our fisheries are managed.

Readable, accessible articles that address the various issues discussed at the ASEAN-SEAFDEC Millennium Conference are most desired. Articles should focus on newly emerging issues relevant to sustainable regional or tropical fisheries management. They should present important issues with clear regional messages, emphases, thrusts, problem areas, and propositions for improving current situations.

Through *Fish for the People*, we hope that authors will gain the attention and consideration of targeted fisheries stakeholders, and contribute to the future achievement of more sustainable fisheries.

Correspondence related to editorial matters should be sent to:

Editors in Chief (*Fish for the People*)
SEAFDEC Secretariat
P.O. Box 1046, Kasetsart Post Office
Bangkok 10903
Thailand

Or e-mailed to fish@seafdec.org

Detailed information for the submission of an article is available on <http://secretariat.seafdec.org/fftp/Home.htm>

Successful first Andaman Sea



After having undergone construction in... has finally been formally handed over to... replacement to the old MV PLATOO under...

Primarily, MV SEAFDEC2 is to serve... programs "The Harvesting of Under-... Department. The ship will be fully mobilized... concerned staffs of the respective ASEAN...

Among other objectives, MV SEAFDEC2... particular areas of Southeast Asia, taking... of the under-exploited fisheries resources... of the sense ownership of the research vessels... such as cost sharing scheme mechanism... Member Countries with due consideration...

We are glad, with all the ASEAN Member...

First sea trial for MV SEAFDEC2 in the last April



In Japan, its launching ceremony in December 2003, MV SEAFDEC2 was transferred to SEAFDEC in March 2004. The ship is presented to SEAFDEC as a grant under the Japanese Regional Grant Aid Program.

As part of an additional component to the Special 5-year and FCG "Exploited Resources" under the responsibilities of the Training and Technical Assistance Unit, the ship is mobilized to conduct required joint surveys in national waters with the ASEAN Member Countries.

MV SEAFDEC2 will help in understanding the status of fisheries resources in the region. Taking into account the existing and potential fisheries, the identification and mobilization of potential fishing technologies, and the enhancement of technical cooperation work with the host governments through mutual financial cooperation and technical assistance. The specific study areas will be determined by respective agreements on the bottom structure and the depth of the water.

ASEAN Member Countries, to welcome the new ship.

Reported by Abdul Rahman Abdul Wahab

Technical Characteristics

Built to have 207 gross tonnage with 32.5 meter long and 7.2 meter wide, MV SEAFDEC2 is equipped with seven main fishing gear namely Bottom Trawl & Pelagic Trawl, Pelagic Longline, Bottom Vertical Longline, Trap/Pot, Drift Gillnet and Automatic Squid Jigging. Some of these fishing gears are connected with modern fishing aid machineries. In order to enable MV SEAFDEC2 to honor her mandate and tasks in the field of stock assessment, the ship is outfitted with a number of last generation oceanographic instruments, navigation and marine electronic equipments. MV SEAFDEC2 will limit herself to study waters of no more than 200 meter depth.

Shark and Ray Fisheries in Cambodia: A Review of National Management Activities

by Ing Try, Kathe R. Jensen,
Pich Sereyath, and Va Longdy



*Whale shark caught in a *Stomberomorus* gill net (Mong Trey Beka) about 4 km from the beach on the outer side of Koh Kong island in 1998*

Introduction

In recent years, there have been increasing international concerns about the sustainability of shark fisheries. The demand for shark and ray products, such as fins, cartilage, skin, meat, oil and liver, has been increasing. Several countries have tried to place certain species on the CITES appendices in order to prevent, or at least control, the international trade in products of these species. However, only in February 2003 were three species of sharks approved for listing in Appendices II and III. The major problems faced by those wanting to include sharks in the CITES appendices have been the difficulty in identifying the products of individual species after they have been processed, and the general lack of biological and trade data. No shark species is known to be in immediate danger of global extinction, but because of their long life spans and slow reproduction, careful management of shark fisheries is essential.

The United Nations Convention on the Law of Sea (UNCLOS) and its agreement on management of fish stocks, and the FAO Code of Conduct for Responsible Fisheries (CCRF) both recommend that member states

of FAO and CITES develop a framework and regulations for conservation and management of sharks and rays for the sustainable use of these resources. CITES is also collaborating with FAO on the implementation of the International Plan of Action for Sharks (IPOA-SHARKS). Yet very few countries have so far taken steps towards implementation.

“No shark species is known to be in immediate danger of global extinction, but because of their long life spans and slow reproduction, careful management of shark fisheries is essential”

In documents pertaining to IPOA-SHARKS, the term ‘shark’ means all species of sharks, skates, rays and chimaeras in the class Chondrichthyes; and the term ‘shark catch’ includes directed, by-catch, commercial, recreational and other forms of taking sharks. The term ‘shark’ used in this article differs from that used in IPOA-SHARKS. Here, sharks and rays, including skates, are treated separately, whereas the term ‘shark catch’ is the same as in IPOA-SHARKS.

“Cambodia is both a signatory party to CITES and a member of FAO, and thus is required to implement a national plan of action for the conservation and sustainable use of shark and ray resources”

Cambodia is both a signatory party to CITES and a member of FAO, and thus is required to implement a national plan of action for the conservation and sustainable use of shark and ray resources. But at the national level many questions about shark and ray issues are asked, including questions about the need to conserve sharks and rays, and the importance of sharks and rays fisheries. This article reviews background information that may be useful in answering these questions.

Shark and ray fisheries

In Cambodia, marine living resources, including sharks and rays, have not yet been studied in detail. According to recent literature 20 species of sharks and 22 species of rays are found in Cambodian waters.

The whale shark is rare in Cambodia. In 1973, a whale shark weighing between 600 and 800 kg was shot by a soldier in Koh Kapi, Koh Kong province. On 12 October 1998, another whale shark was caught in a Scomberomorus gill net (Khmer name *Mong Trey Beka*) some four km from the beach on the outer side of Koh Kong Island. The

five-meter long whale shark (pictured on the left) weighed between 800 and 1000 kg. Although some local people were afraid to eat it, fearing the powerful spirit of such a large creature, it was eventually eaten by less superstitious folks.

Most Cambodian sharks and rays are small, demersal species found in a wide variety of habitats from open oceans to brackish water, including both inshore estuaries and bays, and freshwater rivers and lakes. In 1999, fishers in Prey Veng province caught a freshwater stingray (*Himantura chaophraya*) weighing about 18 kg.

