

**Report of the On-site Training and Workshop on  
Development of Community-based Fisheries Management  
in Coastal Areas of Cambodia  
Kampot Province, 20-23 September 2005**



**Southeast Asian Fisheries Development Center  
The Secretariat**

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(Sida)**

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# **REPORT OF THE ON-SITE TRAINING AND WORKSHOP ON DEVELOPMENT OF COMMUNITY-BASED FISHERIES MANAGEMENT IN COASTAL AREAS OF CAMBODIA**

**Kampot Province, Cambodia  
20-23 September 2005**

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## **I. INTRODUCTION**

1. The On-site Training and Workshop on Development of Community-Based Fisheries Management in Coastal Areas of Cambodia was co-organized by SEAFDEC and the Department of Fisheries (DoF) in Kampot Province from 20 to 23 September 2005.
2. The Workshop was organized as part of the SEAFDEC activities of Sida support project on “Capacity Building for Human Resource Development on the support to the Implementation of the Code of Conduct for Responsible Fisheries in the ASEAN Region”. The Workshop was conducted as a follow-up to the results of the National Workshop on Human Resource Development in Fisheries Management in Cambodia held in Phnom Penh from 6 to 8 July 2005.
3. The participants attended the Workshop were officers of coastal fisheries community, resource persons from the Department of Fisheries and projects related to coastal resources management (CZM/Danida/MoE, UNDP/CAP, IDRC/DFID/WWF, FAO-Sida, UNEP/GEF/DoF (Seagrass), IFRaDI/WorldFish Center, AIT/JICA, and MRC-FP) as well as representatives from SEAFDEC Secretariat. The list of participants appears as *Annex 1*.

## **II. OPENING OF THE WORKSHOP**

4. Dr. Magnus Torell, Senior Advisor of SEAFDEC Secretariat, in his introductory remarks, welcomed the participants and resource persons to the Workshop. As one of a series of activities implemented under the SEAFDEC-Sida project, he thanked DoF particularly Mr. Nao Thouk and Kampot Agriculture Department for co-hosting this Workshop.
5. Mr. Chan Chesda, Director of Kampot Agriculture Department, in his welcoming remarks outlined the scope and activities of fisheries in Kampot province. He stressed on the importance of fisheries for its contribution to the provincial development. He thanked SEAFDEC through the SEAFDEC-Sida project in organizing this Workshop in Kampot as this would provide an opportunity for capacity building for fisheries management in Cambodian coastal areas and particularly in Kampot province.
6. Mr. Nao Thuok, Director-General of Department of Fisheries, Cambodia, welcomed the participants to the Workshop. He expressed appreciation to SEAFDEC for kind support through the SEAFDEC-Sida project particularly in co-organizing this Workshop. In line with the DoF’s attention to community-based fisheries management, he viewed this Workshop as a very useful event to enhance awareness on and to promote various human resource development activities for fisheries management. Strategic actions and guidelines for planning and implementation of coastal resource management that would be discussed during the Workshop would provide a basis in future undertaking of this issue in the future. His opening speech appears as *Annex 2*.

### **III. ADOPTION OF AGENDA AND ARRANGMENT OF THE WORKSHOP**

7. The agenda and arrangement of the Workshop, which appears as *Annex 3*, was adopted.

### **IV. BACKGROUND AND RATIONALE OF THE WORKSHOP**

8. Mr. Suy Serywath, Member of Working Group on Regional Fisheries Policy (WGRFP) from Cambodia, SEAFDEC Secretariat, give a brief background of SEAFDEC-Sida project on Capacity Building for Human Resource Development on the support to the implementation of the Code of Conduct for Responsible Fisheries (CCRF) in the ASEAN Region (*Annex 4*). He outlined the project background, objectives and process for enhancing human capacity to implement the CCRF. He introduced the concept of “pilot process” as an approach to define HRD needs and actions to enhance human capacity at national level, which will provide a basis for sharing of experience at the regional level.

9. As part of a series of project activities, Mr. Serywath explained the objective of this Workshop, which was primarily to provide a national platform for various projects/initiatives working in support of development and management of coastal areas in Cambodia to exchange experience, expertise and lessons learned. This could therefore help in strengthen and sustain local fisheries management capacity particularly human aspects in order to support the promotion of community-based coastal aquatic resource management with an increased focus on legal, economic and social aspects. As results of this Workshop, outline of a training package for HRD in community-based coastal fisheries management in Cambodia; performance indicators for impact monitoring and evaluation of projects/initiatives for sustainable development of coastal resources management; and recommendations for future actions were expected.

### **V. PROJECTS/INITIATIVES RELATED TO TRAINING AND DEVELOPMENT OF COMMUNITY-BASED FISHERIES MANAGEMENT IN COASTAL AREAS OF CAMBODIA**

#### **5.1 Issues and Solutions for Coastal Zone Management in Cambodia (*Annex 5*)**

By Mr. Vann Monyneath, CZM/Danida/MoE

10. Mr. Monyneath introduced the project on Coastal Zone Management in Cambodia started since 1997, which cover four coastal provinces namely Koh Kong, Sihanouk Ville, Kep and Kampot. He stressed on the project’s overall objectives, which is to reduce poverty in coastal areas through management of sustainable coastal resources and environment of which the major natural resources are mangrove, seagrass, coral reef, multiple land and freshwater use, and fisheries.

11. Mr. Monyneath outlined major issues encountered in coastal areas including population pressure, impacts from economic development, poverty due to poor quality of life, and environmental degradation due to pollution and destructive resource utilization. These issues were systematically presented in generic “problem tree” diagrams of “poor quality of life” and “natural resources depletion” in coastal communities.

12. The project addresses seven strategic issues – sustainable development, poverty reduction, gender equity, good governance, ownership of local people, community-based coastal resource management, and local knowledge and culture. The strategic issues will be

addressed through formulation and strengthening of national policy, legal and institutional arrangement as well as collaboration among projects/initiatives and private sectors related to coastal area development and management. Project activities include establishment of community-based natural resource management (CBNRM), integrated farming system, vocational training, environmental education, seaweed culture survey, and support to commune investment plan.

13. Mr. Monyneath also outlined functions and responsibility of Coastal Resources Centers under Ministry of Environment, which are to compile information, conduct research, and enhance awareness and capacity building.

14. The presentation on the project was supplemented by lesson learnt from Local Area Coastal Resources Management (LACRMs) in Kep province (*Annex 6*) by Mr. Lav Bunnrithy and in Kampot province (*Annex 7*) by Mr. Ven Virak. The LACRM adopts an eco-system based management approach to ensure sustainable utilization of natural resources. In Kep province, the project covers four communes – Angkaol, O’Krasar, Kaeb, and Prey Thom, while in Kampot province, the project covers two communes – Koh Touch and Preak Thnoat.

### **5.2 Capacity Building for Sustainable Development in the Tonle Sap Region (*Annex 8*)**

By Mr. Keang Seng, UNDP/CAP2015

15. Mr. Keang Seng gave a brief presentation on the project, which focuses on capacity building through participatory approach for sustainable development in the Tonle Sap area. The project, implemented during July 2003 to June 2006, composes of three components – a) strengthening natural resource management coordination and planning for the Tonle Sap Biosphere Reserve (TSBR), b) organizing communities for natural resource management in the TSBR, and c) building management capacity for biodiversity conservation in the TSBR.

16. Mr. Keang Seng outlined the second and third year project activities on capacity building for Community Fisheries Development Office (CFDO) and for staff of relevant provincial line agencies as well as development and implementation of environmental awareness, education and outreach in the TSBR.

### **5.3 An Examination on the Re-allocation of Fishing Lots – Perceptions from Community Fisheries Cambodia (*Annex 9*)**

By Mr. Keang Seng, Ford Foundation/WorldFish Center/IFReDI

17. Mr. Keang Seng presented the objectives of the study, which focus on allocation of rights for fishing lots between large and small-scale operators in order to reduce excessive fishing capacity and tensions between the two operator groups. He briefly explained fisheries conflicts among fishermen (at various scales of operation due to destructive and illegal fishing gear and methods as well as fishing ground demarcation), fisheries officers, and local authorities. He identified competition among common fishing gear used and increase in fish price as the main causes of fisheries conflicts.

18. As a result of the study, Mr. Keang Seng summarized the main suggested measures to resolve conflicts, which are clear demarcation of fishing boundaries, elimination of illegal fishing, elimination of medium and large-scale fishing gear in the community fisheries sites, and so on.

#### **5.4 Community-based Mangrove Management in Cambodia: Learning CBNRM in Action to Improve Local Livelihoods and Coastal Ecosystem (*Annex 10*)**

By Mr. Kim Nong, IDRC/MoE

19. Mr. Kim Nong explained background of the project site – Peam Krasaop Wildlife Sanctuary (PKWS) in Koh Kong province, where local people largely depend on natural resources in coastal areas. Started in 1997, the project works in partnership with villagers on development and management of coastal resource utilization and improvement of livelihoods. The project adopted participatory research – learning by doing with active involvement of villagers with support from government officers and outside experts as facilitators.

20. Mr. Kim Nong explained about key dimensions of development of community-based natural resources management (CBNRM), which cover a) learning about situation (status of resources, their usage, institutional and legislative framework), b) human capacity building, c) community organization, d) demonstration of potential benefits of CBNRM, and e) policy and legislation support (including encouraging stakeholders' participation in the policy and legislation development).

#### **5.5 Results of Consultation with Coastal Fishing Communities on Conflicts and Resolution as well as Socio-economic Issues (*Annex 11*)**

By Mr. Thor Sensereivorth, FAO-Sida

21. Mr. Sensereivorth introduced the project objective, which is to increase capacity for obtaining information and data required for management of small-scale fisheries. The project focuses on two important aspects. One is marine fisheries conflicts covering information such as scale of fisheries, types and context of fisheries conflicts and potential solutions. The other aspect is on socio-economic status for coastal fishing communities. The latter aspect covers information on fishing activities, education and health of fishers, awareness about fisheries legislation, perception of fisheries management.

#### **5.6 Human Resource and Seagrass Conservation in Cambodia (*Annex 12*)**

By Mr. Ouk Vibol, UNEP/GEF/DoF (Seagrass)

22. Mr. Ouk Vibol introduced the project which started in 1992. The objectives of this regional project were to promote collaboration and partnership in addressing environmental problems of the South China Sea among stakeholders at all levels and to enhance capacity of participating governments to integrate environmental considerations into national development planning. The project composes of two steps – identification of coral reef and seagrass, and management and conservation of coral reef and seagrass.

23. Mr. Ouk Vibol explained activities of the above two steps. Activities of Step 1 include survey of coral reef and seagrass by scuba diving, reef check, and identification of marine protected areas. The latter takes into account of resource abundance, fishing practices, socio-economic conditions of coastal communities, and potential impacts of conservation of the resources. As for activities of Step 2, the project selected Prek Ampil, Kampot province as a demonstration site. The demonstration site has the overall objective to improve management and conservation of seagrass through obtaining better understanding of seagrass eco-systems and knowledge of their status as well as reducing adverse impacts of human activities.

24. Mr. Ouk Vibol explained analysis of stakeholders and risk assessment, which was the basis for formulation of component activities – management and coordination, survey and

monitoring, training and education, environment management and improvement, and financial sustainability. The demonstration site shares the collaborative management framework that that of Vietnam in Phu Quac Island.

### **5.7 Capacity Building of Inland Fisheries Research and Development Institute, Cambodia (*Annex 13*)**

By Dr. Rene Agbayani, ADB/WorldFish Center

25. Dr. Agbayani presented project background including the IFRDI road map to sustainable development of inland fisheries in Cambodia. The project is in its second phase, which aims at building further the skills and awareness of staff of IFRDI for the institute to be better able to disseminate research findings. The project composes of four components – *socio-economic* (strengthening research and development and synthesizing the findings for policy makers), *bio-ecology and flood-fish modelling* (synthesizing bio-ecology of major species with linkage among fish production, water regime and habitats as well as enhancing awareness and capacity), *policy development and dialogue* (developing decentralization strategy for community fisheries as well as enhancing capacity for policy development), and *technology transfer* (improving capacity in technology transfer as well as designing and speeding-up dissemination of information materials).

### **5.8 Management and Conservation Programme on Endangered Species in the Coastal Areas of Cambodia (*Annex 14*)**

By Mr. Pich Sereyath, DoF/NGOs

26. Mr. Sereyath briefly introduced major threats to endangered species in Cambodian coastal areas, which are habitat destruction due to destructive fishing, by-catch, lack of education and awareness building on management and conservation, demands of black markets, etc. He outlined project activities in support of management and conservation, which include legislation, public education and awareness building, research on major habitats, introduction of decentralized/community-based conservation scheme including refugia, etc.

### **5.9 Introduction to Fish Refuge Pond Program: Stock Enhancement for Rice Field Fishing (*Annex 15*)**

By Mr. Haing Leap, AIT/JICA

27. Mr. Haing Leap gave overview and development of aquaculture in Cambodia of which freshwater aquaculture has been developed over the past century while that in coastal areas is a relatively new development. He explained the concept and mechanism of fish refuge pond, which was built on experience of fisheries in man-made reservoirs and traditional fish trap ponds. There is no fishing allowed in fish refuge pond as it serves as areas for broodstocks and their reproduction to provide recruitment to surrounding areas during flooding seasons.

28. Mr. Haing Leap briefly introduced procedure of fish refuge pond management program starting from identification and selection of site (site selection criteria includes hydrological, socio-economic, topographical and administrative aspects), consensus building among villagers and local authorities, establishment of fish refuge pond management group, capacity building of members of pond management group, conduct of activities, and monitoring and evaluation.



## **5.10 Human Resource Development Experience of Management of River and Reservoir Fisheries (MRRF) Cambodia Sub-Component, A Case Study at Tukchar Reservoir (*Annex 16*)**

By Mr. Heng Samay, MRRF, MRC-Fisheries Programme (FP)

29. Mr. Heng Samay introduced the MRRF project, which was started in 2000 and is expected to continue until 2010. The objective of MRRF is to achieve coordinated and sustainable management of economic and nutritional potentials of inland living aquatic resources in the Mekong basin through development, implementation and dissemination of sustainable reservoir/river co-management models by fishing communities and concerned authorities. He explained HRD aspect of the MRRF project covering a wide range of activities such as training (on participatory rapid appraisal (PRA); community development, planning and organization; community fisheries management planning; etc.), study tours, technical symposium, workshops and meetings.

30. Mr. Heng Samay further explained a case study of HRD experience at Tukchar/Thmorda Reservoir in Kampong Cham province by outlining development matrix for HRD, which forms an important basis for building management capacity of fisheries in the reservoir.

## **VI. CONCLUSION AND RECOMMENDATIONS**

### **6.1 Lessons Learned from the Projects/Initiatives**

31. Conclusion and recommendations from the Workshop are shown as follow:

#### **6.1.1 Fisheries in the Development and Management of Coastal Natural Resources**

- Fisheries should be integrated into sustainable development and management of coastal areas, which can be considered as a long-term process. It is important that the development balances three important objectives – social, economic, and environment/ecological.
- The major roles of Department of Fisheries at the central and local levels are to ensure sustainable fisheries resource utilization as well as management and conservation of critical coastal habitats.
- Management and conservation of coastal resources including endangered species should be incorporated into the overall coastal development and management plan.

#### **6.1.2 Policy, Legal and Institutional Framework**

- Policy framework for sustainable coastal fisheries development and management should be developed as a basis for actions to be taken at the provincial and local levels as well as for outside project assistance and funding support.
- Where excessive fishing capacity exists, exit scheme from the fisheries sector may be considered but only when due consideration is given to social and economic consideration.
- Alternative and supplementary livelihoods should aim at diversifying occupations and sources of income and be identified considering potentials and capacity of community in the broader coastal area development and management.

### 6.1.3 Capacity Building and Supporting Resources

- Empowering community and strengthening local institutions are key elements of capacity building for sustainable coastal resource management.
- Awareness and understanding of civil society, communities and stakeholders on potential benefits of natural resource management is crucial for ensuring their support, cooperation and compliance of management intervention.
- There is a need for development of guidelines for best fisheries practices for sustainable coastal development. This could assist in fisheries monitoring and control by coastal provinces as well as coastal resource and habitat protection.
- Data collection technique is important to obtain reliable data and information. Community should be involved in the process to ensure that the results are realistic. This will provide a basis for consensus building in developing solutions to fisheries conflicts and formulation of management intervention as well as to ensure compliance among fishers.
- Awareness and capacity building including information distribution strategies should be regularly monitored and improved to ensure their effectiveness.

### 6.1.4 Research and Development

- Involvement of communities and fishers in identifying and conduct of research could help strengthen management capacity for coastal resources at the local level.
- Appropriate market information should be improved to help better marketing of fish products.

### 6.1.5 Cooperation and Networking of Agencies and Projects/Initiatives

- Inter-agency coordination mechanism and dialogue among line agencies concerned for coastal development are strongly encouraged. As a result, an overarching policy framework for sustainable coastal development including institutional arrangement and demarcation of responsibilities could be developed to facilitate actions to be taken by respective agencies.
- In the context of management and conservation of habitat and transboundary resources, dialogues among neighboring areas/countries should be initiated and supported by collaborative mechanism for sharing information and expertise.
- Networking of national centers in coastal resource management at the regional level could facilitate sharing of information and experience.

## 6.2 Future Follow-up HRD Activities under SEAFDEC-Sida Project

32. Based on the on-going projects/initiatives, future follow-up activities under the SEAFDEC-Sida project may give priority to integrating fisheries into management and conservation of coastal habitats. The concept of “fisheries refugia” considered as a marine protected area with regulated fishing could be considered along this line.

### 6.2.1 Cambodia-Thailand Bilateral Consultation on “Capacity Building for the Establishment of Fisheries Refugia and Coastal Resource Management”

|                              |   |
|------------------------------|---|
| <b>Venue</b>                 | Koh Kong province   |
| <b>Time</b>                  | (To be confirmed)   |
| <b>Implementing Agencies</b> | SEAFDEC with supports from Sida in close collaboration with DoF-Cambodia, DoF-Thailand and UNEP/GEF/SCS |
| <b>Target Areas</b>          | <u>Cambodia</u><br>Koh Kong province – Koh Spach  |

|                            |   |
|----------------------------|---|
|                            | Sihanouk Ville – Koh Rungsanlem<br><u>Thailand</u><br>Trad province – Koh Chang   |
| <b>Overall Objective</b>   | - To investigate the concepts and requirements (particularly supporting capacity building) for establishment of “Fisheries Refugia” in the Cambodia-Thailand border.  |
| <b>Specific Objectives</b> | - To review concepts and basic design for establishment of “Fisheries Refugia”.<br>- To clarify linkage of “Fisheries Refugia” in the context of coastal resource management.<br>- To identify capacity building needs and activities including HRD materials in support of the establishment of “Fisheries Refugia”.<br>- To discuss potential collaborative mechanism between Cambodia and Thailand in the implementation of “Fisheries Refugia”. |
| <b>Expected Outputs</b>    | - A draft plan for the establishment of for “Fisheries Refugia” for both in Cambodia and in Thailand<br>- An outline of a training package for HRD<br>- Suggested collaborative mechanism for the joint implementation of “Fisheries Refugia” between Cambodia and Thailand   |
| <b>Target Participants</b> | <u>Cambodia</u><br>Officers from DoF as well as from Koh Kong, Sihanouk Ville, Kep and Kampot provinces<br>Officers from MoE<br><u>Thailand</u><br>Officers from DoF as well as from Trad province.   |
| <b>Agenda</b>              | - Fisheries Refugia: Introduction and Concepts<br>- Basic Consideration and Design for Establishment of Fisheries Refugia<br>- Capacity Building for Establishment of Fisheries Refugia<br>- Potential Collaboration between Cambodia and Thailand in the Implementation of Fisheries Refugia   |

### 6.3 Indicators to monitor/evaluate the impacts of projects/initiatives for sustainable development of coastal resources management in Cambodia

33. This agenda item was changed into an open plenary discussion on the merits of a process like the one run by the DOF and SEAFDEC-Sida Project. The summary of these discussions in which the fisher-folk and villagers from the four provinces were very active became the closing statement, or **wrap up comments**, from the workshop in Kampot. A statement that provides useful guidance for next step in the pilot process under the SEAFDEC-Sida Project:

- Results of (including good **indicators**) of projects should be clearly presented with indicators on the development of community status after the implementation of the projects.
- The success of projects should be presented. This should also be put in the perspective of the amount of funds spent. Having a small fund could still be fruitful and if so it could be used as an example for other communities. Again **indicators** on “success” needs to be identified

- The representatives from provincial fisheries and community members from province-villages along the coastline should be given time to present their experiences and/or activities.
- The Community members should given room to clearly present their own perspectives and objectives.
- Due to lack of knowledge on computers, community members can present their activities and results by flip chart.
- All documents should be prepared in Khmer language (the presentations, slides and other relevant documents).
- The number of slides in a presentation should be limited
- All documents should be provided early to organizers to be copied and distributed to participants.
- Members of the Commune Councils should be invited to attend the workshops.
- More villagers and fisher-folk should be invited.
- More time should be given to have group discussions
- The Department of Fisheries should present the Royal Degree, Sub-degree and Law of Community Fishery.
- The SEAFDEC-Sida Project should select and present, or invite somebody to present, experiences of community development in coastal area of other Asian countries.
- The report of the previous workshop should be translated into Khmer in order to distribute to participants in the next workshop to be used as a reference document.
- There should be an evaluation form to evaluate workshop activities and presentations.

## **VII. CLOSING**

34. Mr. Ing Try, Deputy Director of Department of Fisheries, Cambodia thanked to the working group of the Fisheries Department in cooperation with delegations of SEAFDEC-Secretariat in organizing the Workshop. He expressed his appreciation to the discussion and exchange including the findings of solution to strengthen human resource development in fisheries for Cambodia in the future. He then declared the Workshop closed. His closing speech appears as Annex 17.

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**Opening Speech by H. E. Nao Tuok  
Director of the Fisheries Department  
For the On-site Training and Workshop on Development of Community Based Fishery  
Management in Coastal Areas of Cambodia  
20-23 September 2005, at Borey Bokor Hotel, Kampot Province, Cambodia.**

**Distinguished guest, ladies and gentlemen,**

First of all, I would like to express my warm welcome and my sincere appreciation for the SEAFDEC delegation and resource persons to give your valuable time to participate the National Workshop on “Training and Development of Community Based Fishery Management in coastal of Cambodia” in support to the Implementation of the Code of Conduct for Responsible Fisheries in the ASEAN Region which was adopted by Council Director in the New millennium Conference. In conjunction with our concern, this workshop is an approach to enhance awareness and to promote various human resource development activities for fisheries management and to alleviate problems caused by excessive levels of fishing capacity in the ASEAN region as well in Cambodia.

On behalf of the Department of Fisheries, I would like to express my gratitude to the participants, resource person of international and national relevance institutions, my colleagues and also delegates from SEAFDEC Secretariat, especially Dr. Magnus Torell, Senior Advisor of SEAFDEC; Dr. Worawit Wanchana, Acting Project Manager of Sida-SEAFDEC project; Mr. Suriyan Vichitlekarn, Policy and Program Coordinator of SEAFDEC and Mr. Suy Serywath, representative of Cambodia working at SEAFDEC Secretariat to take many effort to make this important event smoothly operated as scheduled.

**Distinguished, ladies and gentlemen,**

This is one of the great outcomes of the cooperation of the Department of Fisheries of Cambodia with Sida-SEAFDEC under the program Human Resource Development Capacity Building.

As we have known, Cambodia still has a lot of things that need to be done for human resource capacity building for fisheries management, both inland and marine fisheries. So far, there are many projects that were implemented by several national institutions in cooperation with international organizations and NGOs to manage fisheries resources in Cambodia. However, we still have limited knowledge in the national level and local level, while we face constraint of degradation of fish production coupled with the increase of demand for people food consumption.

Because of the extreme decline of fish production and also the climate change the Cambodia government especially the Department of Fisheries of the Ministry of Agriculture, Forestry and Fishery had paid attention on community based fisheries management. This scheme is needed both for central and local level in order to manage and use natural fisheries resources in sustainable way.

At present, community based fisheries management system in Cambodia, especially marine community fisheries management system is lacking due to the problems linked with structure, responsibility, technical skills management and as well budget constraints.

This workshop plays a significant role to prioritize strategic action plans of the Department of Fisheries to manage fisheries sources. Furthermore, it provides more information and experience related to human resource development program of each project in local area. The synthesis gained from the experiences of past and on going project is encourage for better cooperation, and also to provide guidelines to succeed in the implementation of marine resource management in Cambodia in the future.

In this occasion, I would like to encourage the resource person and my colleagues to freely share and learn knowledge from each other of during coming a few days. This National Workshop is very important to provide more human capacity building for fisheries management in Cambodia.

All participants here today include participants from center level, provincial level and community level. They are a bit different level; however, these experiences are very appropriated to contribute more with our existing skills in order to apply activities in their own location.

Once again, on behalf of Minister of Agriculture Forestry and Fisheries and the Department of Fisheries, I wish to convey the high appreciation of Cambodia for the valuable assistance from SEAFDEC and resource person for their kind attention to provide useful knowledge in human resource capacity which is considered with great importance to strengthen both marine and inland fisheries management and encourage its successful implementation.

Finally, I wish you ladies and gentlemen, for fruitful discussion and success in this workshop, that it would achieve its goal for a strengthened HRD in the fisheries sector.

**Thank you.**

## **Adopted Agenda and Its Arrangement**

### **20 September 2005**

- 1) Opening and background introduction
  - 1.1 Opening address
  - 1.2 Welcome remarks
  - 1.3 Background introduction
- 2) Resource Presentations<sup>1</sup>
  - 2.1 Coastal Zone Management by representative from CZM/Danida/MOE

### **21 September 2005**

- 2) Resource Presentation (continued)
  - 2.2 Capacity Building for Sustainable Development in the Tonle Sap Region from UNDP/CAP 2015
  - 2.3 An Examination on the Re-allocation of Fishing Lots – Perceptions from Community Fisheries Cambodia by Ford Foundation/WorldFish Center/IFReDI
  - 2.4 Community-based Mangrove Management in Cambodia: Learning CBNRM in Action to Improve Local Livelihood and Coastal Ecosystem by IDRC/MOE
  - 2.5 Results of Consultation with Coastal Fishing Community on Conflicts and Resolution as well as Socio-economic Issues by FAO-Sida Project in Cambodia
  - 2.6 Human Resource and Seagrass Conservation in Cambodia by UNEP/GEF/DOF
  - 2.7 Capacity Building of Inland Fisheries Research and Development Institute , Cambodia, ADB/WorldFish Center

### **22 September 2005**

- 2) Resource Presentation (continue)
  - 2.8 Management and Conservation Programme on Endanger Species in the Coastal Areas of Cambodia by DOF/NGOs
  - 2.9 Introduction to Fish Refuge Pond Program: Stock Enhancemnet for Rice Field Fishing AIT/JICA
  - 2.10 HRD Experience of Management of River and Reservior Fisheries (MRRF) Cambodia Sub-Component, A Cast Study at Tukchar Reservior by MRRF, MRC-Fisheries Programme
- 3) Wrap up and conclusion of the workshop
- 4) Conclusion and recommendation for next step of SEAFDEC-Sida Project in Cambodia
- 5) Closing


### **23 September 2005**

Field-trip to Prek Tnaut Community

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<sup>1</sup> Resource persons will provide presentation based on their experiences (in the areas mentioned above) in terms of human and/or institutional capacity building for coastal resources and fisheries management. It was respected that those presentations could lead to the development of outline for a training package for HRD in coastal fisheries management (based on the existing and available training package and materials of those projects/initiatives) for Cambodia, together with suggestions on the performance indicators to monitor/evaluate the impacts of the projects/initiatives for sustainable development of coastal resources management in Cambodia.

**Brief Background of SEAFDEC-Sida Project on Capacity Building for Human Resource Development on the Support to Implementation of the Code of Conduct for Responsible Fisheries in the ASEAN Region: Mr. Suy Serywath**



**National Workshop on  
" Training and Development of  
Community Based Fisheries  
Management in Cambodia"**

20-23 September 2005, Kampot province

**Background and Rationale**

I. CCRF and it's Regionalization in SEA

- ☞ CCRF in 1995: provides norms and principle in the responsible utilization of fisheries resources.
- ☞ ASEAN-SEAFDEC: Regionalization of CCRF from 1998-2005.

National Workshop on HRD Program, 20-23 September 2005, Kampot province, Cambodia

**Background and Rationale**

II. H. Resources and F. Management

- ☞ Major constraint of CCRF implementation: Lack of qualified/trained personnel.
- ☞ SEAFDEC-SIDA: developed a regional program on HRD in 2003.
- ☞ RTC in Kuala Lumpur, Feb 2003: HRD in fisheries.

National Workshop on HRD Program, 20-23 September 2005, Kampot province, Cambodia

**Background and Rationale**

- ☞ RTC in Phnom Penh, June 2004: HRD in fisheries management: Strategy & Regional inventory.
- ☞ Expert Meeting on Fishing Capacity and HRD, in Bangkok Sept 2004: Pilot Process is agreed.

National Workshop on HRD Program, 20-23 September 2005, Kampot province, Cambodia

**Background and Rationale**

III. Pilot Process on HRD in SEA.

- Consideration: commonality and differences among the countries.
- Strategy to draw lessons and experience from a representative set of countries to provide a basis to develop future direction: so called "PILOT PROCESS"

National Workshop on HRD Program, 20-23 September 2005, Kampot province, Cambodia

**Background and Rationale**

IV. Pilot Process: in Cambodia

- The meeting 17 March 2005 and workshop 6-8 July 2005, Phnom Penh.
- Explore what steps to be taken, projects to follow up on with regards to HRD to be discussed in further National Workshop.
- Define background, objectives, and expected outcome.

National Workshop on HRD Program, 20-23 September 2005, Kampot province, Cambodia

**National Workshop**

➤ **Background:**

- There are constrain issues and pressures of use natural resources along the coastal of Cambodia.
- The concerning to rectify resources used toward the sustainable development goal.

National Workshop on HRD Program, 20-23 September 2005, Kamput province, Cambodia

**National Workshop**

➤ **Overall Objectives**

To strengthen local fisheries management capacity and to promote community-based coastal aquatic resources management – with an increased focus on legal, economic and social aspects – to sustain human capacity building for coastal resources management in Cambodia

National Workshop on HRD Program, 20-23 September 2005, Kamput province, Cambodia

**National Workshop**

➤ **Specific Objectives:**

- > To develop and outline of a training package HRD on community-based coastal fisheries management in Cambodia by mobilizing the lessons learned from project/initiatives based on the experiences in provinces-municipalities along the coastal area.
- > To develop performance indicators to monitor /evaluate the impacts of project/initiatives for sustainable development of coastal resources management in Cambodia.

National Workshop on HRD Program, 20-23 September 2005, Kamput province, Cambodia

**National Workshop**

➤ **Expected Outcome**



- ✓ A strategy/practical of project's activities to formulate guideline for implementation and,
- ✓ An appropriate model of HRD to apply for the local community.
- ✓ The indicators for evaluation/monitoring will be defined of the projects/initiatives in local Community.