No.	Scientific name: (Species)	Vernacular name	Local name
	Rhincodontidae		
1	<i>Rhincodon typus</i> (Smith, 1828)	Whale shark	Chlarm Yaak
	Hemiscylliidae		
2	<i>Chiloscyllium indicum</i> (Gmelin, 1789)	Longtail Carpet Sharks	Chlarm sangha
3	<i>Chiloscyllium griseum</i> (Muller & Henle, 1839)	Slender bamboo shark	Chlarm russey
4	<i>Chiloscyllium punctatum</i> Muller & Henle, 1818	Grey bamboo shark	Chlarm Chkuot
5	<i>Chiloscyllium plagiosum</i> (Bennett, 1830)	Brown-banded cat shark	
	Stegostomatidae		
6	<i>Stegostoma varium</i> (Seba, 1761)	Zebra Sharks	
7	<i>Stegostoma fasciatum</i> (Hermann, 1783)		Chlarm Chkuot
	Ginglymostomatidae		
8	<i>Nelurus ferrugineus</i> (Lesson, 1830)	Leopard shark	Chlarm
	Lamnidae		
9	<i>Isurus oxyrinchus</i> (Rafinesque, 1809)	Nurse sharks	Chlarm
	Scyliorhinidae		
10	<i>Cephaloscyllium fasciatum</i> (Chen, 1966)	Tawny nurse shark	Chlarm
	Carcharhinidae		
11	<i>Galeocerdo cuvier</i> (Peron & Lesueur, 1822)	Mackerel sharks	Chlarm Chkuot
12	<i>Scoliodon laticaudus</i> (Muller & Henle, 1838)	Shortfin mako	Chlarm
13	<i>Scoliodon walbeehni</i> (Bleeker, 1856)	Cat Sharks	Chlarm Chkuot
14	<i>Carcharhinus limbatus</i> (Valenciennes, 1839)	Reticulated swell shark	Chlarm
15	<i>Carcharhinus sorrah</i> (Valenciennes, 1839)	Ground or Requiem Sharks	Chlarm och kantuy
	Triakidae		
16	<i>Mustelus griseus</i> (Pietzschmann, 1908)	Tiger shark	Chlarm kla
17	<i>Paragaleus tengi</i> (Chen, 1963)	Spadnose shark	Chlarm
	Sphyrnidae		
18	<i>Sphyrna zygaena</i> (Linnaeus, 1758)	Blacktail reef shark	Chlarm Chkuot
19	<i>S. lewini</i> (Griffith & Smith, 1834)	Blacktip shark	Chlarm
	Rhinobatidae		
20	<i>Rhinobatos typus</i> (Bennett, 1830)	Spottail shark	Chlarm och kantuy
21	<i>Aplocheilichthys</i> sp.?	Hound shark	
	Rhynchobatidae		
22	<i>Rhynchobatus djiddensis</i> (Forsskål, 1775)	Spotless smooth hound shark	Chlarm
	Dasyatidae		
23	<i>Dasyatis akejei</i> ?	Straight-tooth weasel shark	Chlarm
24	<i>Dasyatis kuhlii</i> (Muller & Henle, 1841)	Hammerhead sharks	
25	<i>Dasyatis uarnak</i> (Forsskål, 1775)	Smooth hammerhead shark	Chlarm Ek
26	<i>Dasyatis zugei</i> (Muller & Henle, 1841)	Scalloped hammerhead	
27	<i>Dasyatis leylandi</i> (Last, 1987)		
28	<i>Dasyatis bennetti</i> (Muller & Henle, 1841)		
29	<i>Himantura toshi</i> (Whitley, 1939)		
30	<i>Himantura undulata</i> (Bleeker, 1852)		
31	<i>Pastinachus sephen</i> (Forsskål, 1775)		
32	<i>Taeniura melanospila</i> (Bleeker, 1853)		
33	<i>Taeniura lymma</i> (Forsskål, 1775)		
34	<i>Urolophus flavomaculatus</i> (Last & Gomon, 1987)		
	Gymnuridae		
35	<i>Gymnura australis</i> (Ramsay & Ogilby, 1886)	Giant shovelnose ray	Chlarm Truoch
	Myliobatidae		
36	<i>Aetomyelus nichofii</i> (Bloch & Schneider, 1801)	Spotted shovelnose ray	Chlarm Truoch
37	<i>A. milvus</i> (Muller & Henle, 1841)		
38	<i>Aetobatus narinari</i> (Euphrasen, 1790)		
39	<i>Myliobatis tobijei</i> ?		
40	<i>Rhinoptera javanica</i> (Muller & Henle, 1841)		
	Mobulidae		
41	<i>Manta birostris</i> (Donndorff, 1798)	White-spotted shovelnose ray	Chlarm Truoch Och Sar Bobel
		Blue-spotted stingray	
		Brown reticulated stingray	Bobel Spoa
		Black-spotted stingray	
		Leopard whipray	
		Cowtail stingray	
		Blue-spotted fantail stingray	Bobel Khla
		Patchwork stingray	
		Rat-tailed ray	
		Barbless eagle ray	
		Spotted eagle ray	
		Spotted eagle ray	Bobel Ork
		Manta ray	

Shark and ray species occurring in Cambodian waters

In December 2002, another freshwater stingray of the same species was caught by fishers using a bottom trawl (*yang kav*) at Peam Chhor in Prey Veng province. This fish was 4.2 m in length, 2.1m in diameter, and weighed 180 kg.

“Most Cambodian sharks and rays are small, demersal species found in a wide variety of habitats from open oceans to brackish water, including both inshore estuaries and bays, and freshwater rivers and lakes”

Data collection on shark fisheries

Preliminary data indicate that at least five large joint venture vessels are operating in Cambodian waters, buying and loading marine products to be landed and marketed in Thailand. The owners of these large vessels are Thai fishers who have obtained a license to operate in a trawl boat in Cambodian waters by “mixed-commission” from the provincial authorities on Koh Kong. Cambodian trawlers have agreements to transfer

their catch maybe four times a month. There are also some pair trawlers from Thailand with licenses to operate in the overlap zone of Thai and Cambodian EEZs. Pair trawlers can catch upwards of 300 kg sharks per month.

There are no shark data for small-scale fishing with hooked lines (*santouch trey ka ok*). However, it is estimated that lines with 3,000 hooks can catch 30-50 kg per day. Based on preliminary estimates, the total catch of shark can be calculated to be in the range of 837 – 1,117 t per year. Recent studies have shown that most of the sharks caught are small, weighing at most two kg per head.

Cambodia has not yet developed any collaborative mechanism with commercial or large-scale industries to collect data and information about sharks. Official statistics from the Department of Fisheries do not have a separate category for sharks. There is however a separate category for rays, although species are not distinguished, due to the difficulty in doing so. For these fish, data from the Department of Fisheries show that capture averages 412 t per year, and appears to be decreasing. These figures are less than actual capture, as fishers sell small fish and species with no commercial value mixed with the trash fish. Rays included in the statistics are the edible species and those that the fishers can process.

Fishing gear used for capturing sharks and rays

In Cambodia, sharks and rays are caught as by-catch with several types of fishing gear, including long-lines, gill net, grouper trap and demersal or bottom trawls

For further reading, see for example:

SEAFDEC (2002). Proceedings of the ASEAN-SEAFDEC Regional Meeting on Fish Trade and Environment, Southeast Asian Fisheries Development Center, Bangkok, Thailand.

FAO (1998). The International Plan of Action for Conservation and Management of Sharks. Consultation on Management of Fishing Capacity, Shark Fisheries and Incidental Catch of Seabirds in Longline Fisheries. Food and Agriculture Organization of the United Nations, Rome, Italy.



Freshwater stingray (Himantura chaophraya) caught by bottom trawl (yang kav) at Peam Chhor, Prey Veng Province, in December 2002 (Photo: Nicolaas van Zalinge).

operated by boats with engines from 200 hp working in-shore and off-shore waters. Large sharks are only caught in off-shore waters. There is no fishing gear in Cambodia that is specifically designed for catching sharks.

Marketing of sharks and rays

In Cambodia, fresh shark products such as meat and fins are consumed locally in coastal areas and in cities. The consumer market price of fresh shark meat is about 3,000 to 4,000 riels per kg (about US\$ 1) in coastal areas. Only big rays are sold in local markets at a price of about 1,000 to 2,000 riels per kg. Small rays are sold mixed with trash fish to fishmeal factories. Fishers may land sharks directly in Thailand because they can obtain a higher price than at Cambodian landing sites. There are no figures for the import or export of fresh shark products in Cambodia. Some processed shark is imported from Vietnam to Kampot province, but no exact figures exist. The market price for this is 2.5-3 US\$ per kg. There is no export of processed shark products from Cambodia.

“In Cambodia, fresh shark products such as meat and fins are consumed locally in coastal areas and cities”

Fish traders collect shark from fishers individually to sell, either at market or to restaurants. Shark fin is more expensive than other shark parts; middlemen usually cut off the fins before selling them in the local markets. According to market vendors in Sihanoukville, they buy most shark from fishers who use fish and crab gill nets and

hooked lines. The Department of Fisheries plans to collect more detailed data about shark fisheries in the future, in collaboration with the SEAFDEC Ad Hoc Study on Shark Fisheries in the ASEAN Region.