National Workshop on HRD Program, 20-23 September 2005, Kamput province, Cambodia



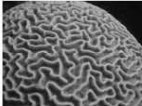








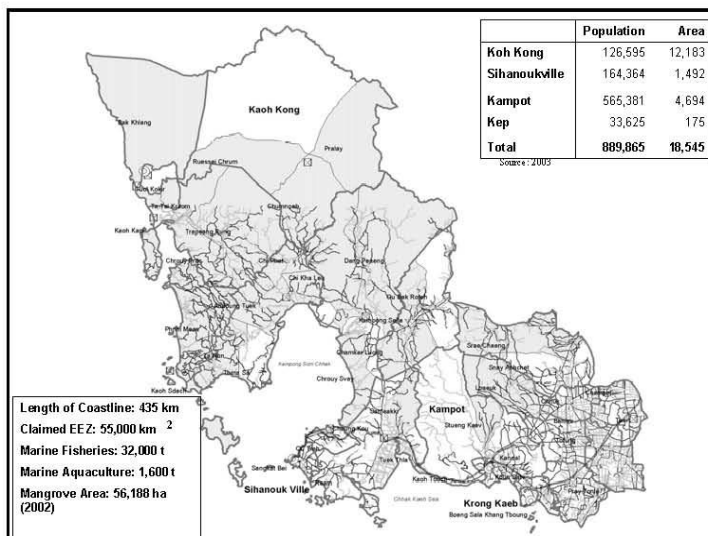
**Issues and Solutions for Coastal Zone Management in Cambodia:  
Mr. Vann Monyneath, CZM/Danida/MoE**

**Issues and Solution for Coastal Zone Management in Cambodia**

**Vann Monyneath,  
Director,CCU, MoE**



## 1. Coastal Resources

- Land, Beaches, Islands



- Mangroves and other Forests



- Fish, Dolphin, Crustaceans, and Sea grasses



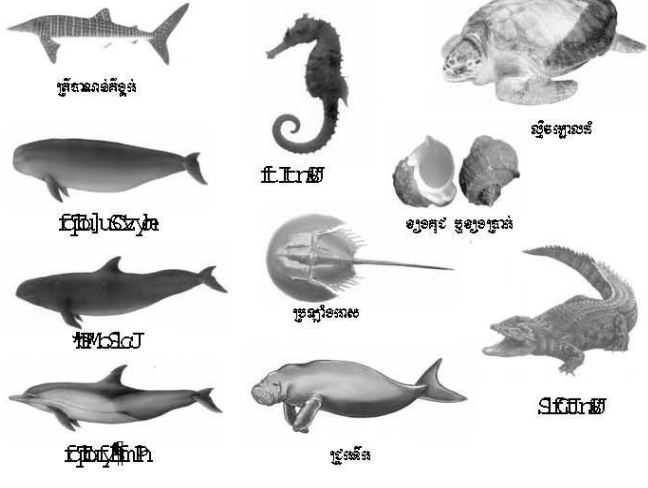
- Shrimps, Crabs, Lobsters, Corals



- Birds and Wildlife



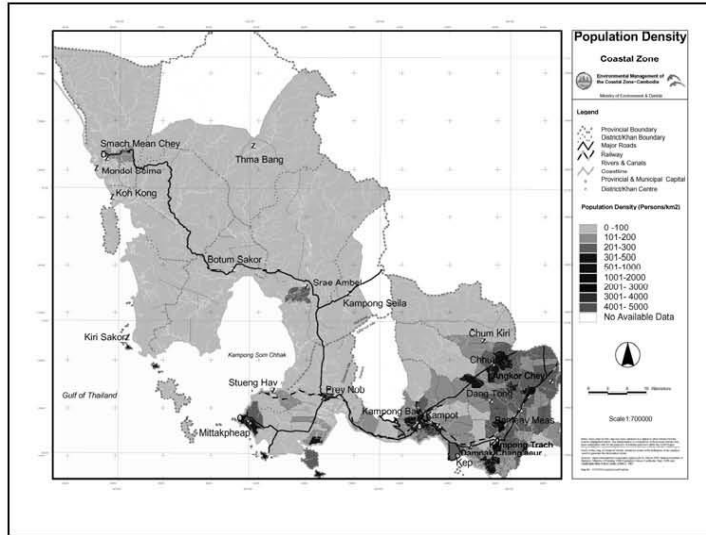
Southwest Atlantic



Coastal People

- Mostly Rural





## 2. Coastal Issues

### Population Pressure

- AAGR (3.6%)
- Migration

### Economic Development

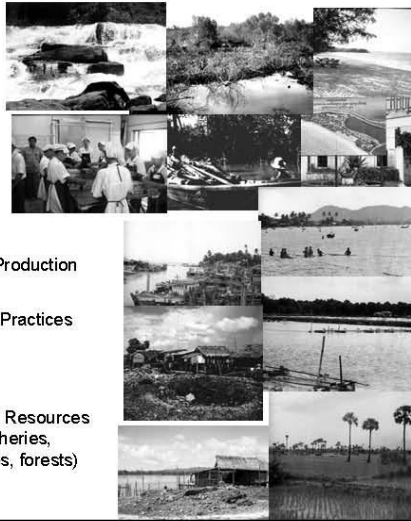
- Urbanization
- Tourism Development
- Shrimp Farming, Salt Production

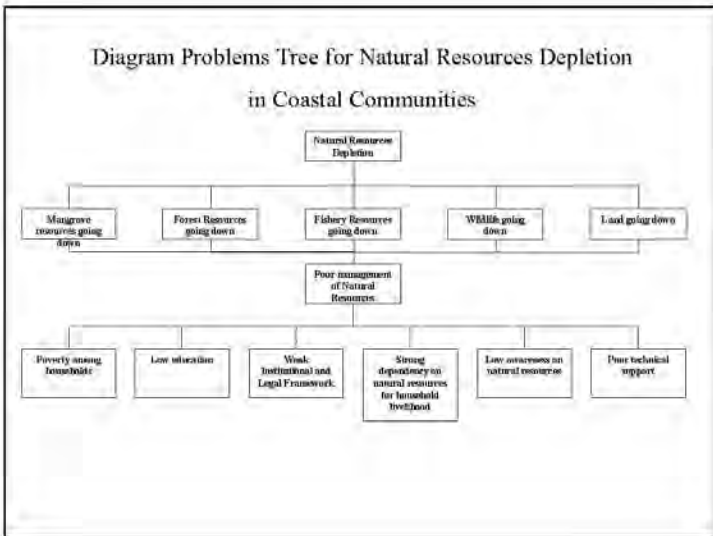
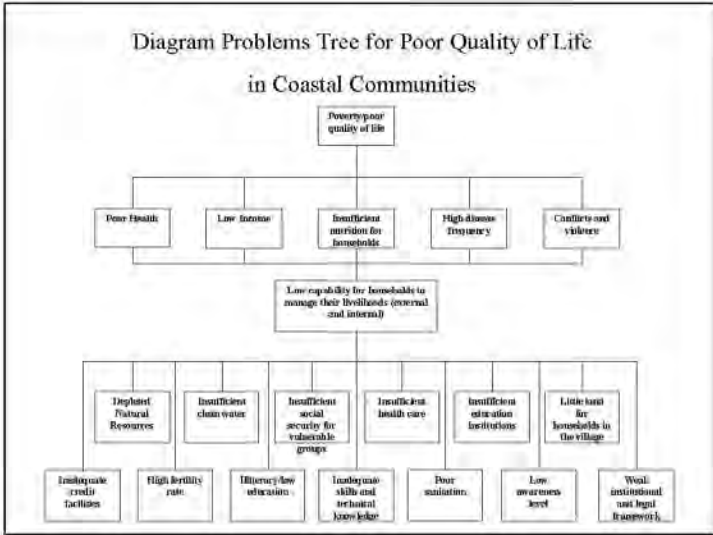
### Poverty

- Destructive Livelihood Practices

### Environment

- Pollution (solid waste)
- Degradation of Natural Resources (coral reefs, coastal fisheries, mangroves, seagrasses, forests)





### **3. Solutions for Coastal Zone Management**

#### 3.1 Policy, Legal and institutional arrangement

- Recognizing the necessity of decentralization policies,
- Recognizing the necessity of land use policies,
- Recognizing of marine policies,
- Recognizing the necessity of sustainable resources utilization policies and balance of socio-economic development and natural resources and environmental management.
- Recognizing the necessity of integration and coordination, public and private cooperation and community participation in NRM.
- Strategic plan for coastal Sihanoukville
- Strategic plan for land-base pollution
- National action plan for corals and seagrass
- Coastal and marine water quality monitoring program
- Putrajaya Declaration on regional cooperation for sustainable development of the Seas of East Asia
- Law on Environment and Natural Resources management
- Law on forestry

#### 3.1 Policy, Legal and institutional arrangement

- Land Law
- Investment Law
- Law on Communal Administration
- Law on fisheries (Drafted)
- Law on Protected Areas (Drafted)
- Sub-decrees
- National Coastal Steering Committee
- National Committee for Support to Communes
- Seila Task Force
- Provincial Rural Development committee

### **3. Solutions for Coastal Zone Management**

#### 3.2 Donor partners to CZM in Cambodia

- CZM project (Danida)
  - 33 communities were established in 14 communes and 8 districts
  - 33 villagers are trained to be veterinarians
  - 62 ha have planted mangrove forests
  - State of coastal report and its action plan
  - Coastal and marine water monitoring program
  - Livelihoods (Integrated Farming System, Eco-tourism, Rural Waste Management, Vocational Technical Training, )
  - Coastal Resource Centers
- Participatory Management of Coastal Resources (IDRC/Canada)
- Participatory Natural resource management and Land Use Planning (GTZ)
- Integrated Coastal management in Sihanoukville (PEMSEA/IMO)
- Commune and Community Based National Resource Environmental Management (Seila/Danida)
- American Friends Services Committee (AFSF/USA)
- South China Sea Regional Project (UNEP/GEF)
- NGOs

### **3. Solutions for Coastal Zone Management**

#### 3.3 Private Sectors

- Angkor Beer factory (treatment capacity:1,500 m3)
- Sokimex Company (fuel storage tanks. Building sewage system and dykes)



### Coastal Resources Centres



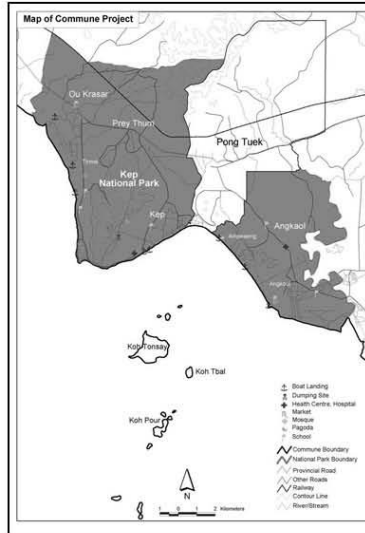
- Information (general, specific)
- Exhibition (coastal management issues)
- Meetings (public, private, government, non-government)
- Training (vocational, NGOs, government staff, etc)
- Education (support schools and higher learning institutions)
- Resource (Staff, Office, IT, Boat, Surveying, etc.)



**Lesson Learnt from Local Area Coastal Resources Management in Kep: Mr. Lav Bunnithy**

|   |
|---|
|  <b>Lessons Learnt from Local Area Coastal Resources Management in Kep</b>  |
| <b>Presentation for National Workshop on Training and Development of Community Based fisheries Management in Coastal of Cambodia</b>  |
| Kampot, 20-23 September 2005  |

**Opening incident...**  
Support to coastal communities is an important component in Phase 3 of EMCZ–Cambodia. The so called Local Area Coastal Resource Management (LACRM) Project adopts an eco-system based management approach, which seeks to support locally organized human use of the coastal eco-system in order to balance the exploitation of the natural resources with their sustainable production. As far as possible, LACRM is defined within natural borders (e.g. an estuary, lagoon, or group of islands) with an overlay of socio-economic and administrative borders allowing management at the lowest appropriate level.



**Project where about...**

Kep is located about 178 km from Phnom Penh and is accessible through Kampot. This map shows the LACRM area stretches from O'Krasar commune passing through Prey Thom, toward Kep and reaching to Angkaol commune where they are all located along coastline. There are eight places for boat landing and other infrastructures such as schools, health centers, pagodas and mosques. The area also consists of a number of islands within the water.

| <b>Population in the area...</b> |              |               |              |              |             |                     |
|----------------------------------|--------------|---------------|--------------|--------------|-------------|---------------------|
| Names of villages                | # Family     | # People      | # Females    | # Males      | Sex Ratio   | Average Family Size |
| <b>Angkaol Commune</b>           |              |               |              |              |             |                     |
| Ampeaeng                         | 651          | 3,392         | 1,719        | 1,673        | 0.97        | 5.21                |
| Angkoul                          | 329          | 1,887         | 919          | 968          | 1.05        | 5.74                |
| <b>Total</b>                     | <b>980</b>   | <b>5,279</b>  | <b>2,638</b> | <b>2,641</b> | <b>0.99</b> | <b>5.37</b>         |
| <b>O'Krasar Commune</b>          |              |               |              |              |             |                     |
| O'Krasar                         | 718          | 3,441         | 1,781        | 1,660        | 0.93        | 4.79                |
| <b>Total</b>                     | <b>718</b>   | <b>3,441</b>  | <b>1,781</b> | <b>1,660</b> | <b>0.93</b> | <b>4.79</b>         |
| <b>Kaeb Commune</b>              |              |               |              |              |             |                     |
| Kaeb                             | 478          | 2,363         | 1,189        | 1,174        | 0.99        | 4.94                |
| <b>Total</b>                     | <b>478</b>   | <b>2,363</b>  | <b>1,189</b> | <b>1,174</b> | <b>0.99</b> | <b>4.94</b>         |
| <b>Prey Thom Commune</b>         |              |               |              |              |             |                     |
| Thmei                            | 541          | 2,162         | 1,119        | 1,043        | 0.93        | 4.00                |
| <b>Total</b>                     | <b>541</b>   | <b>2,162</b>  | <b>1,119</b> | <b>1,043</b> | <b>0.93</b> | <b>4.00</b>         |
| <b>Grand Total</b>               | <b>2,717</b> | <b>13,245</b> | <b>6,727</b> | <b>7,518</b> | <b>0.96</b> | <b>4.96</b>         |

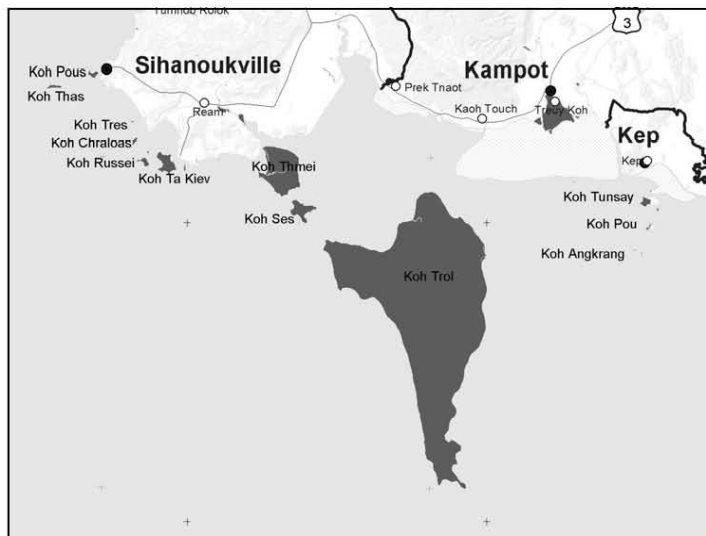
| <b>Wealth distribution...</b> |                     |                  |             |                 |
|-------------------------------|---------------------|------------------|-------------|-----------------|
| <b>Names of villages</b>      | <b>Total Houses</b> | <b>Very Poor</b> | <b>Poor</b> | <b>Well Off</b> |
| <b>Angkaol Commune</b>        |                     |                  |             |                 |
| Ampeaeng                      | 586                 | 38%              | 49%         | 13%             |
| Angkoul                       | 299                 | 62%              | 25%         | 13%             |
| <b>Ou Krasar Commune</b>      |                     |                  |             |                 |
| Ou Krasar                     | 675                 | 30%              | 36%         | 34%             |
| <b>Kaeb Commune</b>           |                     |                  |             |                 |
| Kaeb                          | 459                 | 29%              | 60%         | 11%             |
| <b>Prey Thom Commune</b>      |                     |                  |             |                 |
| Thmei                         | 464                 | 42%              | 39%         | 20%             |

| <b>Natural resources profile (mangrove)</b>  |                     |                       |                       |
|--|---------------------|-----------------------|-----------------------|
| <p>Mangrove forest stand patches by patches along the coastline of O'Krasar commune, Prey Thom and especially in Angkol communes are visible. According to PRA dialogues (2003 &amp; 2004), the villages' statements have been addressed the degradation of mangroves resources due to illegal activities such as cutting for firewood, construction materials, and abandoned shrimp farm in mangroves not utilized for any purposes, especially restoration of mangrove habitat. In addition, expansion of salt-farms in Angkol commune is obviously noticed over the past activities. According to the discussion with Technical Departments including ground observations have been addressed over the issuance of land tenures in the mangrove area for privatized occupation. The table below shows the mangrove distribution in Kep's coastline.</p> |                     |                       |                       |
| <b>Location</b>  | <b>Districts</b>    | <b>Area (1992/93)</b> | <b>Area (1996/97)</b> |
| Kep  | Damnak<br>Chang'aur | 672 ha                | 672 ha                |
| Kep  | Kaeb                | 74 ha                 | 74 ha                 |

## Natural resources profile (sea grass)



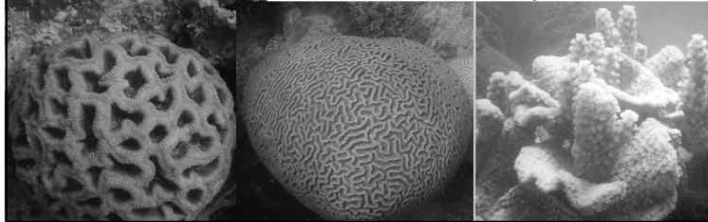
Discussion made with villagers (PRA 2003 & 2004) has been stated on the sea grass degradation. In addition, sea grass area has not been specifically indicated the location but it is located along the coast of shallow water, especially in front of Angkol's coastline. The sea grass bed has been degraded as result of bottom fishing and used destructive gears like trawlers, motorized push nets in the shallow water of sea grass meadow. The broken blades of sea grass have once been evident as they floated at the surface near the inshore and this because of fishing in the sea grass meadow.

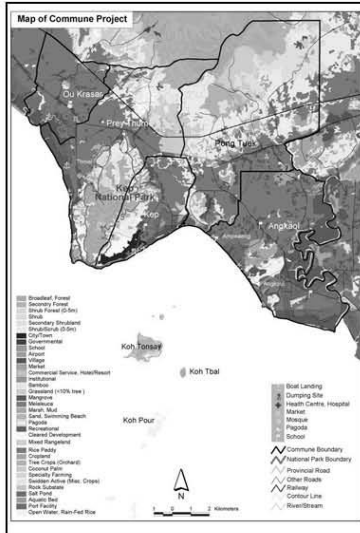


## Natural resources profile (coral reef)

Dynamite fishing is characterized of illegal fishing in the area of coral reef, which has been addressed on the villages' statements during PRA dialogues (PRA, 2003 & 2004). The PRA discussion, villagers not much addressed on the causes of coral status. Additionally, further information in the anecdotal map show that most coral areas locate around the group of Islands of Rabbit Island and other vicinity Islands in Angkol commune. There are slightly patches of coral reef in the shallow reef in front of Prey Thom commune.

The annually check on the status of the coral reef and some surveys have been made by DoF. So far the coral benefits to local people is very little known, thus, awareness and ecotourism development should be considered but environmentally sounded.





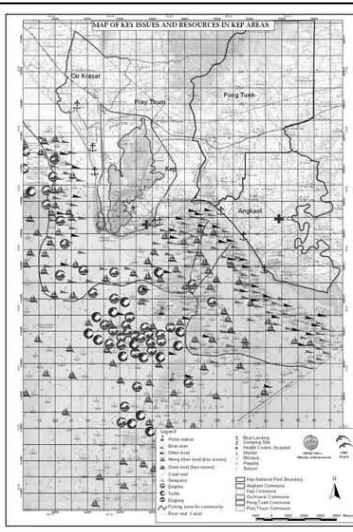
### Natural resources profile (land and fresh water)

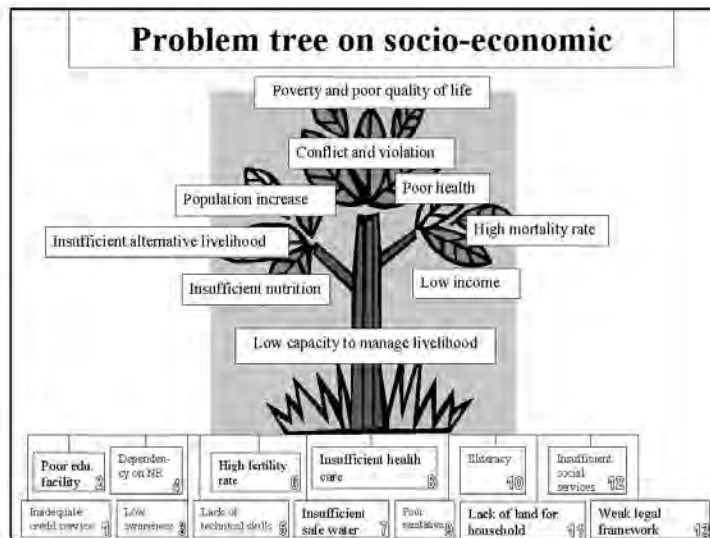
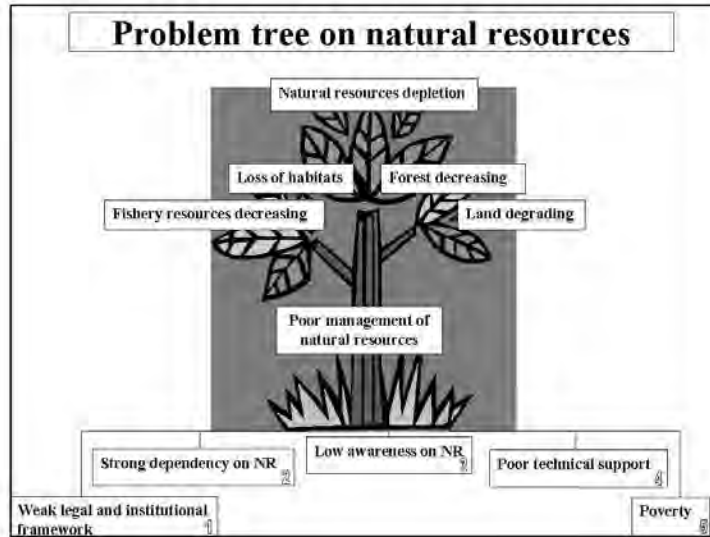
There are different types of land use and divided into different landforms such as agriculture, settlements, salt farms, shrimp ponds etc. Concern related to land use focused on encroachment in forest and mangrove areas, and the lack of access to land for agriculture.

The coastal tropical climate in Cambodia is characterized by a rainy season between May and November with considerable precipitation and a dry period between from November to May with very little precipitation. Freshwater is therefore in ample supply for part of the year from wells, ponds and rivers whereas shortage can be experienced in the dry season when saline intrusion can occur.

### Natural resources profile (fishery)

In the PRA dialogues, local fisher-folks have expressed concerns on the decline in the fisheries resources. The decline is largely seen as the result of illegal fishing using destructive fishing gear. Particularly, motorized push netting and trawling in the shallow waters of the LACRM Area is considered too efficient leading to declining stocks. Also these practices together with dynamite fishing is believed to impact on key habitats (sea grass beds and coral reefs) for the recruitment required to sustain or expand the stocks of commercial fish and crustacean stocks.





### **Objective and strategic consideration**

The overall objective is coastal communities implementing participatory LACRM taking into account building of social capital, enforcement of local user rights, involvement of women, and generation of improved livelihood to reduce poverty.

The following criteria have been complied in developing the plans. They are:

- Sustainable development (finance, organization, natural resources, human resources)
- Poverty reduction
- Gender equity
- Good Governance (democratically, transparent, accountably)
- Local Ownership
- Management at the lowest level possible
- Ethnic/religion sensitive

### **What we are doing to support NR management in the coastal zone...**

- Establish Community-based Natural Resources Management (CBNRM)
- Introduce and implement family size integrated farming system
- Support to vocational training for alternative livelihood
- Support to Environmental Education activities in schools
- Study and support to community based eco-tourism



### **Establishment of CBNRM in Angkaol village**

- Election of community committee
- Establishment of agreed community regulation
- Demarcation of community boundary by GPS and mapping
- Study tour of community committee to Koh Kong.
- Preparation for appropriated action on illegal fishing practice. (Set up appropriated place for lay out obstacle devices.)

### **Introduction to family IFS...**

- Establishment of village animal health workers (1 or 2 per village, totally 7 persons.)
- Selection of volunteer families (about 10 per village, totally 56 families.)
- Study tour to Takeo province for VAHWs and representatives from volunteer families.
- Training to volunteer families on IFS for 10 days.
- Establishment of IFS committee to manage fund flow.
- Study on household profile and identify needs of each family.
- Preparation of IFS family planning.
- Provide support for each family.



### **Environmental education in schools...**

- Conduct training need assessment.
- Selection of schools and responsible teachers for the program.
- Establishment of national and provincial committee to support the program.
- Training workshop to school teachers and principals on environmental education.
- Support training aid, educational materials to the schools.
- Monitoring teachers activities with the students.
- Encouraging and facilitating schools to write proposals.

### **Lessons learnt from project implementation...**

- Establishment of CBNRM requires strong support from local authorities.
- Commune councils and community should take more responses in natural resources management with less support from the project.
- Patrolling seem to be not a good activity of CBNRM since it is not sustainable and may ignites direct conflicts. Try other ways.
- Required training skills should be provided to community as a way to promote alternative livelihoods.
- Natural resources management activities should be included in commune investment plan.
- Education and awareness activities should be followed by technical support.

### **Lessons learnt from project implementation (continue...)**


Usually, poor people have an interest in protection of the resources, but might not have the capacity to deal with protection of the resources on their own. However, the poor are rarely the real offenders of violation of environmental law, and should therefore not be the only focus target in NRE education and enforcement strategies.

Strategically, it might be necessary to consider a focus on other wealth groups than the poorest as a starting point. Precaution should, though, be taken to avoid the better off are the only ones with access to and control over resources.


Women are found to be good in conflict solution as part of enforcement of law.

Local ownership depends on capacity and human resources. However, it also depends on the political commitment to let local communities take the responsibility.

# Lesson Learnt form Local Area Coastal Resources Management in Kampot Province Mr. Ven Virak



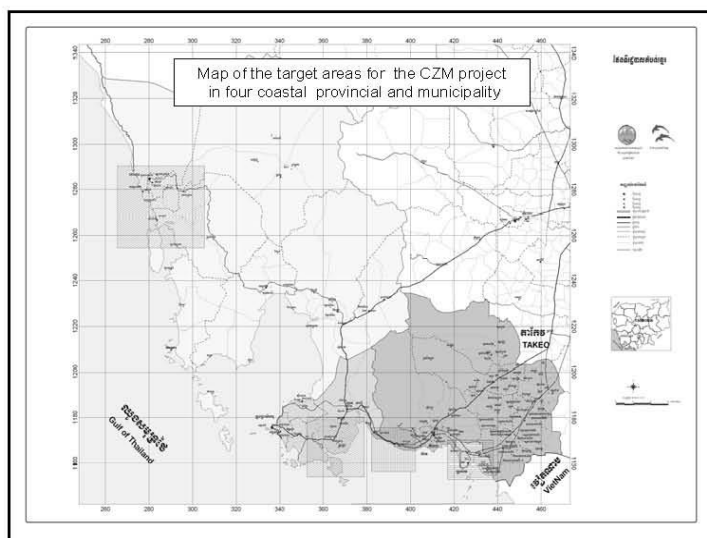
Coastal Zone Management in Cambodia  
Ministry of environment and Danida



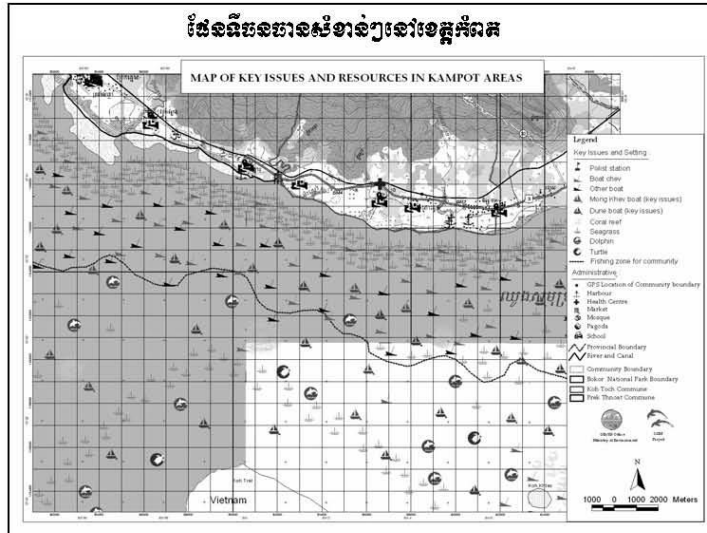
## Coastal Zone Management Project in Kampot Province

*Coastal Zone Management project started from*

- 1997-2000 phase I
- 2000-2002 phase II
- 2002-2007 phase III
- The project has carried our in the four coastal provincial and municipality .
- Funded by Danida.



**ផែនទីបញ្ហានិងធនធានសំខាន់ៗនៅខេត្តកំពត**



**Target areas for coastal zone management project in Kampot Province**

All stakeholders related to the coastal resource use have selected 2 communes in Kampot district, Kampot Province like below:

**1-Koh Touch Commune consist of 4 villages:**

*(Kilo 12, Kandal, Preak Ampil and Preak Chark villages).*

**2-Preak Thnoat Commune consist of 4 villages :**

*(Chang Houg, Preak Thnoat, Trapang Ropauv and Preak Kreng villages).*

**Main occupation for the coastal people in Preak Thnoat and Koh Touch Communes.**



**The Main issues from PRA dialog in the project target area in 8 villages.**

- |                                      |  |
|--------------------------------------|--|
| 1-Health problem.                    | 9-lack of fresh water source.  |
| 2-Low income                         | 10-eleteracy   |
| 3-food lack of nutrient .            | 11-lack of service for venerable people.   |
| 4-More disease                       | 12-Lack of sanitation  |
| 5-domistict violation                | 13-Lack of health service  |
| 6- credit service was not enough     | 14-Lack of land for animals raising and building the house.                                |
| 7-Natural resources degradation.     | 15-law enforcement related to the natural resources protection and conservation is limited |
| 8-Rate of death has been increasing. | 16-lack of knowledge related to the natural resources advantage.                           |

From the various meeting ,workshop and discussion with local people, technical departments, local authority and external we have had the priority issues as bellow.

- Law enforcement
- lack of integrated farming technique.
- Lack of knowledge related to natural resources advantage.
- Low income



Overall goal of the project is environmental and coastal resources management in order to poverty reduction by sustainability using and developing of coastal resources.



### **Key strategy for the coastal zone management**

In order to solve the core issues in the target area, CZM has been 7 strategy as below:

- 1- Sustainability development.
- 2- Poverty reduction.
- 3- Gender equity.
- 4- Good governance.
- 5- Ownership from the local people.
- 6- community base management in the coastal resources.
- 7- respect to knowledge and culture in the target area.



### Project activities

- Coastal resources management communities.
- Integrated farming system for 8villages
- Vocational training course to the local communitymembers .
- Veteran village agencies.
- Environmental education to the primary school.
- Seaweed survey
- Supported to the investment communeplan.



### Out put from the project implementation in phase III

#### Natural resources community

-The project has created two community, one for Preak Thnoat village.in this community has had 214 community members and another for Trapang Ropauv and Preak Kreng villages have had 820 community members.

-The both community have carried out there activities as bellow:

- Boundary demarcation participation.
- Participation in integrated farming system.
- Patrol group forming
- Community planning
- Mangrove planting.
- Implementation patrol
- Close cooperation with technical departments and local futurity .
- Monthly meeting.

community regulation signing



Mangrove planting





### Out put from the project implementation in phase III

#### Integrated farming system in 8 villages



Animals and fruit trees providing ceremony by Mr. Vann Money Neath ,Deputy general director of MoE and National Coordinator for CZM

#### Veteran village agencies training in CRC KP,KEP.

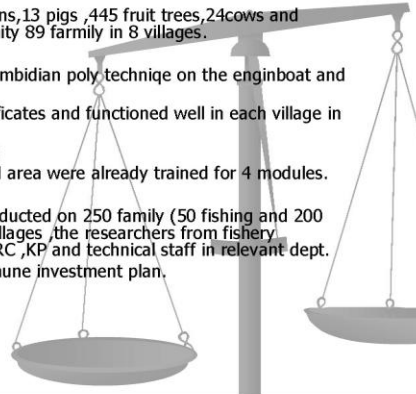


#### Environmental training to Primary school from KP and Kep



### The output from Coastal Resources Center in Kampot

- 1-IFS  
The project provided 347 chickens,13 pigs ,445 fruit trees,24cows and training on IFS to local community 89 family in 8 villages.
- 2-Vocational training  
16 people have been trained cambodian poly technique on the enginboat and electronic repairing.
- 3-8VVA trained and receid certificates and functioned well in each village in the LACRM area.
- 4-EE (Environmental education)  
12 primary school in the LACRM area were already trained for 4 modules.
- 5-Seaweed culture suvey  
The seaweed culture survey conducted on 250 family (50 fishing and 200 seaweed farming culture) in 6villages ,the researchers from fishery department cooperation with CRC ,KP and technical staff in relevant dept.
- 6- Support six projects to commune investment plan.



Problem during the implementation the project

1-CRC KP has had only 2 staff but a lot of responsibility and work to do.

2-Technical staff in each department has had limited on the capacity .

## Conclusion

- The local community members, especially commune council members will participate in the community base management on the coastal resources using and developing in long term .
- To reduce the pressure on coastal resources use.
- The HHs of integrated farming system(IFS) and income will be increased rapidly more than 89 family in the mid of 2007.
- Each school in the LACRM area will include the environmental program in their curriculum and environment in each school in the LACRM area will be better.
- The sustainability system for CBNRM and IFS will be carry out by community and CC themselves when the project finish the mandate.
- The capacity of the technical staff from each department will improve in the mid of 2007.

### Recommendation and suggestion

- Capacity building on the CZM staff in each Coastal resources center related to degree of academic outside ( or inside country )
- The government should be supported to the coastal resources center when the CZM project finish the mission in the mid of year 2007.



Thank you very much for your attention!