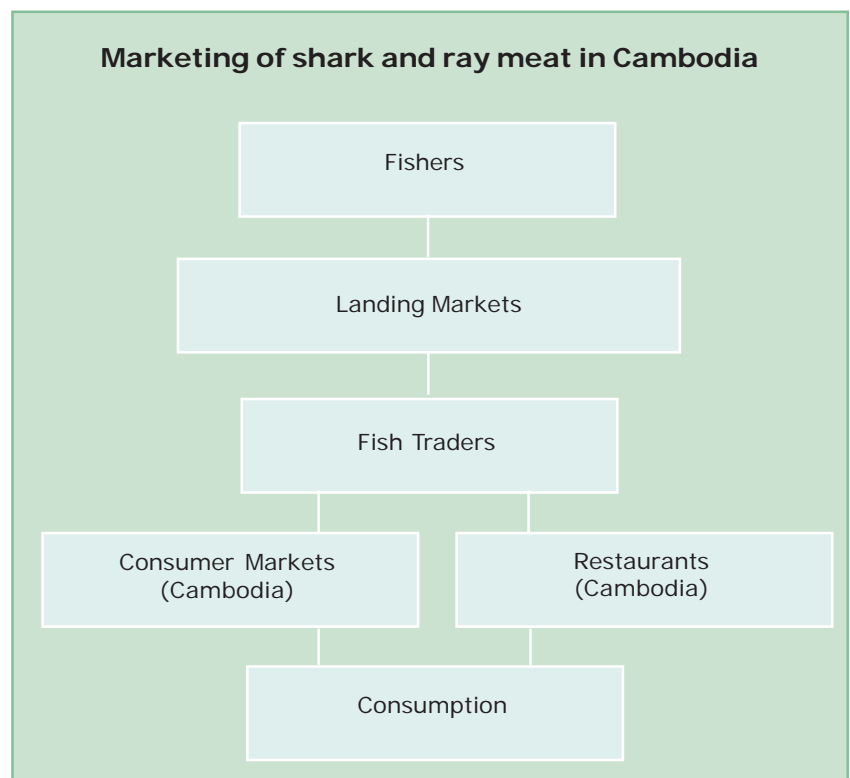


Live-shark ready for sale and distribution, at Sihanoukville, Cambodia

Utilization of sharks and rays

In Cambodian markets, after fins and liver oil have been removed, fresh shark meat is sold as food. Fresh shark soup has become a popular dish in Cambodia since 2000, especially in Sihanoukville. In 2003, there were perhaps 10

specialized fresh shark soup restaurants in Sihanoukville, two in Koh Kong province, two in Kampot province, two in Siem Reap province and six in Phnom Penh. These restaurants obtain fresh shark meat from local fishers.



Sharks have been utilized in Asia for centuries. In Chinese culture, the serving of shark fin has come to symbolize honour and respect, and shark fin soup is now widely consumed around the world. The soup is expensive, and is believed to provide a range of medical benefits, such as strengthening the kidneys and muscles, reducing blood fat levels, and reducing risks from coronary heart disease, hypertension and arteriosclerosis.

“In Chinese culture, the serving of shark fin has come to symbolize honour and respect, and shark fin soup is now widely consumed around the world”

Shark meat is consumed in many countries, and its quality varies from species to species. For species with lower quality meat, skin and cartilage are used in fishmeal or fertilizer production. In the past, sharkskin has been used as an abrasive to polish objects and as a strong upholstery fabric.

“Sharks’ cartilage is thought to be useful for the treatment of a great variety of diseases”

Sharks’ cartilage is thought to be useful for the treatment of a great variety of diseases, including arthritis, psoriasis, colitis, acne, enteritis, phlebitis, rheumatism, peptic ulcers, haemorrhoids, herpes simplex, melanoma, cancer, and recently also AIDS. For the most part, these popular beliefs have yet to be

medically proven. Shark liver oil is mainly used in the textile and tanning industries, and in the production of cosmetics, pharmaceutical products and lubricants.

Conservation and management of sharks: Regional concerns

In 2002, the Sharks Conference in Taipei, Taiwan concluded that conservation and management measures on sharks should be focused on those areas where shark stocks had been declining. Measures needed to include scientific research to substantiate the decline as well as the endangered status of shark species. At the same time, Taiwan declared that although it is not a member of the United Nations, in the spirit of responsible fisheries, and as a responsible member of the international community, Taiwan is willing to follow fisheries management measures adopted internationally, and to manage sharks in their water. Moreover, Taiwan is also willing to share with other countries its experience in shark research, and

resources management and utilization. The Taiwanese government plans to draft a National Plan of Action for implementation, to ensure the sustainability of shark resources.

“...conservation and management measures on sharks should be focused on those areas where shark stocks had been declining”



Shark and shark fin sold separately at market



After the CITES COP 10 meeting, ASEAN-SEAFDEC Members Countries recommended that the ASEAN-SEAFDEC Fisheries Consultative Group should be used as the mechanism to develop a common position on sustainable fisheries and sustainable trade in fish and fishery products at international fora such as WTO, CITES and FAO. SEAFDEC could assist Member Countries in compiling various national and regional studies on important fisheries issues, including sharks, and the CCRF, and collaborate with FAO to accommodate the regional specificities into the global framework.

The regional technical consultation on Fish Trade in the ASEAN Region in 2001 recommended that Member Countries should be proactive in developing a regional mechanism to coordinate their efforts in dealing with CITES issues, starting with the issue of shark fisheries. Member Countries should take appropriate action to implement the IPOA-SHARKS.

At the Senior Official Meeting (SOM) of the 23rd Meeting of the ASEAN Ministers on Agriculture and Forestry (AMAF) in October 2001, it was decided that the ASEAN common positions on the management of commercial fisheries, including shark fisheries, should come under the purview of FAO and the CCRF, and not CITES (SEAFDEC, 2003).

At the second meeting of the ASEAN Experts Group on CITES in August 2002 in Kuala Lumpur, Malaysia, it was reported that the International Plan of Action for the Conservation and Management of Sharks (IPOA-SHARKS) has made little progress, and the National Plans of Action of Sharks (NPOA-SHARKS) have had only limited implementation. It was also recommended that the CITES authorities in Member Countries should be encouraged to obtain information on IPOA-SHARKS implementation from their national fisheries departments and report progress to the Animal Committee (Harjanti, 2003).

Before the CITES COP12 meeting, a Regional Meeting on Fish Trade and Environment was organized under the purview of ASEAN-SEAFDEC. Held in October 2002 in Bangkok, Thailand, this regional meeting discussed shark issues and set up a regional proposal to review shark fisheries in Southeast Asia. The meeting also adopted a common position on



Shark soup made from fresh shark meat served in a restaurant in Sihanoukville.



Conservation and Management of Sharks: Global Concerns

The issue of sharks was first taken up for consideration and discussion in 1994 at the Ninth Conference of Contracting Parties of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which adopted a Resolution on the Biological and Trade Status of Sharks (Conf. 9.17). This resolution urged parties to submit species-specific data on landings, trade, and biological status if available. Furthermore, collaboration with FAO and other international fisheries management organizations for collecting data was encouraged.

Two major steps forward were taken in 1997: (1) CITES COP 10 approved several Decisions concerning reporting of shark landings and trade, and (2) the FAO Committee of Fisheries (COFI) requested FAO to develop guidelines leading to a plan of action. The International Plan of Action for the Conservation and Management of Sharks (IPOA-SHARKS) was finally adopted in 1999. The objective of the IPOA-SHARKS is to ensure the conservation and management of sharks and their long-term sustainable use. The IPOA-SHARKS is voluntary, and is related to other international instruments such as CITES. All concerned states are encouraged to implement it. The IPOA-SHARKS requested states that have vessels conducting directed shark fisheries or regularly taking sharks in non-directed fisheries to prepare a National Plan of Action for the Conservation and Management of Shark (NPOA-Sharks). However, very few states have so far implemented this.

During the CITES COP 11 meeting in 2000, Resolution Conf. 9.17 was repealed, as its aims had largely been implemented. Two new Decisions were adopted instead: Decision 11.94 was to continue the collaboration between CITES and FAO to implement the IPOA-SHARKS; Decision 11.151 was to collaborate with the World Customs Organization to promote the establishment and use of specific headings within the Harmonized System of Standard Tariff Classifications, in order to discriminate between various shark products, such as meat, fins, leather and cartilage. Proposals to list three shark species in Appendices I or II were rejected.

The NPOA-SHARKS & IPOA-SHARKS have been progressing very slowly in all FAO member states; by the 24th session of FAO-COFI in February 2001, only 29 of the 113 of FAO member states had reported shark landings, and only five of 29 FAO states had made shark assessment reports or NPOA-SHARKS available.

At the CITES COP 12 in 2002, it was proposed that two shark species be added to CITES lists, namely the whale shark *Rhincodon typus* and the basking shark *Cetorhinus maximus*. However, again the proposal was rejected. After submission of additional scientific information by India and the Philippines, both species have subsequently been added to Appendix II.



What should be the aims of national or regional plans of action for sharks?

The shark plan should aim to:

- Ensure that shark catches from directed and non-directed fisheries are sustainable;
- Assess threats to shark populations, determine and protect critical habitats, and implement harvesting strategies consistent with the principles of biological sustainability and national long-term economic use;
- Identify and provide special attention to vulnerable or threatened shark stocks in particular;
- Improve and develop frameworks for establishing and coordinating effective consultation involving all stakeholders in research, management and educational initiatives within and between states;
- Minimize unutilized incidental catches of sharks;
- Contribute to the protection of biodiversity and ecosystem structure and function;
- Minimize waste and discards from shark catches;
- Encourage full use of dead sharks;
- Facilitate improved species-specific catch and landings data and monitoring of shark catches; and
- Facilitate the identification and reporting of species-specific biological and trade data.

fisheries management, trade and improvement of the management of shark fisheries in the region for ASEAN-SEAFDEC Member Countries (SEAFDEC, 2003).

National response

In response to international and regional concerns, the Department of Fisheries of the Kingdom of Cambodia needs to initiate more detailed studies on species composition, habitats and the status of each species with the aim of formulating a National Plan of Action for the conservation and management of sharks. All shark and ray species caught in Cambodia are common species, and the fishers do not target sharks, rays and skates species. Market prices are also low for all these species compared to other commercial fish, shrimp and crab, and with the exception of the Thai-Cambodian joint venture fishery, they are not exported to any countries around the world.

Marine fisheries are important both for the national economy and for improving local standards of living in coastal areas, and also contribute to national food security. As the Department of Fisheries has no quantitative data and scientific information, it cannot set up any legal instruments for protecting sharks, rays and skates. In order to achieve such protection, the Department needs assistance from other agencies or donors to support studies on these animals in Cambodia. Some efforts are currently being made in collaboration with SEAFDEC to fill the gap and ensure the sustainability of our fisheries.

National framework

All marine fisheries in Cambodia are under the responsibility of the Department of Fisheries, under the Ministry of Agriculture, Forestry and Fisheries, as regulated in the Fisheries Law. This is currently being redrafted; the new law will include sections on conservation and sustainable use of marine resources. Cambodia also has a Wildlife Protection Law, but this does not currently cover fish. Cambodia has a CITES authority which collaborates with Ministry of Agriculture, Forestry and Fisheries, and has FAO support for several projects in the fisheries sector. However, there is a need for increasing public awareness

about the conservation of marine resources, including sharks and rays. Fisheries statistics are collected by provincial fisheries authorities, and these offices need serious strengthening to ensure more reliable data. Statistics should ideally show separate listings for sharks, if possible by species. In addition, there is a need for research to study habitats and spawning grounds of sharks and rays in Cambodia.

About the authors

Mr. Ing Try is Deputy Director for the Department of Fisheries, Cambodia, supervising coastal and marine related activities. He is a marine biologist and ecologist by formation.

Dr. Kathe R. Jensen is currently an associate professor in marine biology in Copenhagen, Denmark. From 2000 to 2002, she was seconded by Danida at AIT (Bangkok) in the Integrated Tropical Coastal Zone Management program. She has collaborated in coastal biodiversity research with the Marine Working Group of the Department of Fisheries, Cambodia.

Mr. Pich Sereywath and Mr. Va Longdy are researchers at the Marine Working Group of the Department of Fisheries, Cambodia.

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From Community-based Management to Co-management Thailand's Experience

by Yves Henocque and Sanchai Tandavanitj

Introduction

Fish for the People recently presented an overview of the current status of decentralization and rights-based fisheries management in ASEAN-SEAFDEC Members Countries, under the framework of the recommendations adopted at the Millennium Conference (Volume 1, Issue 2). In the article, key questions were raised about fisheries policies and decentralization. Thailand has been particularly active in developing its decentralization policy, promoting governance at both provincial and local levels. Different processes and tools are being tried out through a number of national projects, such as the CHARM Project under the coordination of the Department of Fisheries.

This article describes the structure of this project, and discusses its achievements to date. The article contributes to the debate on decentralization in the

region, and on the innovative management of coastal habitats and resources.

“Thailand has been particularly active in developing its decentralization policy, promoting governance at both provincial and local levels”

Background

The Thai maritime area covers over 378,000 km², including territorial waters extending 12 nautical miles from the coast, and the Thai EEZ. The Gulf of Thailand comprises two-thirds of the area (252,000 km²), and the Andaman Sea (126,000 km²) the rest. Thailand's total coastline is 2,614 km in length, with 1,660 km on the Gulf of Thailand and 954 km on the Andaman Sea.

Management of Habitats and Coastal Resources –



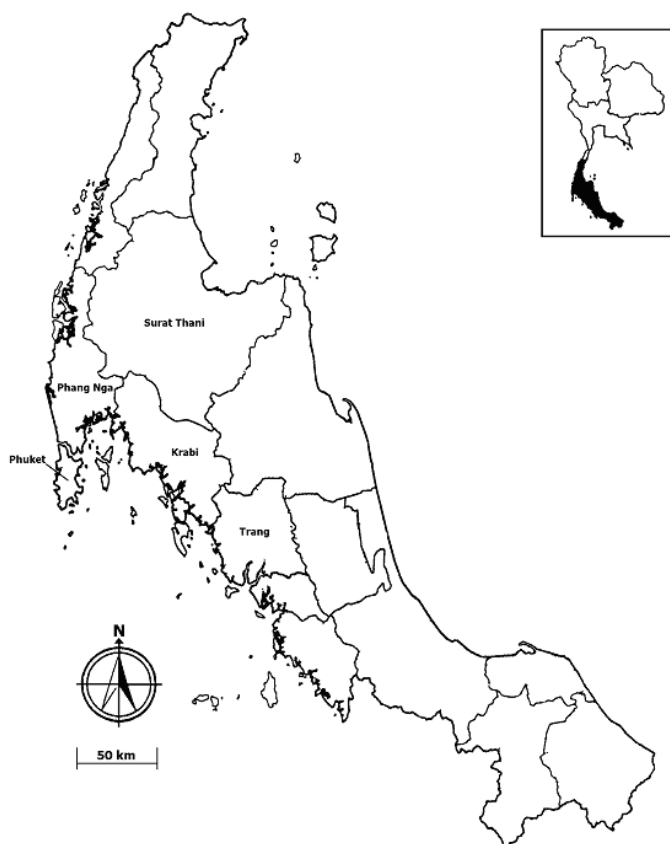
The use of coastal habitats and resources by the capture fisheries, aquaculture and tourism sectors contributed significantly to the rapid economic growth that took place in Thailand during the 1980s and early 1990s. But activities in these sectors are carried out in a context of largely unrestricted access to habitats and resources, frequent evasion of regulatory supervision and enforcement, and an extensive but non-integrated legislative framework that hampers effective management. Social conflicts over resource use have intensified, and Thailand's coastal resources are over-exploited, with coastal habitats now being rapidly degraded. Urgent action is needed to support and encourage environmentally sustainable coastal resource use and habitat conservation.