**Capacity Building for Sustainable Development in the Tonle Sap Region:  
Mr. Keang Seng**

Capacity Building for Sustainable Development in the  
Tonle Sap Region Project  
(CMB/G81)

**Tentative Plan for 3<sup>rd</sup> Year  
(Jul 2005 – June 2006)**

By Keang Seng  
National Project Coordinator

Present to The National Workshop on Training Development of CBNRM  
20-23 September 2005

| Activities   | Q3<br>05 | Q4<br>05 | Q1<br>06 | Q2<br>06 | Budget<br>(USD) |
|--|----------|----------|----------|----------|-----------------|
| <b>Act 1.3.3: Building Capacity for CFDO</b>   |          |          |          |          |                 |
| 1- Extension cooperation with CFDO counterparts  |          |          |          |          | 16,000          |
| 2- Establish a new CF model in Ang Tumpang<br>Thmar (step 7-10)  |          |          |          |          | -               |
| 3- CFDO R&D counterparts in collaboration with<br>PIU:   |          |          |          |          | 2,000           |
| - Refine and prioritize training needs for CFDO,<br>PIU, and CFs in collaboration with TSEMP<br>partners |          |          |          |          |                 |
| - Organize trainings and study tours as per<br>approved training plan                                    |          |          |          |          |                 |
| - Organize a consultation workshop to develop<br>election guideline for community fisheries              |          |          |          |          |                 |

| Activities  | Q3<br>05 | Q4<br>05 | Q1<br>06 | Q2<br>06 | Budget<br>(USD) |
|---|----------|----------|----------|----------|-----------------|
| <b>Act 1.3.3: Building Capacity for CFDO</b>  |          |          |          |          |                 |
| 4- CFDO M&E counterparts in collaboration with PIU to:  |          |          |          |          | 2,000           |
| - Consult with PIUs, NGOs and relevant stakeholders to improve database on all community fisheries in the project provinces |          |          |          |          |                 |
| - Monitor and evaluate the work on CF development of PIU, NGOs, and relevant stakeholder supported by CBSD                  |          |          |          |          |                 |

| Activities  | Q3<br>05 | Q4<br>05 | Q1<br>06 | Q2<br>06 | Budget |
|---|----------|----------|----------|----------|--------|
| <b>Act 1.3.3: Building Capacity for CFDO</b>  |          |          |          |          |        |
| 5- CFDO L&A counterparts in collaboration with PIU to:  |          |          |          |          | 2,000  |
| - Support the development and dissemination of extension material on CF sub-decree (in collaboration with TSEMP)      |          |          |          |          |        |
| - Support the development and dissemination of training material on partnership with CCs (in collaboration with CCSP) |          |          |          |          |        |
| - Organize a consultation workshop to develop the buy-law of community fisheries                                      |          |          |          |          |        |

| Activities   | Q3<br>05 | Q4<br>05 | Q1<br>06 | Q2<br>06 | Budget |
|--|----------|----------|----------|----------|--------|
| <b>Act 1.3.3: Building Capacity for CFDO</b>                             |          |          |          |          |        |
| 7- CFDO staff attend prioritized trainings as per approved training plan |          |          |          |          | 17,500 |
| - Understanding of NRM (7 CS + 3 CFDO) in collaboration with MWBP/CNMC   |          |          |          |          |        |
| - Training of Trainers (7 CS + 3 CFDO)                                   |          |          |          |          |        |
| - Proposal writing (7 CS + 5 CFDO)                                       |          |          |          |          |        |
| - Training curriculum development (7 CS + 4 CFDO)                        |          |          |          |          |        |
| - Leadership in project management (3 CS + 4 CFDO sites)                 |          |          |          |          |        |
| - English and computer (7 CS) (Parhasastr/ ICS already contracted)       |          |          |          |          |        |
| - 3 Study visits in Cambodia (7 CS + 5 CFDO for each)                    |          |          |          |          |        |

| Activities   | Q3<br>05 | Q4<br>05 | Q1<br>06 | Q2<br>06 | Budget |
|--|----------|----------|----------|----------|--------|
| <b>Activity 2.1.3: Implement a training program for staff of relevant provincial line agencies</b> |          |          |          |          |        |
| 1- Extension cooperation with provincial counterparts  |          |          |          |          | 3,900  |
| 2- PIU staff attend prioritized trainings as per approved training plan                            |          |          |          |          | 28,400 |
| - Understanding of NRM (17 PIU + 3 NGOs) in collaboration with the MWBP/CNMC                       |          |          |          |          |        |
| - Training of Trainers (20 PIU + 6 NGOs)   |          |          |          |          |        |
| - Proposal writing (20 PIU)  |          |          |          |          |        |
| - Training curriculum development (6 PIU + 2 NGOs)   |          |          |          |          |        |
| - Leadership in project management (6 PIU hears + NGO)   |          |          |          |          |        |

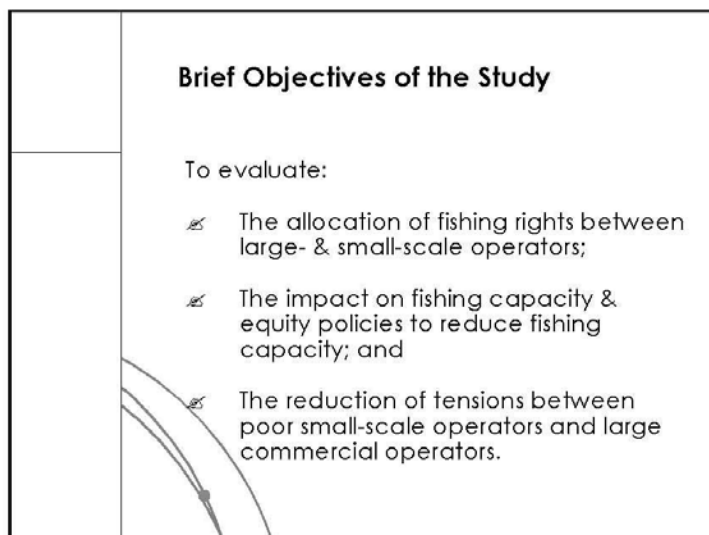
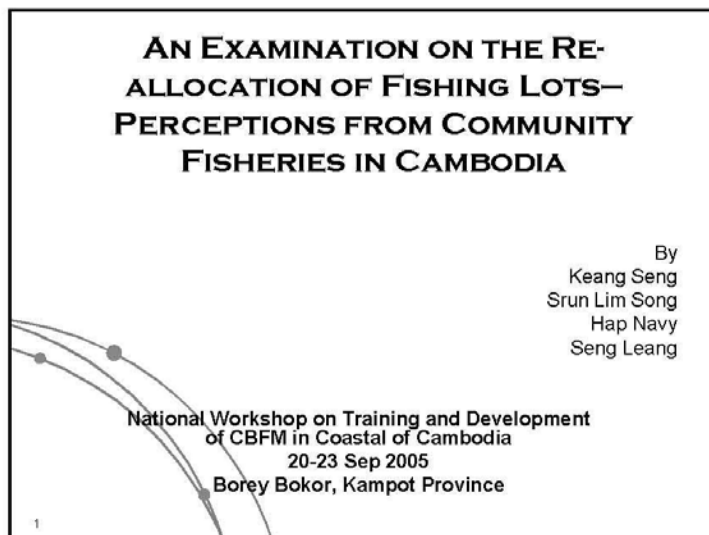
| Activities   | Q3<br>05 | Q4<br>05 | Q1<br>06 | Q2<br>06 | Budget |
|--|----------|----------|----------|----------|--------|
| <b>Activity 2.1.3: Implement a training program for staff of relevant provincial line agencies</b> |          |          |          |          |        |
| 1- Extension cooperation with provincial counterparts  |          |          |          |          | 3,900  |
| 2- PIU staff attend prioritized trainings as per approved training plan (cont.)                    |          |          |          |          |        |
| - Commune council partnership strategy (30 PIU + 6 NGOs) in collaboration with CCSP                |          |          |          |          |        |
| - D&D reform in Cambodia (30 PIU + 6 NGOs) in collaboration with CCSP                              |          |          |          |          |        |
| - English and computer (2 CS in BMC)   |          |          |          |          |        |
| - 3 Study visits in Cambodia (7 CS + 5 CFDO for each)  |          |          |          |          |        |
| 3- PIU strengthen community fisheries where CF sanctuaries were established with support from CBSD |          |          |          |          | 15,200 |

| Activities  | Q3<br>05 | Q4<br>05 | Q1<br>06 | Q2<br>06 | Budget |
|---|----------|----------|----------|----------|--------|
| <b>Activity 3.3.3: Incorporate EAEOP into selected schools around the TSBR</b>  |          |          |          |          |        |
| 1- Support the publication and dissemination of EE manual   |          |          |          |          | 3,900  |
| 2- Support environmental education outreach in the TSBR   |          |          |          |          | 28,300 |
| - EE outreach targeting children in Kbal Toal, Peak Kantel conducted (BTB province)   |          |          |          |          |        |
| - EE outreach for communities around the TSBR conducted by DOE, MOE, TSBRs  |          |          |          |          |        |
| 3- PFO and DOE in KPT and BTB provinces collaborate in conducting surveys on the use of natural resource in the 3 core areas (in collaboration with the TSCP/TSEMP) |          |          |          |          | 10,000 |

| Activities   | Q3<br>05 | Q4<br>05 | Q1<br>06 | Q2<br>06 | Budget |
|--|----------|----------|----------|----------|--------|
| <b>Project Management, Coordination, M&amp;E</b>   |          |          |          |          |        |
| 1- Field monitoring visits to all project provinces by PMO   |          |          |          |          |        |
| 2- Participation to relevant meeting and workshops in project provinces and Phnom Penh by PMO and UNDP |          |          |          |          |        |
| 3- Final evaluation and TPR meeting organized by UNDP  |          |          |          |          |        |



## **An Examination on the Re-allocation of Fishing Lots – Perception from Community Fisheries Cambodia: Mr. Keang Seng**



## Why's study this?

- 75% of animal protein is taking from fish and aquatic animal
- Fishing population (gears and boats changes)
- Environmental degradation (increasing pressure of land, deforestation and siltation of 20-40mm/yr)
- Influencing development strategies such as construction of dam on the main stream of the Mekong River.
- Cage/pen aquaculture in the Great Lake— collection of wild seed and feed

## Methods and Survey Area

### ❖ Study Sites and Sample selection

| Province                 | Sample     |            | Total             |
|--------------------------|------------|------------|-------------------|
|                          | CF         | NCF        |                   |
| Pursat (Great Lake site) | 45         | 45         | 90                |
| Kandal (Mekong Site)     | 45         | 45         | 90                |
| Kampot (Coastal Site)    | 45         | 45         | 90                |
| <b>Total</b>             | <b>135</b> | <b>135</b> | <b><u>270</u></b> |

CF: Community Fisheries

• NCF: Non-Community Fisheries

## Methods and Survey Area

### ❖ Data Collection and Data analysis

- Primary data collection through individual interview
- Focus group discussion with key informant eg. Community representatives, commune councils and community members
- Discussion with NGOs, IOs and other cooperation institutions
- SPSS and Excel package was the main software for data analysis and graph presentation.

## Findings from the Study

### ➤ Fisheries Conflicts in the Study Areas

There were 7 types of conflicts arising in the study areas for small scale fishermen :

- ❶ Between small scale fishermen – destruction of fishing gears/methods

| Site           | Community    | Non communality |
|----------------|--------------|-----------------|
| Great Lake     | 2.2%         | 0.0%            |
| Mekong         | 0.0%         | 0.0%            |
| Coastal        | <b>42.2%</b> | 20.0%           |
| <b>Average</b> | <b>14.8%</b> | <b>6.7%</b>     |

| Findings from the Study   |              |                 |
|---|--------------|-----------------|
| <p>➤ <b>Fisheries Conflicts in the Study Areas</b></p> <p>② <b>Between small- &amp; medium-scale fishermen – operating in community fishing areas</b></p> |              |                 |
| Province  | Community    | Non communality |
| Great Lake  | 22.2%        | 4.4%            |
| Mekong  | 53.3%        | 13.3%           |
| Coastal   | 28.9%        | 17.8%           |
| <b>Average</b>  | <b>34.8%</b> | <b>11.9%</b>    |

| Findings from the Study   |              |                 |
|---|--------------|-----------------|
| <p>➤ <b>Fisheries Conflicts in the Study Areas</b></p> <p>③ <b>Between small- &amp; large-scale fishermen – boundary issues</b></p> |              |                 |
| Province  | Community    | Non communality |
| Great Lake  | 71.1%        | 82.2%           |
| Mekong  | 80.0%        | 66.7%           |
| Coastal   | 31.1%        | 51.1%           |
| <b>Average</b>  | <b>60.7%</b> | <b>66.7%</b>    |

## Finding from the Study

### ➤ Fisheries Conflicts in the Study Areas

- ④ Between fishermen & "illegal fishermen" – destruction of fishing gears/methods & degradation of the resources

| Province       | Community    | Non communality |
|----------------|--------------|-----------------|
| Great Lake     | 17.8%        | 22.2%           |
| Mekong         | 42.2%        | 42.2%           |
| Coastal        | 0.0%         | 2.2%            |
| <b>Average</b> | <b>20.0%</b> | <b>22.2%</b>    |

## Finding from the Study

### ➤ Fisheries Conflicts in the Study Areas

- ⑤ Between fishermen & fisheries officers – lack of support

| Province       | Community   | Non communality |
|----------------|-------------|-----------------|
| Great Lake     | 8.9%        | 2.2%            |
| Mekong         | 0.0%        | 0.0%            |
| Coastal        | 8.9%        | 11.1%           |
| <b>Average</b> | <b>5.9%</b> | <b>4.4%</b>     |

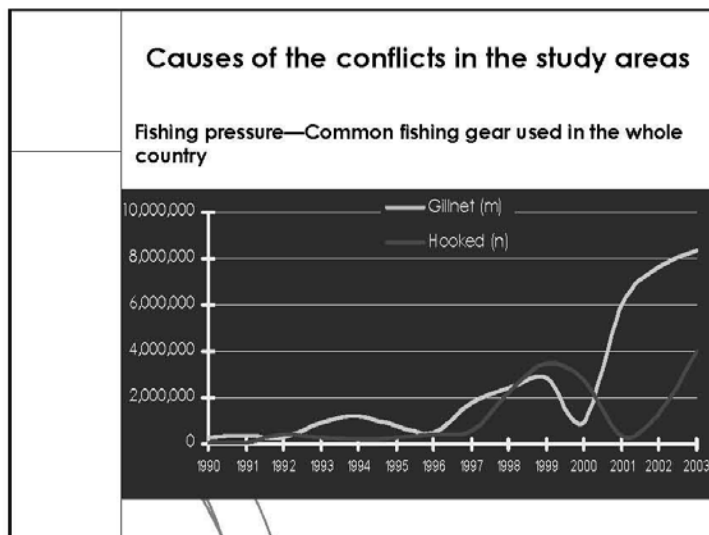
| Finding from the Study  |             |                 |
|---|-------------|-----------------|
| ➔ Fisheries Conflicts in the Study Areas                                  |             |                 |
| ⑥ Between small scale & local authority – lack of cooperation and support |             |                 |
| Province  | Community   | Non communality |
| Great Lake  | 0.0%        | 0.0%            |
| Mekong  | 2.2%        | 8.9%            |
| Coastal   | 2.2%        | 2.2%            |
| <b>Average</b>  | <b>1.5%</b> | <b>3.7%</b>     |

| Finding from the Study   |             |                 |
|--|-------------|-----------------|
| ➔ Fisheries Conflicts in the Study Areas                             |             |                 |
| ⑦ Between small scale & thief – stolen and destroyed fishing methods |             |                 |
| Province   | Community   | Non communality |
| Great Lake   | 4.4%        | 6.7%            |
| Mekong   | 11.1%       | 8.9%            |
| Coastal  | 0.0%        | 2.2%            |
| <b>Average</b>   | <b>5.2%</b> | <b>5.9%</b>     |

### Causes of the conflicts in the study areas

Fishing pressure—Common fishing gears used

| Common gears   | Community   |             | Non Community |             |
|----------------|-------------|-------------|---------------|-------------|
|                | Before 1995 | 2003/04     | Before 1995   | 2003/04     |
| Fish trap      | 22.2        | 25.9        | 17.0          | 18.5        |
| Cast net       | 6.7         | 13.3        | 4.4           | 10.4        |
| <b>Gillnet</b> | <b>78.5</b> | <b>81.5</b> | <b>87.4</b>   | <b>91.8</b> |
| Hooked line    | 31.9        | 28.9        | 19.3          | 15.6        |
| Krasom/Samras  | 3.7         | 5.2         | 19.3          | 21.5        |
| Seine net      | 1.5         | 1.5         | 0.7           | 3.7         |
| Others         | 11.1        | 3.7         | 10.4          | 3.0         |



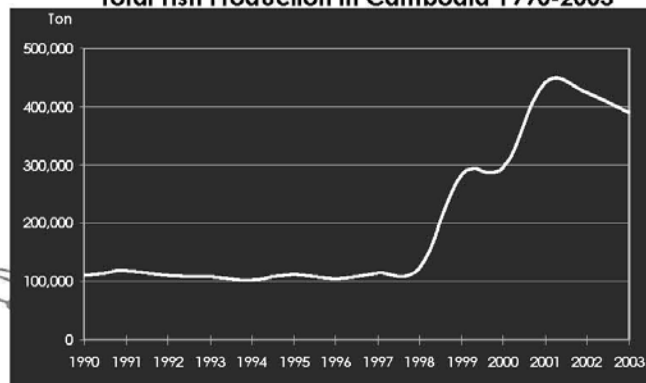
### Causes of the conflicts in the study areas

Fishing pressure—Fish production caught in the areas (2003)

|                | Community |          |             | Non Community |          |             |
|----------------|-----------|----------|-------------|---------------|----------|-------------|
|                | T/w       | Per./T   | Kg/Trip     | T/w           | Per./w   | Kg/time     |
| Minimum        | 1         | 1        | 1.3         | 1             | 1        | 2.0         |
| Maximum        | 12        | 4        | 180         | 7             | 5        | 130         |
| <b>Average</b> | <b>5</b>  | <b>2</b> | <b>17.5</b> | <b>6</b>      | <b>2</b> | <b>24.4</b> |
| Total          |           |          | 4.6 ton/yr  |               |          | 7.6 ton/yr  |
| STDEV          |           |          | 41.0        |               |          | 32.7        |

15

### Total Fish Production in Cambodia 1990-2003



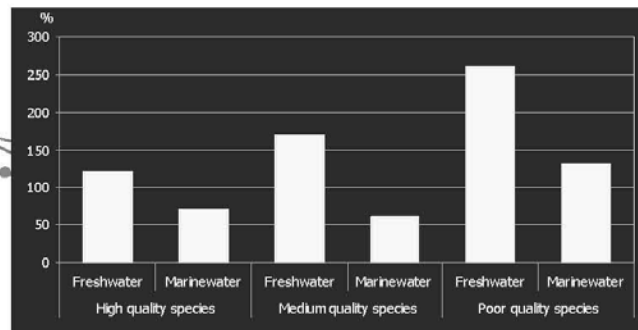
NOTE: about 93% of respondent from community and 98% from non-community fisheries stated that fish production caught has decreased if compared with previous year.