This situation was discussed at the European Commission (EC) – Thai Senior Officer Meeting (SOM) held in Bangkok in July 1998. Following the meeting, a concept paper was developed for a project to address coastal habitats and resources management (hence CHARM) in Thailand. This was subsequently accepted by Thailand's Ministry of Agriculture and Cooperatives (MOAC), and submitted to the EC in February 1999. After a preparatory mission in summer 1999 to explore in detail the complex issues and problems to be addressed by the project, a Financing Agreement between the EC and Thailand was signed successively in Brussels on 15 January 2001 and in Bangkok on 18 October 2001. The Department of Fisheries, under the Ministry of Agriculture and Cooperatives (MOAC), is the executing agency of the project.

The project

CHARM is a five-year project (2002-2007) that aims to promote a co-management approach among the Royal Thai Government, the private sector and local communities at national, provincial and local levels. Institutional arrangements and technical operations for co-management are being tested and established in two project areas.

These two project areas, Ban Don Bay in the Gulf of Thailand, and Phang Nga Bay in the Andaman Sea, are located in the Upper South Region of Thailand. They comprise Surat Thani province on the Gulf of Thailand coast, and the provinces of Phuket, Phang Nga, Krabi and Trang on the Andaman Sea coast. The former includes four districts (*amphoe*) and 26 sub-districts (*tambon*); the latter comprises 12 districts and 73 sub-districts. In all, 356 coastal villages, including 24 island villages, are covered by the project, with an estimated coastal population of about 300,000.



Southern Thailand, showing project provinces

In both areas, overlapping responsibilities and conflicting jurisdiction over coastal resources among key government agencies are major issues to be resolved in any attempt to improve inter-institution coordination.

CHARM objectives

By 2008, it is expected that:

- at least 300 km of Thailand's 2,614 km coastline in 30 of 99 coastal sub-districts in the two project areas will have coastal habitats and resources with stable or improving conditions
- 30 tambon administrative organizations (TAOs) in the two project areas will be engaged in a sustainable process of co-management of their coastal resources, and
- at least 30 sub-districts in all five coastal provinces will be using integrated coastal resource management (ICRM) in the development of major coastal activities, namely agriculture, aquaculture, fisheries and tourism.

Stakeholders

The project addresses both primary and secondary stakeholders. Coastal communities are considered as primary stakeholder groups, and first beneficiaries in co-management arrangements. Secondary stakeholders (intermediate beneficiaries) include central, provincial and local government on the one side, and NGOs, academic institutions, private sector groups and investors on the other.

Coastal communities are considered as complex arrangements of people with kinship, political, economic, religious or social ties to one another and other communities. Ties among community members are often generational and deeply entrenched. In the CHARM Project, a community will generally be represented at the level of the village, although other community arrangements at a larger scale can be considered, such as those between villages involved in the exploitation and management of the same commons.

Approach and phasing

Some community-based coastal resources management (CBCRM) or locally-based coastal resources management (LBCRM) projects have previously been initiated in the two pilot areas or elsewhere along the Thai coastline, but these have remained essentially at the village or sub-district levels. CHARM builds on these experiences, enlarging their scope to include provincial, regional (bay-wide) and national levels in order to involve all concerned stakeholders, from local communities to the central government.

“CHARM builds on these [existing local] experiences, enlarging their scope to include provincial, regional and national levels in order to involve all concerned stakeholders”

A goal as ambitious as this means that CHARM has had to develop a strategy to strengthen institutional capacity for coordinated planning, management, and information transfer in the central government with the advisory activities of the Project Management Unit (PMU) in the Department of Fisheries. It has also had to promote measures to improve vertical integration through linkage between Field Management Offices (FMOs) in Krabi and Surat Thani, and counterpart organizations.

CHARM's organizational structure tackles this bottom up/top down strategy as follows. From a bottom-up perspective, co-management serves as a participatory and flexible management process that provides and maintains a structure for action on rule making, conflict management, leadership, decision-making, and learning among fishers, government and other stakeholders. At the national level, on the other hand, co-management could represent the core of a



larger process of ICRM. Both are underpinned by the CHARM's key attributes – participation, partnerships, integrated approaches and methods, learning and adaptation, and building capacity.

“From a bottom-up perspective, co-management serves as a participatory and flexible management process that provides and maintains a structure for action on rule making, conflict management, leadership, decision-making, and learning”

These key attributes of the CHARM co-management approach emphasize the five project components:

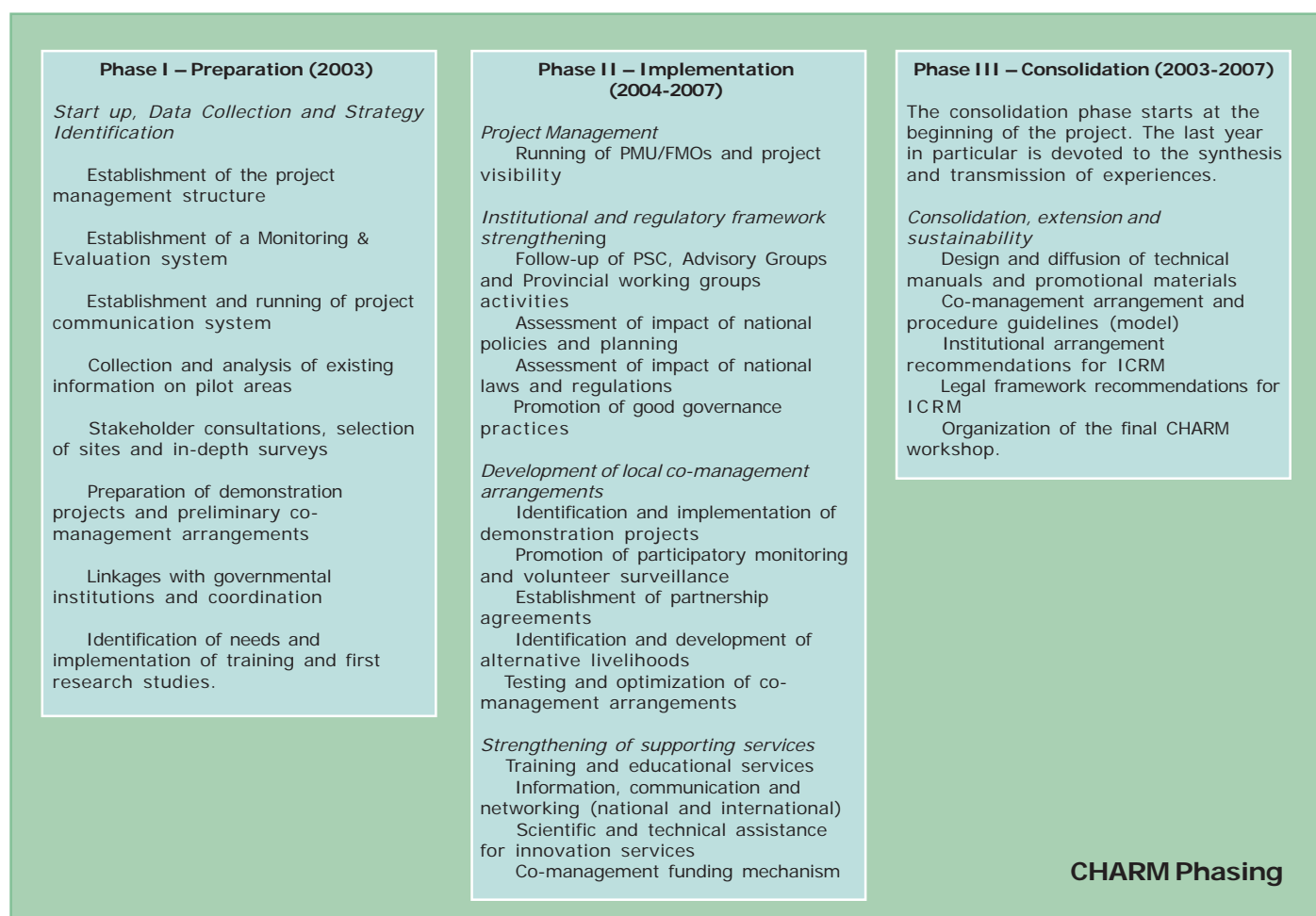
1. The policy and legal framework
2. Participatory management
3. Human capacity
4. Information and communication, and
5. Project management, monitoring and evaluation

The first two components are the pillars of the co-management approach; the three others provide the necessary support for development and sustainability of the first two.

The project has a start-up phase for data collection and strategy identification (2002-2003), an implementation phase to develop the co-management process, institutional support and capacity building (2003-2007), and a consolidation phase that starts at the beginning of the project.

Selection of sites and participatory approach

One of the main activities of the first preparatory year was the collection and analysis of existing information on the two project areas. A total of 35 sub-districts and 56 villages and municipalities were short-listed with the Department of Fisheries (DOF) Provincial Offices in the two project areas. Among these, at least one per province was pre-identified for implementation of a co-management demonstration





Key attributes of the CHARM co-management approach

Participation – International experience demonstrates that projects are sustained only where there are constituencies that are active advocates for improved resources management. CHARM seeks to carefully design mechanisms to assure that participants at national, provincial and local levels participate in each phase of the co-management process. Under the Provincial and Tambon Administration Organizations (PAO and TAO), village committees should become focal points for conflict mediation and implementation of “pragmatic co-management activities” that test new approaches to habitat and resource management at a pilot scale.

Partnerships – Forging mutually beneficial partnerships among institutions, communities, NGOs and donors is a central feature of CHARM activities at every level. The Financing Agreement that governs the relationship between the Royal Thai Government and the European Commission is designed as a partnership, with National and European co-directors having comparable responsibilities and authority. At the ministerial level, the Project Steering Committee is a partnership among Departments and professional organizations with major roles in coastal management. The departmental coordinators group should develop as a partnership designed to improve the effectiveness of departmental actions at national, provincial and local levels. The PMU/FMOs and the Community Development Department are developing a partnership for community consultation, promotion of alternative livelihoods, and operation of community revolving funds. The PMU/FMOs will work in partnership with NGOs with whom they are already working.

Integrated approaches and methods – Integration in coastal management is the major difference from traditional sectoral projects that address only fragments of the whole picture. The integration is multidimensional in nature:

- integration of science with policies, with a strong emphasis on social and political processes, and the belief that research and technical tools (such as permits, zoning and impact assessments) are of little value if the institutional and societal context in which they are introduced is not yet capable of effecting the changes in values and behaviour that such tools require;
- integration between bottom-up and top-down approaches to resource management;
- integration between large-scale and small-scale management, and between short-term and long-term time scales; and
- integration among sectors and disciplines, expressed through the multi-agency project steering committee and the inter-department focal points group, and through the participation of academic and research institutions.

Learning and adaptation – Feedback should be central to the implementation of the CHARM project activities. Techniques and mechanisms have to be developed to encourage the open exchange of ideas and experience and foster learning both among the CHARM project staff, and with stakeholders and the public at large.

Building capacity – The project works at building a core group of professionals that can sustain a coherent co-management process into the future. This concerns individuals with adequate training and experience working in government at national, provincial and local levels, universities, NGOs and communities in the different sites. The ‘learning-by-doing’ approach is intended to be bolstered by formal training along with exchange visits within the country and to other countries.



project. It was assumed that a well-trained provincial fisheries officer can cover 3-5 villages at first, so about 6 officers would be needed in each province. Beyond the FMO and the assigned staff, it was therefore decided to integrate CHARM activities, including demonstration projects, into the regular programming of the DOF Provincial Offices in order to get the full participation of DOF staff in the field while building up the sustainability of the co-management framework. The partnership strategy developed by the project is intended to allow collaboration with other Departments, such as that initiated with the Community Development Department (CDD), and NGOs as a network support for specific implementation and follow-up.

Based on the mandate to prepare a computerized database for the two project areas, the FMOs have compiled data from the Community Development Department, the Department of Fisheries, NGOs and other projects in the two project areas as well as CHARM survey data collected at the TAOs in the five project provinces. The data have been compiled as basic information about the two project areas, including the number and size of local coastal villages, administrative arrangements for each village, occupations in the village, income generated, environmental status and willingness to participate. Once data were compiled into an evaluation grid, project staff were able to evaluate the status of each village in terms of these different aspects. The data represent a valuable source of information for building up the selected sites baseline.

From December 2003, once the sites had been selected, the process moved to identification of critical

issues with villagers and the prioritisation of those issues. Next, an in-depth field assessment was carried out in each selected site to serve as a benchmark for participatory monitoring and evaluation.

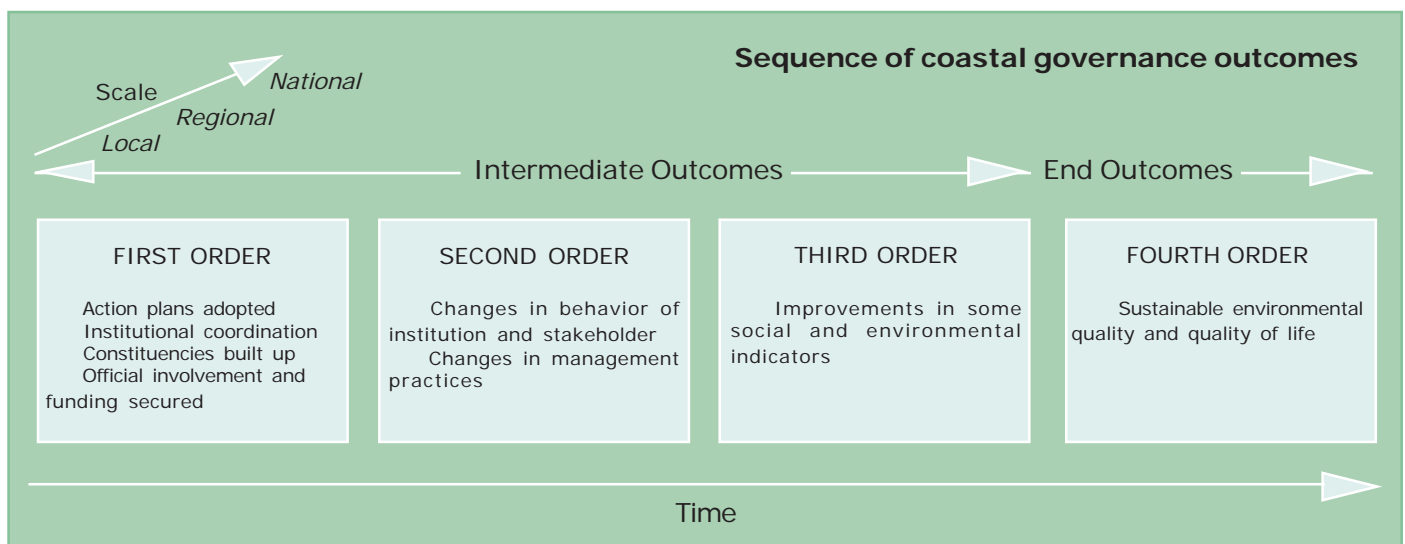
“Achieving goals such as improved quality of life for coastal communities while maintaining biological productivity and biodiversity in populated coastal regions requires efforts that must be sustained over many decades”

The villagers then formed a village committee or used an existing body to take actions to deal with priority issues. These committees became the focal point for planning and implementation of the agreed action plan. Through partnership agreements, provincial personnel, such as Fisheries Officers and Community Development Officers, and project staff provided technical assistance to the village committees.

Monitoring and Evaluation system

Sequence of outcomes

The growing body of international experience in coastal management reinforces the fact that achieving goals such as improved quality of life for coastal communities while maintaining biological productivity and biodiversity in populated coastal regions requires efforts that must be sustained over many decades. As shown in the figure below, such sustained efforts progress through a sequence of outcomes. While



measurable improvements in some social and environmental indicators (“Third Order Outcomes”) may be achieved under favourable conditions at the community level in a decade or less, achieving such outcomes on a larger scale, particularly where coastal ecosystems are already severely degraded and where there is poverty, requires a larger and more protracted effort.