16

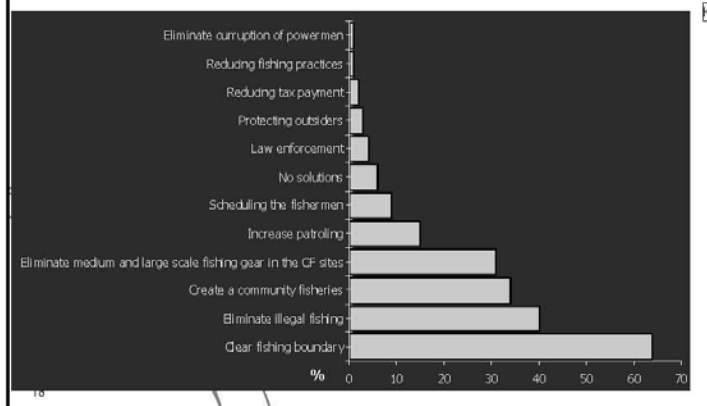


### Causes of the conflicts in the study areas

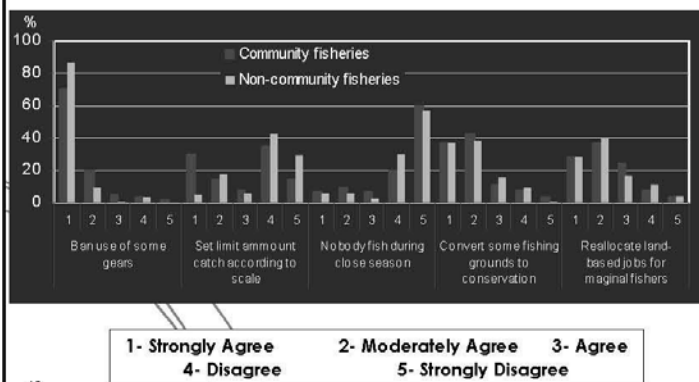
Fishing price—Increased of fish price by quality species



### Suggested Measure to Resolve the Conflicts

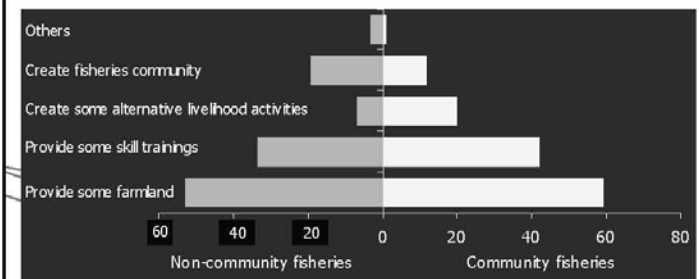


### Reactions of the Strategies for Reducing Fishing Pressure



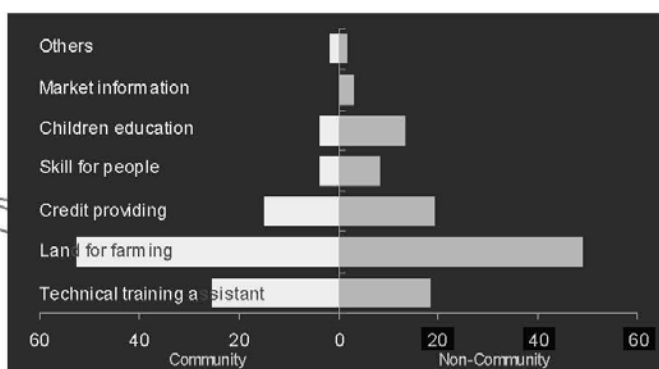
19

### Suggested strategies for reducing fishing pressure



20

### Assistance Needed (Exit from Fishing)



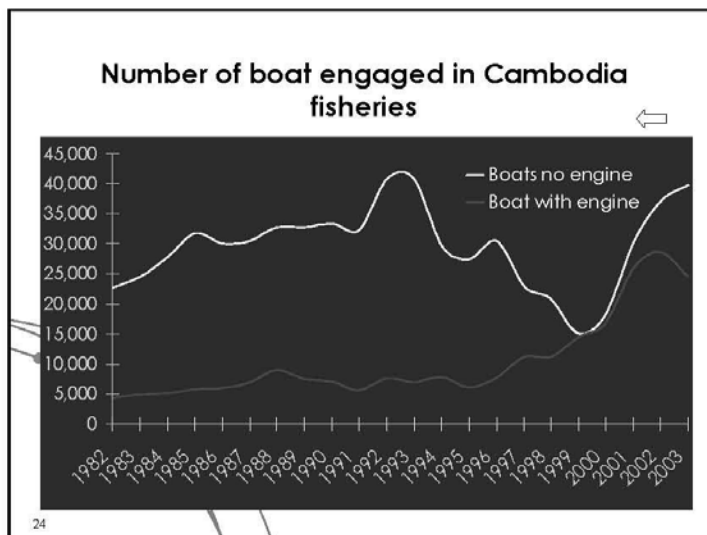
21

### Recommendations from the National Workshop

1. Review the effect of land reform to fishers and how land ownership could encourage exit from fishing
2. Identify appropriate skills and training needs that are suited to the areas
3. Information on other existing non-fishing jobs among fishers so that these could be enhanced when relevant as an exit option
4. Identify appropriate income-generating activities;
5. Improve market information to help decision-making among fishers
6. Biological studies to support decisions to establish fish conservation areas
7. Further study of fishers perceptions and willingness to exit and eight is integrated (inter-sectoral) and
8. Inter-temporal analysis of impact of suggested livelihood options

22

Thank you very much for  
your attention!



### Fishermen in Cambodia



| Year | Small Scale       | Medium Scale      | Large Scale    | Total            |
|------|-------------------|-------------------|----------------|------------------|
| 2001 | 389,659<br>(83.7) | 68,446<br>(14.7)  | 7,283<br>(1.6) | 465,388<br>(100) |
| 2002 | 611,780<br>(84.3) | 107,386<br>(14.8) | 6,505<br>(0.9) | 725,671<br>(100) |
| 2003 | 461,503<br>(81.0) | 102,276<br>(18.0) | 5,636<br>(1.0) | 569,415<br>(100) |

25

DoF, 2002/03

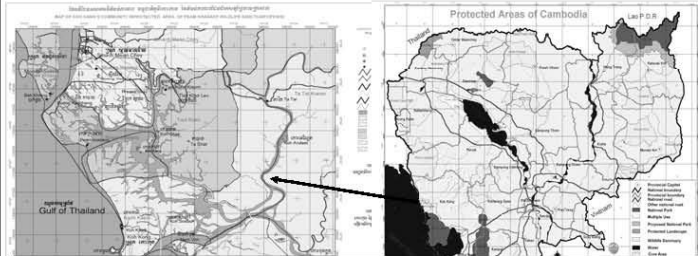
**Community-based Mangrove Management in Cambodia: Learning CBNRM in Action to Improve Local Livelihoods and Coastal Ecosystem: Mr. Kim Nong**



**Key Question For Consideration!**

- Why does PMMR's Research Team do CBNRM/CBMM approach ?
- What kind of issue does PMMR's team need to address?
- How does CBNRM work in Cambodia Context ?
- Who will benefit from it ?

## Location Background



|   |   |
|---|---|
| <p><b>Name of Site:</b> Peam Krasaop Wildlife Sanctuary (PKWS), Koh Kong Province</p> <p><b>Area:</b> 23 750 ha</p> <p><b>Population in PKWS:</b> over 10 000</p> <p><b>Sources of livelihood:</b> fisheries dependent (small &amp; med scale); charcoal production / shrimp farming / logging (now limited); a little farming (rice and vegetables).</p> | <p><b>Country:</b> Cambodia</p> <p><b>Area:</b> 181,035 Km<sup>2</sup></p> <p><b>Population:</b> around 12 million</p> <p><b>Capital:</b> Phnom Penh,</p> <p><b>Sources of Livelihood:</b> Most of People depending on Natural Resources: Agriculture, Forestry and Fisheries</p> |
|---|---|

## Trends and Issues in PKWS from 1990 to 1999



## Facilitating Innovative Research

- Participatory Research Project:  
Started Dec 1997, learning and doing;
- Interdisciplinary governmental team:  
national and provincial with technical support by outsider, but through local context;
- Close collaboration with villagers are depending on Coastal Resources, provincial officers & local authorities;
- Thrust of PMMR's work is working with villagers on management and using of coastal resources and livelihood issues.



## Key Dimension of CBCRM Development

1. Learning about situation
2. Capacity Building
3. Community Organizing
4. Potential benefit of CBNRM
5. Policy and legislation support

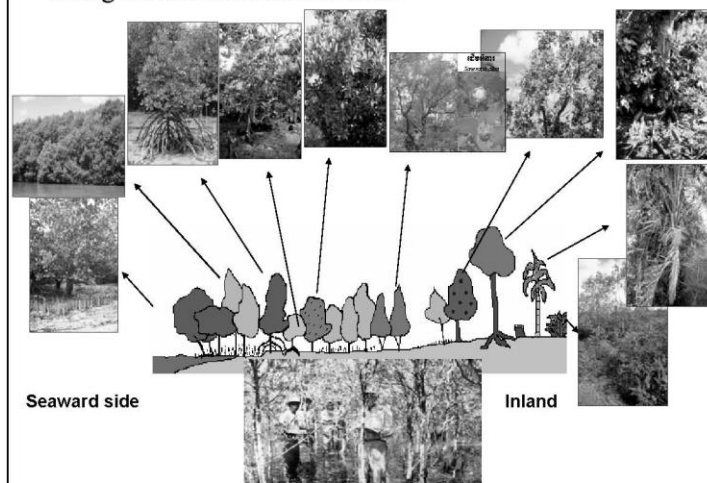


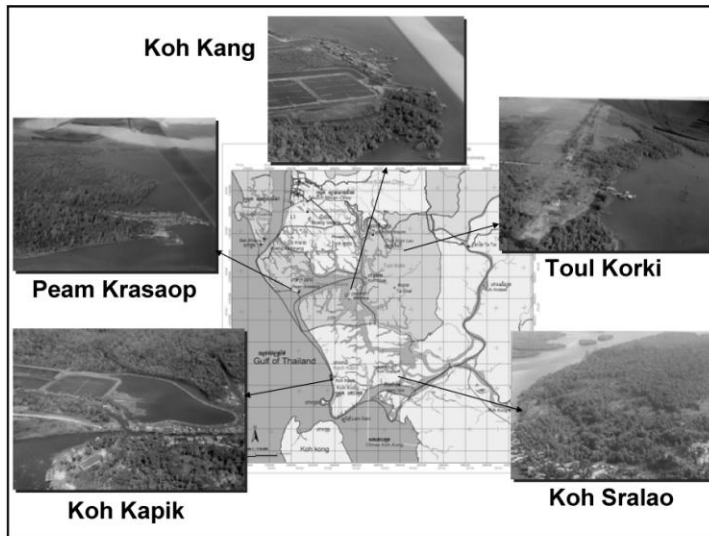
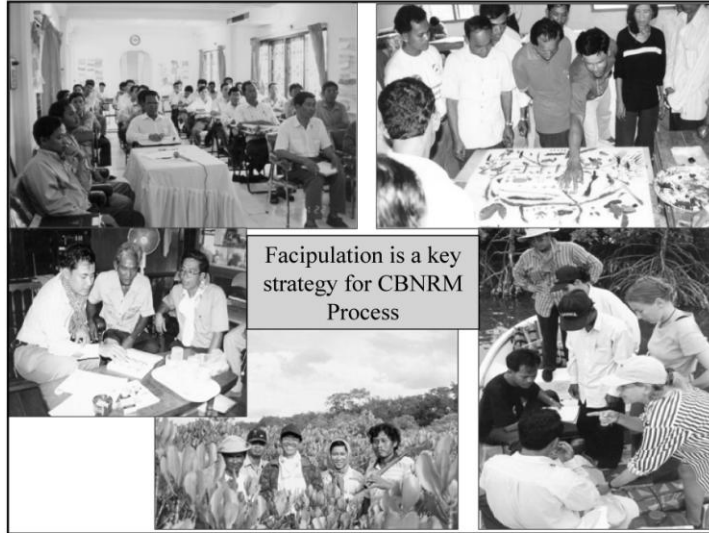
## 1- Learning About The Situation

1. Location and characteristic of natural resources
2. Resources use patterns and socio-economic
  - General living
  - Gender activities
  - Stakeholders activities
  - Livelihoods access (resources and markets)
3. Institutions and Legislation (role and responsibility of stakeholders)
4. Participatory evaluating and analyzing
  - How to do sustainable community development?



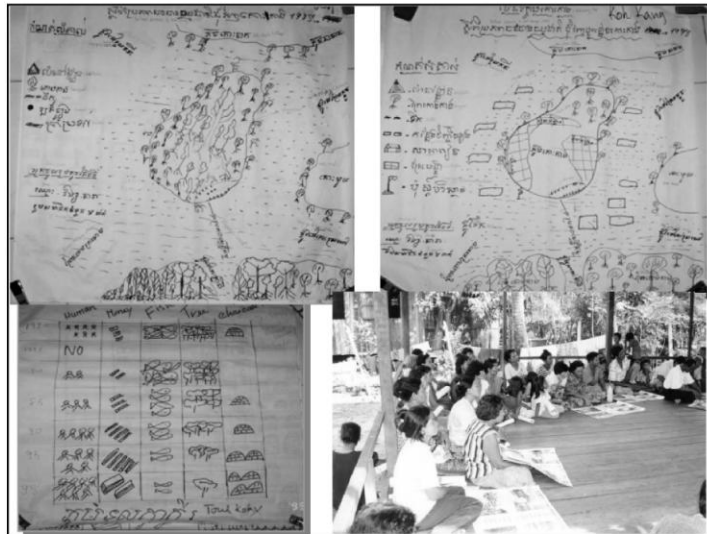
- Mangroves show clear zonation





## 2- Capacity Building of Human Resources

- **Trainings**
  - How to do Participatory Research
  - Mangrove and Aquaculture, etc
  - PM&E
  - Case-study writing
- **Workshops**
  - Mangrove ecosystems
  - Participatory management and planning of mangrove ecosystem
  - Environmental education etc...
- **Study tours**
  - Thailand, Malaysia, Vietnam, Philippines and within Cambodia on Community-Based Coastal Resources Management
- **Facilitation**



| Capacity Building of Strategic Partnerships to Develop and Support CBNRM Process in Cambodia |   |   |
|--|---|---|
|  | FOR WHOM?   | FOR WHAT?   |
| National Level   | <ul style="list-style-type: none"> <li>• Technical staffs</li> <li>• National and international experts / advisors</li> <li>• Decision – Markers</li> </ul> | <ul style="list-style-type: none"> <li>➢ Enhance technical support</li> <li>➢ Influence key decision-makers to support and debate</li> <li>➢ Policy and legal framework development</li> </ul>  |
| Provincial Level   | <ul style="list-style-type: none"> <li>• Provincial technical department</li> <li>• Local authorities</li> </ul>  | <ul style="list-style-type: none"> <li>➢ Capacity building of key resource persons to facilitate and work with PO</li> <li>➢ Helping policy gap b/w Nat &amp; local</li> <li>➢ Policy and law investment</li> <li>➢ Creative and adaptive local planning</li> </ul> |
| Local Community Level  | <ul style="list-style-type: none"> <li>• Village Management Committees</li> <li>• Commune &amp; village Chiefs</li> <li>• Villagers</li> </ul>              | <ul style="list-style-type: none"> <li>➢ Participation (learning, sharing &amp; doing)</li> <li>➢ Empowering role and responsibility</li> <li>➢ Improving ownerships &amp; commitment</li> </ul>  |
| International Level  | <ul style="list-style-type: none"> <li>• Donors</li> <li>• Technical advisors</li> </ul>  | <ul style="list-style-type: none"> <li>➢ For technical &amp; financial support</li> <li>➢ Learning international important events</li> </ul>  |



### 3- Community Organizing



- What is community?
  - Group of people have been organized by the outsider
  - Special group interested to do something (CF, CPA, CLUP...etc)
- What is mean by community organizing?
  - A way to enhance the natural environment, to improve income and strengthen local awareness
  - Transform people are powerless to powerful
  - Supporting a village management committee (VMC) to involve something
  - Equity for accessing, protecting and managing of natural resources

### Conditions that enable or disable of CO

#### ENABLE

- Capacity in place for the local community
- Staff have good skills and methods to help the local community for filed work
- Enough opportunities for all stakeholders to involve in PR
- Good plan for helping local community's need for self-management
- Sufficient financial support for the planning process
- Exchange of ideas b/w fieldworkers and local community

#### DISABLE

- A lack of capacity within the community
- Staff lack of knowledge and skills in PRA/PR and PA
- Use top down approaches (planning, decision making and monitoring depending on leaders)
- Insufficient funding for the process and help CO
- Natural conservation and protection not specified



#### 4- Potential Benefits of CBNRM

- Community training on the concept of the CBNRM and sustainable livelihoods
- Community awareness on the exploitation of the coastal resources in an environmentally friendly and sustainable manner
- Coordination among local level, provincial levels, national levels, and international levels...