In CHARM’s case, it is reasonable to expect that better institutional coordination and constituencies might be achieved at the national level, but should be achieved primarily at the provincial level (‘First Order Outcomes’) in the two pilot areas and their corresponding provinces. The necessary development activities and changes in societal behavior (“Second Order Outcomes”) will be limited more to the selected sites and corresponding local governments (TAO) on which CHARM will focus its management efforts. The achievement of Second Order Outcomes on a larger scale lies in the future, with implementation of national policies, and will include overall rehabilitation of mangrove or shrimp pond areas, sound shorefront development practices and the control of activities that result in the degradation of water quality and habitats. As Third Order Outcomes may to a degree be achieved at the community level, building up the conditions of sustainability before the end of CHARM is essential.



The CHARM monitoring system therefore focuses on the intermediate outcomes, including end of project outcomes (‘outcome indicators’), and the processes at stake to reach them (‘process indicators’).

Definition of indicators

Any coastal management project like CHARM, which can be considered as part of a government response to identified issues, will be monitored through input, process and outputs type of indicators where,

- **Input indicators** monitor the project-specific resources provided – facilities, human and financial resources, staff and beneficiaries training, and strategic studies;

The CHARM Monitoring and Evaluation system

Drawing on national and international experience, the CHARM Monitoring and Evaluation system is based on the following guidelines:

- It is important for coastal zone management projects to adopt objectives-based outcome evaluations, defining environmental and socio-economic goals and establishing baselines against which to measure the impact of project initiatives.
- Indicators should be user-led, and coastal stakeholders should be involved in the process of selection and development of indicators from the beginning. In this regard, an enhanced report on the state of the environment and development of the coastal zone can provide an occasion for collaboration between sub-national and national levels for the achievement of shared objectives.
- Monitoring and evaluation mechanisms have to be incorporated from the beginning. Indicators must therefore be set as an integral part of the project proposal, and revised in response to adjustments to project results and implementation activities.
- Headline indicators or indices (combined indicators) should be selected based on policy relevance, predictability, interdependency, measurability, and performance.
- Not every area of assessment lends itself to the use of quantitative information. Certain policy areas should be assessed in qualitative terms. This is especially true in the case of governance indicators.

- **Process indicators** cover the governance response indicators, or the process by which interventions take place. They may document public awareness and education programmes that sensitise stakeholders to the coastal management issues and encourage voluntary changes in behaviour. They also describe consultative processes to determine public opinion about desired outcomes, and they may include strategies for regulatory interventions. In the case of the CHARM project, they mainly cover the co-management processes;

- **Output indicators** can be classified as either (a) environmental indicators, or (b) socio-economic indicators.

Development and application to the project first year

Based on the above framework and guidelines, the CHARM project monitoring system comprises three main modules (excluding the financial module).

The Core Operations Monitoring module represents the main reporting system of the project. It includes activities related to the Policy and Legal Framework component, the Participatory Management component, the Human Capacity component, and the Information and Communication component. It incorporates two types of indicators: input indicators, which, besides funding, staff and facilities, include all activities related to research and training services (support services) development, and output indicators. The progress of the project output indicators is measured against the environmental and socio-economic indicators that describe the initial situation (site and bay-wide baselines) in the two project areas.

Interestingly, while it is estimated that a little more than 50% of the input indicators-related activities have been fulfilled in regard to the first year objectives, the output indicators indicate an average of 40% progress towards the first year objectives, probably too ambitious in terms of the enabling conditions, one of the main assumptions still to be fulfilled, i.e. effective inter-Department collaboration.

The Co-management Monitoring module mainly focuses on the use of governance (process) indicators

for the main stakeholders involved – communities, TAO, other government institutions, private sector and the public in general.

Within the project’s first preparatory year, any change in behaviour related to the project activities can hardly been measured, while the enabling conditions-related activities indicate progress of less than 40% in regard to the first year objectives. The main reasons are related to the delay in identifying and selecting the sites (“site leaders and village committees identified”) and a primary focus on fishery activities to the detriment of other sectors (“tourism operators identified”).

The Project Progress Monitoring module is mainly an aggregated presentation of the Core Operations module and the Project Management component main indicators. It reflects directly the logical framework’s Objectively Verifiable Indicators (OVI), and is primary aimed at several key information users, including the Project Steering Committee, the Executing



Authority and the European Commission through the delivering of the Quarterly Progress Reports, Annual Work Plan and Budgets, and the Annual Booklet.

A new political context

Since October 2003, the Royal Thai Government has been actively implementing its 'Governor CEO' policy. This has been seen as a move towards decentralized administration, but it will also help consolidate provincial administration under stronger provincial governors' leadership. Politically speaking, the spatial approach under the Governors CEO will transform the provincial administration into a 'State government' in all but name. The Cabinet, at its 19 August 2003 meeting, resolved to implement the delegation of authority from line ministries to Governor CEOs, and to groups of governors for matters covering more than one province. Such an approach is seen as facilitative at the provincial and bay-wide levels to CHARM's co-management strategy and in the

framework of the new zoning scheme currently discussed by the newly established Provincial Fishery Committees.

“The new Governor CEO’ policy has been seen as a move towards decentralized administration, but it will also help consolidate provincial administration under stronger provincial governors’ leadership”

At a more local level, the government has already institutionalised, under the Administrative Decentralization Act, the Tambon Administration Organization (TAO) planning models in a five-year cycle (the current cycle runs from 2002 to 2006) and the annual cycle, in accordance with the Royal Thai Government Fiscal Year. A number of technical agencies have been assisting TAOs in providing Coastal Resources Management inputs to their planning; however, the quality of their plans largely depends on the TAO leadership, and physical, social and political access to each TAO. Improvements in the quality of TAO planning are expected to improve with the evolving CEO role for provincial governor and the strengthening Provincial Administrative Office (PAO).

Fine-tuning the strategy

Beyond assigned CHARM staff within the DOF, it is the involvement of the institution that is critical. Given the DOF structure and functioning, the participation of the five DOF Provincial Office Heads is of the utmost importance, and can be achieved by progressively integrating CHARM activities into each Provincial Office's regular programming. Their involvement in site selection was the first step towards this objective. The same approach should prevail with other concerned Departments with the help of the CHARM Departmental coordinators. The ongoing collaboration with the Community Development Department is a good example of this. Instead of 'selling' its own activities to other organizations, CHARM will continually take into account organizational dynamics and adapt its different component activities accordingly through a partnership strategy. Following its double-track strategy, the project will, at the national level, have to work at building up a strong constituency within





the PSC and the inter-department coordinators group, and at the local level, will have to facilitate the negotiating process between coastal resource users and decision-makers.

“CHARM will continually take into account organizational dynamics and adapt its different component activities accordingly through a partnership strategy”

Coordinating with other projects

At the regional and international levels, CHARM is already well known among relevant agencies and projects, including PEMSEA (Partnership for the Environment of the South-East Asian Seas), the GEF/UNEP South China Sea Project, and the IOC/UNESCO Working Group on Integrated Coastal Area Management. The second year will be devoted to the strengthening of links with such organizations in order to increase both CHARM’s national, regional and international visibility, and its capacity to learn from international experiences.

There are several ongoing coastal management projects in the southern region of Thailand, including PEMSEA, the South China Sea Project, the

SEAFDEC-DOF Chumphon project, Children of the Sea, and Wetland International. Some of these are active in CHARM project areas. The implementing agencies of these projects are essentially part of a group of stakeholders whom CHARM will involve in the consultation process in order to evolve a common set of objectives, intervention strategies, implementation, monitoring, and adaptive planning. Wherever applicable, the coordinating and monitoring roles will be shared to ensure maximum interventional efficiency.