## 5- Policy and Legislation Support



- To enhance participation of stakeholder to learn, and to share their own perceptions
- To enhance participation of stakeholder to negotiate and take role and responsibility
- To encourage stakeholder to participate in policy and legislation development



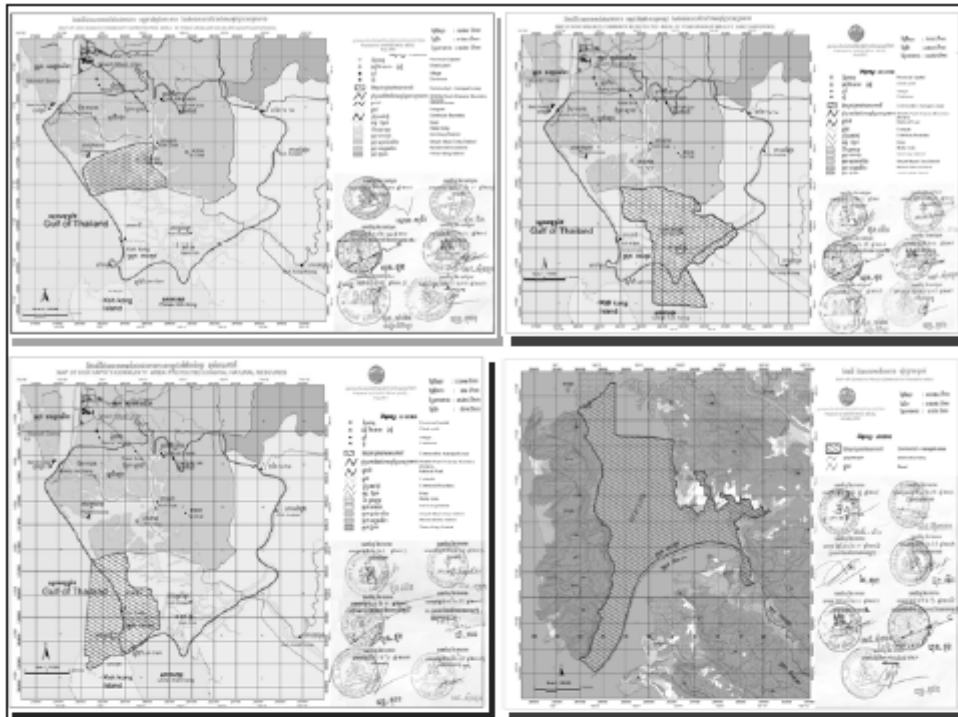
## 5- Policy and Legislation Support

- Agreement
- Local rules (villages, communes...)
- Local authority support
- Declaration
- Sub decree for community fisheries, forestry, protected area etc..
- Law ( forestry, fisheries, land use, protected area....)
- Constitution Article 59:

“ The state shall protect the environment and balance of abundant natural resources and establish a precise plan of management of land, water, air, wind, geology, ecological system, mines, energy, petrol and gas, rock, sand, gems, forests and forestial products, wildlife, fish and aquatic resources ”







## PMMR's Methodological Approach

- Developing a relationship and understanding the local setting
- Working with the community to identify problems, solutions and action
- Identifying concerned community group and stakeholders
- Identifying local community' needs, objectives and activities
- Identifying appropriate tools for local participation

### PMMR's Methodological Approach Con't

- Facilitating the building of partnerships
- Producing an implementation plan
- Participating monitoring and evaluation
- Planning the sharing and utilization of results
- Revising and update next planning

### What challenges are faced in wider implementation of CBNRM strategies?

- Limited resources (HR, and \$ );
- Need coordination among relevant institutions to understand the different context and perception;
- Lack of a legal framework to support CBNRM approach (CF, CPAs.);
- The main sectors (government, civil society and private) need to understand the benefits of CBNRM approaches in resource management;
- Overlap task, time and role to support local community...
- Different perspectives among stakeholders

## Key lessons learned so far...



- Need to build institutions that:
  - Support/facilitate CBNRM
  - Are cross-scale and include feedback mechanisms;
- Committee member very open to learning from outside
- Communities know what they want to do when given a chance;
- Neutral facilitation is important for solving conflicts;
- In Cambodia, having top officials support this approach makes it much easier!

## Key Questions for Community Development Workers

1. What are you believe for your work?
2. What are you believe for people?
3. What are you believe for your program/project?
4. What are the most appropriate in your work?
5. Where are you?
6. Where are your role and your people's role?
7. What kind of capacity building that you, your organization and people needed?
8. How do mean by sustain of your work?
9. What is to be sustain?



## Principle of Sustainable Community Development



Go to the people  
Live among them  
Learn from them  
Plan with them  
Work with them



Start with what they know  
Build on what they have  
Teach by showing , learn by doing



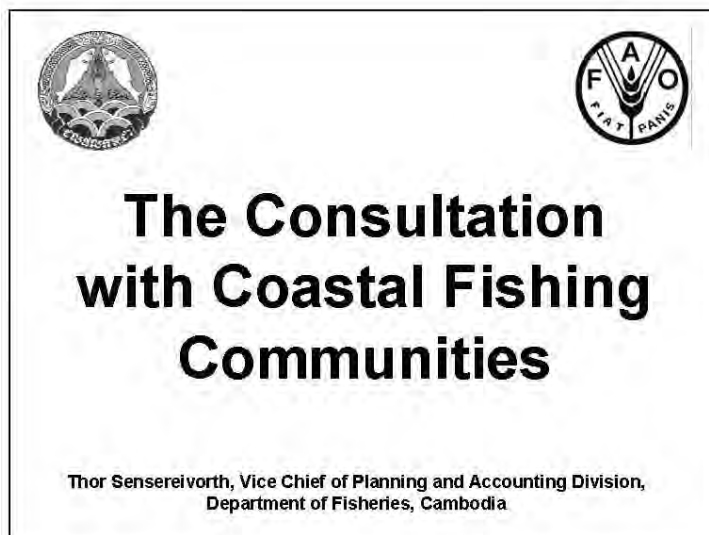
Not a showcase but a pattern  
Not odds and ends but a system  
Not relief but release



Thanks You

Water fall in Koh Kong Province

**Results of Consultation with Coastal Fishing Communities on Conflicts and Resolution  
as well as Socio-economic Issues: Mr. Thor Sensereivorth**



**Strengthening the Capacity in Fisheries  
Information Gathering for Management**

- The FAO, under the project GCP/RAS/199SWE:  
Cambodia's DoF/MAFF.
- Financial support for the national activities under the  
"Strengthening the Capacity in Fisheries Information  
Gathering for Management Project"
- During: January 2005-June 2006

**The purpose of the project is to:**

- √ Arrange and manage the national activities geared  
towards increasing capacity for obtaining information  
from marine fisheries stakeholders.

- √ Collect data for marine fisheries and evaluate the conflicts and socio-economic status of small scale coastal fisheries.
- √ Prepare progress reports of activities and report of national planning and wrap up/evaluation workshops, and
- √ Prepare two background studies, the marine fisheries conflicts, and the socioeconomic issues affecting coastal fisheries.

### **1- National Informal Inception Consultation**



- 2- Existing Fisheries Related Information Gathering**
- 3- The Socio-Economic Status of Coastal Fishing Communities**
- 4- Conflict among Competing Fishing Groups and Other Users in the Coastal Area**



**6- An inventory of community fisheries in Cambodia's coastal area**

**7- Training course on participatory consultation technique**



**8- Consultation with coastal fishing communities on conflicts and resolutions, as well as socio-economic issues**

**Questionnaire on the Socio-economic issue of coastal small scale fishermen**

**1- General status of the family**

- Name ..... Sex ..... Village ..... Commune

District ..... Province

- How many persons in your family? 1to2 3to4 ... etc

- What are they doing (main job) of the household head?

*a/....., b/....., c/.....,*



## 2- Household income and expenses

- Family's agricultural income
- Family's non-agricultural income
- Household expenditure per month
- Expenditure on fishing boat per month



## 3- Fishing activities and boat



- What kind of fishing gear you use?



- What type of engine of fishing boat you use?
- How much fish do you catch per day?



#### **4- Education**

- Can you read Khmer character? Yes or No
- If yes, which grade did you study? ...
- How many of you children are studying in school? ...
- Which is the highest class that you children are studying?
- If your children are studying, why? ....

#### **5- Health**

- How far is the nearest health center to your house? ...
- When you are sick, do you go to health center? Y or N
- If No, why?

#### **6- Awareness about fisheries legislation**

- Do you know about the fishery law no.33?
- What is the law ban?
- Apart from fishery law, do you know other law related to fisheries ?

#### **7- Perception of fisheries management**

- What do you think about the current fisheries management?
- If fish catch decrease, what are the main causes?
- What do you think should be restore back the fish catch?

#### **8- Do you have any comment, questions or ...**

## Questionnaire on Coastal Fisheries Conflicts

### A- Information

- 1- Name ..... Sex ..... Age ..... Year ..... Race .....  
Nationality ..... Permanent ..... address: Village .....  
Commune ..... District ..... Province .....
- 2- Family members .....  
Total person: ..... Male ..... Females .....
- 3- Profession .....
  - What types of fisherman do you belong to?
    - Smaller scale fisherman: Yes/No
    - Middle scale/commercial fisherman: Ye/No
- 4- If your answer to question 3 is No
  - What is your main job?
  - What is your secondary/part time job?

- 5- Are you a member of community fisheries? Yes/No
- 6- If no, what is the reason (circle one of the followings)
  - I don't want to join community fisheries
  - No community fisheries in my place
  - I don't know anything about community fisheries

### B- Conflicts and solutions

- 1- What kind of fisheries conflicts are happening in your area?  
.....  
.....



**2- Describe fisheries conflicts from the last 6 months (from the most serious to less serious).**

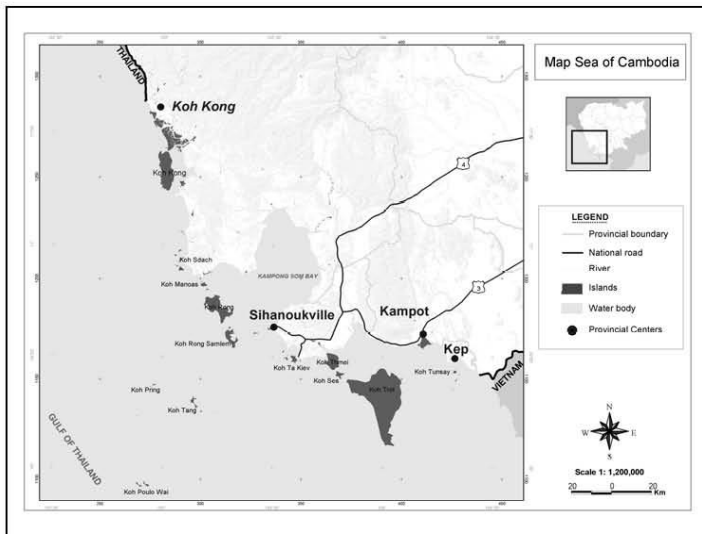
| No | Type of fisheries conflicts | Involved parties | Institutions involved in conflict resolution | Status of the conflicts (finished or still exists) |
|----|-----------------------------|------------------|--|--|
| 1  |                             |                  |  |  |
| 2  |                             |                  |  |  |

**3- Reasons of the conflicts (write down one by one)**  
 .....

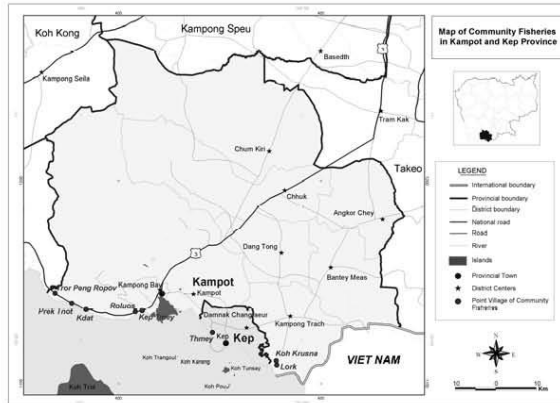
**4- Did fishermen accept the solutions given by involved institution?**

**5- What are your own solutions to the conflicts happening in your area (write down one by one)?**

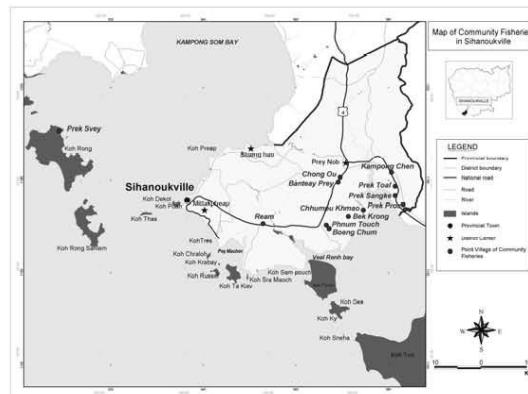
**6- Can community fisheries solve the problem?**



**5 community fisheries: Lork, Koh Krisna, Tror Paing Ropov, Prek Tnot, Roluos**



**5 community fisheries: Preng Sangke, Kampong Chen, Ream, Boeung Chum, Chong Ou**



### **Coastal Capture Fisheries Baseline Assessment**

- 9- Drafting of logbook and sampling
- 10- Consultation workshop with artisanal and commercial fishers
- 11- Field training on data collection
- 12- Develop draft database for data processing
- 13- Coastal fishery catch assessment
- 14- National wrap-up workshop



## **Human Resource and Seagrass Conservation in Cambodia: Mr. Ouk Vibol**

**National Workshop on Training and Development of Community  
Based Fisheries Management in Coastal of Cambodia  
Borey Bokor Hotel , Kampot Province, 20-23 September 2005**

### **Human Resource and Seagrass Conservation in Cambodia**

**Sub-Component of Coral Reef and Seagrass sponsored by  
UNEP/SCS**

**By Ouk Vibol**

**Deputy Chief, Fisheries Domain and Extension Division  
National Focal Point for Coral Reef and Seagrass Component**

### **Background of project**

- Supported by the UNEP/GEF. The implementation of this project began in 2002
- Project implementation
  - Step 1. Identification of coral reef and seagrass
  - Step 2. Management and conservation of coral reef and seagrass
- The objectives:
  - Create an environment at the regional level, in which collaboration and partnership in addressing environmental problems of the South China Sea between all stakeholders and at all levels is fostered and encouraged
  - Enhance the capacity of the participating governments to integrate environmental considerations into national development planning

## Step 1. Seagrass Identification

1. Scuba diving



2. Reef Check and LIT





### 3. MPA Identification

- Socio-economic survey
- Abundance of biodiversity (seagrass bed)
- Mapping
- Fishing practices
- Infrastructure
- Involvement of local community in conservation of resources
- Impact of conservation