Conclusions

Co-management is a two-track approach that utilizes a strategy of formulating actions simultaneously at the community and national levels. This strategy typically begins with a national coastal management initiative, with demonstration projects at selected sites. These define and analyse the issues that must be addressed and formulate new approaches to resolving them on a small scale. The assumption is that success will be replicated, and will eventually produce a coherent and effective coastal management strategy and decision-making procedures that encompass the whole nation.

CHARM has adopted a strategy that calls for experimenting with the application of co-management practices at the local scale, while contributing to

building constituencies, capacity and policy within provincial and national governments. This two-track approach features an initial emphasis on tangible demonstrations of what co-management means and how it can result in improved governance, changed behaviours and improved conditions.

“Co-management is a two-track approach that utilizes a strategy of formulating actions simultaneously at the community and national levels”

CHARM is not a research project but a time-limited five-year project that strives to improve villagers’ livelihoods by strengthening participation in decision-making processes. It therefore has to combine ‘rapid assessment’ techniques that provide a snapshot of environmental and social conditions in the two areas with more in-depth analysis, involving the identification of main issues, their causes and possible remedies by local stakeholders, leaders and officers in selected sites. Its goal therefore is to promote a process that allows the involvement of stakeholders through the development of pilot activities at a number of sites along the southern coasts of Thailand, to be expanded within the two project areas and elsewhere.

About the authors

Yves Henocque, PhD in marine ecology, had notably previously worked at IFREMER with East and Southeast Asia. He has experience with Integrated Coastal Zone Management in various countries, including in the region. Today, he is the EU Co-Director of the CHARM project, which for him represents a new challenge at the crossroad of a co-management approach and an integrated coastal zone management policy.

Sanchai Tandavanitj, has long experience in aquaculture but also in working with international organizations and small-scale fishermen. Present in the CHARM project since its inception, he has been recently promoted from Deputy Director to National Co-Director.



[Events Calendar]

Date/Venue	Events	Organizer
2003		
5-21 November Philippines	Training on Diagnosis for Important Viral Diseases of Shrimp and Marine Fish	SEAFDEC/AQD
10-20 November Thailand	Training Course in Ecosystem Effects of Fishing in Southeast Asia	SEAFDEC/TD
17-19 December Thailand	Workshop on Safety at Sea for Small Fishing Boats	SEAFDEC/TD
2004		
20-23 February Malaysia	ASEAN-SEAFDEC Regional Workshop on Human Resource Development on Fisheries	SEAFDEC/Secretariat
9-11 March Malaysia	The Second Regional Meeting on the Use of Indicators for the Sustainable Development and Management of Capture Fisheries	SEAFDEC/MFRDMD
16-18 March Thailand	Regional Meeting on Issues related to Fish Trade and Environment	SEAFDEC/Secretariat
4-6 May Singapore	Core Experts Meeting on Regionalization of the Code of Conduct for Responsible Fisheries (Phase IV: Post-Harvest Technology and Trade)	SEAFDEC/MFRD
7 May - 5 June Philippines	Training on Management of Sustainable Aquafarming Systems	SEAFDEC/AQD
2 Jun - 16 Jul Philippines	Training on Marine Fish Hatchery	SEAFDEC/AQD
2 Jun - 12 Sep (on-line course)	Training on Principles of Health Management in Aquaculture	SEAFDEC/AQD
3-6 June Cambodia	Regional Technical Consultation on Human Resource Development in Fishery Management	Sida-SEAFDEC
7 Jun - 16 Jul Thailand	International Training course in Coastal Fisheries Management and Extension Methodology	SEAFDEC/TD
15-18 June Thailand	Second ASEAN-SEAFDEC Regional Technical Consultation on Fishery Statistics	SEAFDEC/Secretariat
June (tentative) Singapore	Regional Training Course on Information Collection for Sustainable Fisheries of Pelagic Fish in the South China Sea	SEAFDEC/MFRD
5-9 July Thailand	Workshop on the Evaluation of Juvenile and Trash Excluder Devices (JTEDs) in Southeast Asia	SEAFDEC/TD
13-15 July Thailand	Second ASEAN-SEAFDEC Regional Technical Consultation on Shark Fisheries	SEAFDEC Secretariat
21 July - 13 Oct (on-line course)	Training on Basic Principle for Aquaculture Nutrition	SEAFDEC/AQD
July (tentative) Philippines	Training on Detection of White Spot Syndrome by Polymerase Chain Reaction (PCR)	SEAFDEC/AQD
2-31 August Philippines	Training on Responsible Aquaculture	SEAFDEC/AQD
7 Sep - 6 Oct Philippines	Training on Crab Seed Production	SEAFDEC/AQD
13-16 September Malaysia	Third Technical Consultation Meeting on Information Collection for Sustainable Pelagic Fisheries in the South China Sea	SEAFDEC/MFRDMD
Sep (tentative) Thailand	ASEAN-SEAFDEC Regional Technical Consultation on Fishing Capacity	SEAFDEC Secretariat
Sep (tentative) Singapore	Third Regional Workshop on Good Laboratory Quality Management Practices and Methods Validation in Southeast Asia	SEAFDEC/MFRD
Sep (tentative) Malaysia	Regional Technical Meeting on Sea Turtle Tagging	SEAFDEC/MFRDMD

Southeast Asian Fisheries Development Center (SEAFDEC)

What is SEAFDEC?

SEAFDEC is an autonomous intergovernmental body established as a regional treaty organization in 1967 to promote fisheries development in Southeast Asia.

Objectives

SEAFDEC aims specifically to develop fishery potentials in the region through training, research and information services in order to improve food supply through rational utilization of fisheries resources in the region.

Functions

To achieve its objectives the Center has the following functions:

1. To offer training courses, and to organize workshops and seminars, in fishing technology, marine engineering, extension methodology, post-harvest technology, and aquaculture;
2. To conduct research and development in fishing gear technology, fishing ground surveys, post-harvest technology and aquaculture, to examine problems related to the handling of fish at sea and quality control, and to undertake studies on the fisheries resources in the region; and
3. To arrange for the transfer of technology to the countries in the region and to make available the printed and non-printed media, which include the publication of statistical bulletins for the exchange and dissemination related to fisheries and aquaculture development.

Membership

SEAFDEC members are the ASEAN Member Countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam) and Japan.



SEAFDEC Addresses

Secretariat

P.O. Box 1046
Kasetsart Post Office
Bangkok 10903 Thailand
Tel: (66-2) 940-6326
Fax: (66-2) 940-6336
E-mail: secretariat@seafdec.org
<http://www.secretariat.seafdec.org/>

Training Department (TD)

P.O.Box 97, Phrasamutchedi
Samut Prakan 10290 Thailand
Tel: (66-2) 425-6100
Fax: (66-2) 425-6110 to 11
E-mail: td@seafdec.org
<http://td.seafdec.org/>

Marine Fisheries Research Department (MFRD)

2 Perahu Road
off Lim Chu Kang Road
Singapore 718915
Tel: (65) 6790-7973
Fax: (65) 6861-3196
E-mail: mfrdlibr@pacific.net.sg
<http://www.seafdec.org/mfrd/>

Aquaculture Department (AQD)

Tigbauan, Iloilo 5021
Republic of the Philippines
Tel: (63-33) 335-1009, 336-2891
336-2937, 336-2965
Fax: (63-33) 335-1008
E-mail: aqdchief@aqd.seafdec.org.ph
<http://www.seafdec.org.ph/>

Marine Fishery Resources Development and Management Department (MFRDMD)

Fisheries Garden, Chendering
21080 Kuala Terengganu
Malaysia
Tel: (609) 616-3150
Fax: (609) 617-5136
E-mail: seafdec@mfrdmd.org.my
<http://www.mfrdmd.org.my/>



In the occasion of the Millennium Conference, a drawing contest was organized for the children among ASEAN-SEAFDEC Member Countries, on the theme of 'Fish and the Culture'. This is the best drawing from the Philippines.