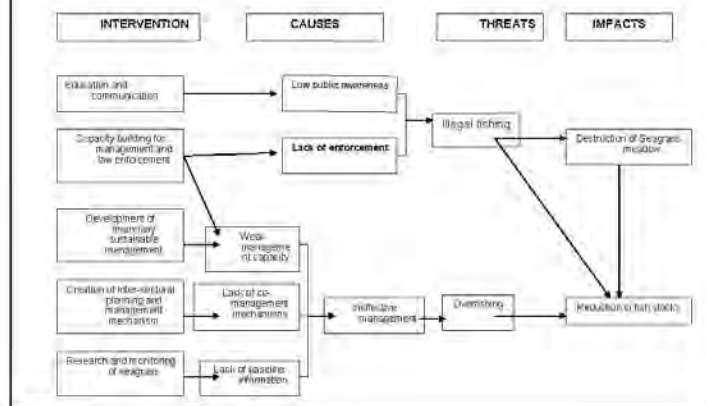
### Seagrass Distribution

- The total area of seagrass in Cambodia's waters is 32,492 ha
- The largest area of seagrass is in Kampot covering 25,240 ha.,
  - Where the first area, extending from Prek Trapeang Ampil to Prek Kdat, has an area of 1,795 ha.
  - The second area, ranging from Prek Kdat to Prek Koh Torch (Km 12) is 380 ha.
  - The third area, 23,065 ha, starts at Prek Koh Torch (or Km 12) and extends to Kep Town.
- The followed areas of seagrass in Koh Kong (3,993 ha)
- Kep Municipality (3,095 ha)
- The lowest area of seagrass is found in Sihanoukville (164 ha)
- These seagrass beds typically occur in water depths of 3 to 4 m, with salinity ranging from 25 to 30 ppt.
- 9 species of seagrass found

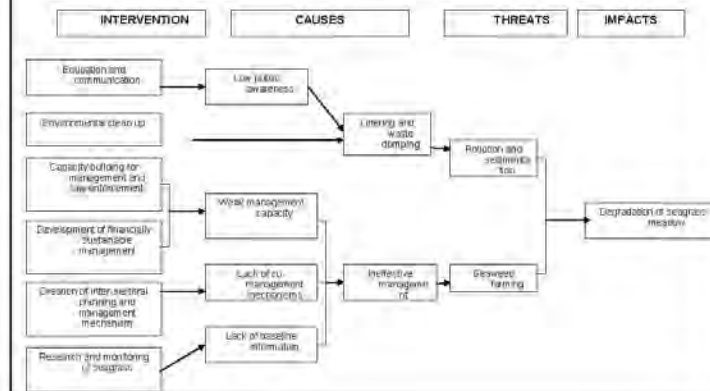
## Associated Marine Biota

- Many groups of marine living resources are under threat from human activities and natural phenomena and those species become endanger, e.g. Pisces (fishes), reptiles, marine mammals and Cnidaria (coral reefs).
- Based on Mr. Ing Try's review in 2003 was pointed out that there were 12 species of marine mammals and 5 species of sea turtles; exist in Cambodia marine water.
- According to Tana (1995), there are three species of marine mammals in Cambodia coastline; Irrawadi dolphin (*Orcaella brevirostris*), Spinner dolphin (*Stenella longirostris*) and dugong in Sihanoukville and Kompot bay and they were accidentally caught by gill net and especially shrimp trawler in the seagrass bay.

## Causal Chain Analysis of Threats to Seagrass in Cambodia



### Causal Chain Analysis of Threats to Seagrass in Cambodia (Cont.)



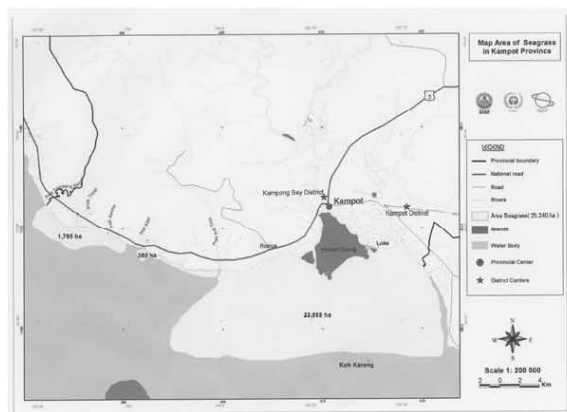
### Management regime

- **Ministry of Agriculture Forestry and Fisheries**
  - Department of Fisheries: responsible in managing fisheries resources in all marine and costal water of the Kingdom of Cambodia
  - Province has a fisheries office, with 34 full time staff is involved in management of the site with official responsible for day-to-day management of the area
  - Fisheries staff at district, whose responsibilities is to patrol and protect critical habitat
- Provincial Department of Environment
- Provincial Department of Tourism
- National Coastal Steering Committee
- Local authorities
- Local communities

*Step 2: Management and  
conservation of Seagrass*

*Prek Ampil Demonstration Site*

Map of Seagrass bed in Prek Ampil

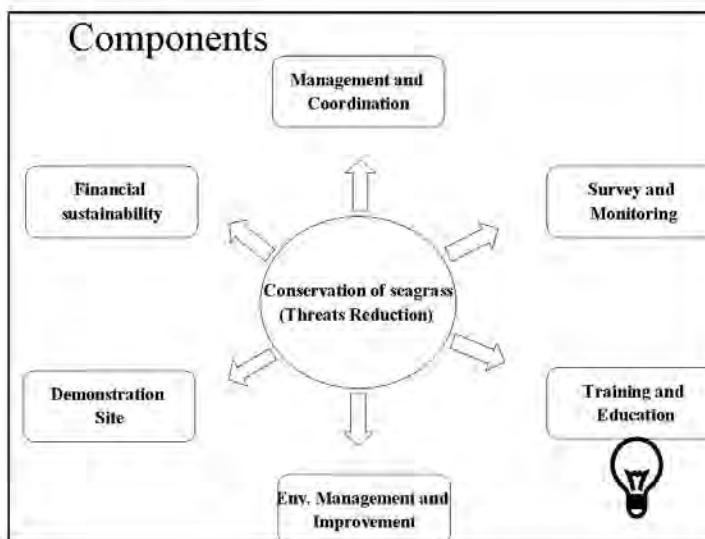
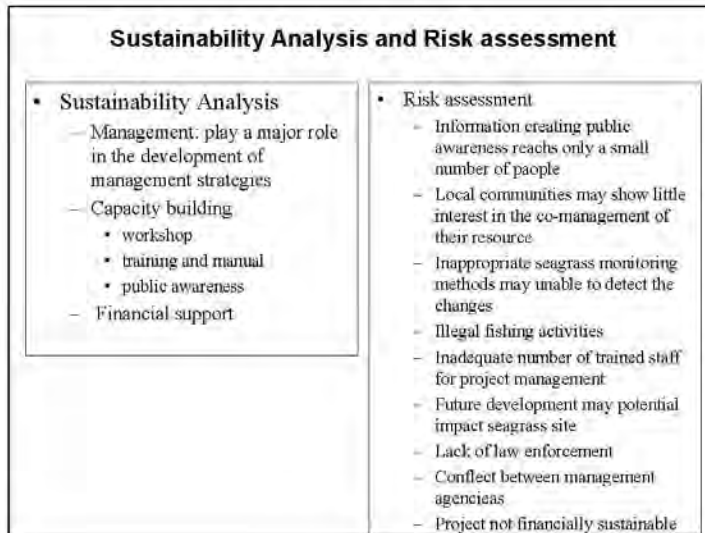


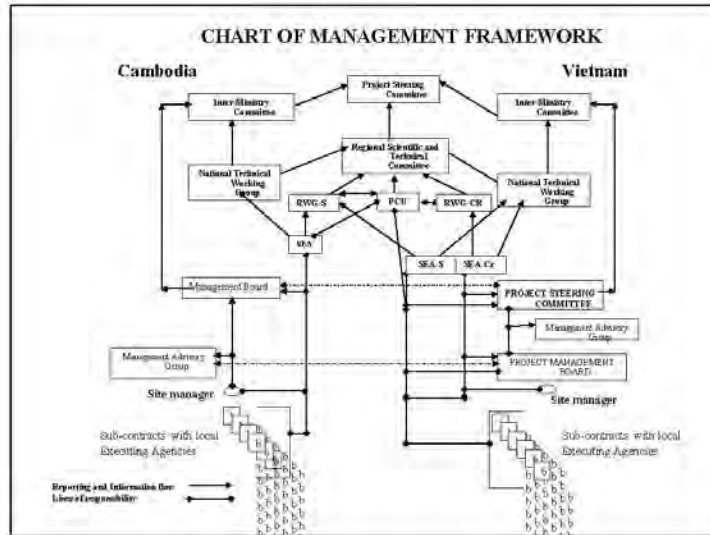
## Rationale and Objective

- The goal of this project is to reduce the threats to the seagrass in Kampot Province by applying a management strategy developed for ecologically sustainable development and use of the resource.
- Two major components are crucial in addressing and reducing threats to seagrass in Cambodia:
  - Understand seagrass ecosystems — better understanding of seagrass ecosystems and knowledge of their status will improve management and conservation of these valuable resources
  - Reduce the adverse impacts of human activities — Reducing the impacts of human activities is essential to conserving seagrass ecosystems

## Stakeholder Identification

| Stakeholder  | Role   |
|--|--|
| <b>Central government</b><br>- Department of Fisheries<br>- Specialize executing Agencies  | - Consultant and advisory role, national network<br>- Implementation, in charge of database and mapping                              |
| <b>Provincial Department</b><br>- Management Board (MB)<br>- Advisory group (AG)<br>- Department of Agriculture<br>- Department of Environment | - Managing for whole project<br>- Consultant<br>- Consultant, in charge of marine resource<br>- Consultant, in charge of environment |
| <b>District Office</b><br>- Office of Fisheries<br>- Border Army<br>- District council   | - Implementation<br>- Support for enforcement<br>- Awareness enhancement, policy development   |
| <b>Private sectors</b><br>- Tourists business<br>- Small business  | - Eco-tourism modeling for sustainable seagrass<br>- Public awareness enhancement, livelihood alternative                            |
| <b>Villagers living in coastal communities</b><br>- Local communities<br>- Village leader, Fishers, school children                            | - Planning and implementing, public awareness, patrolling, zoning and regulation<br>- Public awareness enhancement, beach clean up   |





## Training and Education

|  | 2005 |   | 2006 |   |   |   | 2007 |   |   |   |  |
|--|------|---|------|---|---|---|------|---|---|---|--|
|  | 3    | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 |  |
| 3.1 Development of training material for public awareness<br>- Create poster video and leaflets on seagrass importance and sustainable use   |      |   |      |   |   |   |      |   |   |   |  |
| 3.2 Seminars for awareness enhancement<br>- Hold seminar on seagrass biodiversity and sustainable development for policy makers<br>- Hold seminar on seagrass biodiversity and sustainable use for local communities |      |   |      |   |   |   |      |   |   |   |  |
| 3.3 Study tours<br>- Study tour for village leaders to appropriate seagrass management area  |      |   |      |   |   |   |      |   |   |   |  |
| 3.4 Training   |      |   |      |   |   |   |      |   |   |   |  |

### 3.1 Development of training material for public awareness



### 3.4 Training Need

| Needs  | No. and target trainee                                       | Duration and timing    |
|--|--|------------------------|
| 1. Ecological monitoring   | 3 SEA, 5 provincial fishery officer and 2 local participants | 6 days (February 2005) |
| 2. Analysis of present and potential use, value, net income and cost     | 3 SEA, 5 provincial fishery officer and 2 local participants | 4-5 days (Nov., 2005)  |
| 3. Project management  | 2 SEA & site manager   | 3-4 days (Nov. 2005)   |
| 4. Alternative income generation   | 4 site manager and community                                 | 4-5 days (July 2005)   |
| 5. Site management with community involvement                            | 4 site manager and community                                 | 4-5 days (April. 2006) |
| 5. GIS database management   | 2 SEA & site manager   | 3-4 days (June 2006)   |
| 6. Development and maintenance of mechanism for financial sustainability | 5 site manager, MB, local authorities and community          | 5-7 days (Sept. 2006)  |



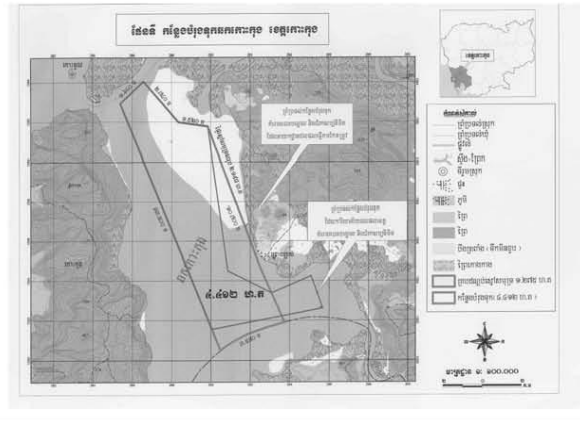
## Training offer

- Snorkel
- Public education on importance of seagrass habitat
- Management, Communication and Self improvement
- GPS
- Observation of seagrass and biodiversity distribution for community
- Others




## Indicator

- By July 2007:
  - 3460ha of seagrass under an appropriate form of sustainable management by 2015
  - 50% of threat reduced

## Using Artificial reef as practice for seagrass conservation



**Capacity Building of Inland Fisheries Research and Development Institute, Cambodia:  
Dr. Rene Agbayani**



**ADB TA 4563-CAM**  
**Capacity Building for the Inland Fisheries Research  
and Development Institute (IFReDI) Phase 2**

**National Workshop on Training and Development  
Of Community-Based Fisheries Management  
In Coastal Cambodia**

**20-23 September 2005**  
**Borey Bokor Hotel, Kampot Province**  
**Cambodia**

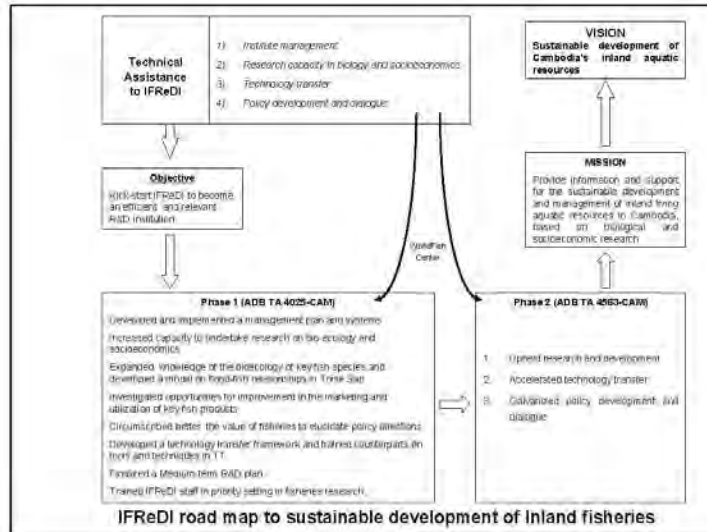
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**Sponsored by DoF, SIDA, SEAFDEC, and ASEAN**

### **Project background**

- The Royal Government of Cambodia recognizes the importance of inland fishery resources in the country's social and economic development
- Given its importance, the Inland Fisheries Research and Development Institute was established by MAFF Declaration 357 to provide scientific information and technical support for the sustainable development of the inland fisheries.
- DANIDA provided support to construct buildings and facilities
- Government of Cambodia requested ADB for TA to build human capacity within IFReDI; ADB approved the request
- In May 2003, ADB TA 4025 (Capacity-building of IFReDI) Phase 1 started; WorldFish Center was designated as the implementing agency.
- The objective of Phase 1 was to kick-start IFReDI to become an efficient and relevant research institute.

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## IFReDI Phase 2 ADB TA 4563

- **Purpose**  
To build further the skills and awareness of staff of IFReDI so that the institute is better able to disseminate research findings.
- **Target accomplishments**
  1. Research and development will be upheld
  2. Technology transfer will be accelerated
  3. Policy development and dialogue will be galvanized

## **Socioeconomic Components**

Team members:

Ratana Chuenpagdee, Hap Navy,  
Seng Leang

### **Phase II: Overall Goal**

- To strengthen and improve the research and development capability of the Socioeconomic Section of the IFReDI,
- To build up on the knowledge and techniques gained in Phase I,
- To synthesize findings and to make them accessible and readily usable for policy making.

### **Phase II: Specific Objectives**

- Prepare a synopsis of economic and livelihood values of inland fisheries;
- Analyze conflicts over property rights and resource access, in markets and fisheries;
- Synthesize key policy instruments and making recommendations;
- Build local capacity on socioeconomic and policy analysis; and
- Communicate key results to various stakeholders and clientele.

### **Phase II: Methods & Approaches**

#### **(1) Economic and livelihood values**

- Review existing studies;
- Conduct interviews with key officials and informants;
- Synthesize key issues on values and livelihoods;
- Conduct field surveys to obtain feedback from stakeholders.

### **Phase II: Methods & Approaches**

#### **(2) Conflicts over property rights, access and markets**

- Review existing studies;
  - Conduct interviews with key officials and informants;
  - Draft a synopsis on key issues related to different kinds of conflicts.
- 

### **Phase II: Methods & Approaches**

#### **(3) Key policy instruments and recommendations**

- Preliminary list of policy recommendations based on (1) and (2), and in consultation with bio-ecological component and policy development;
  - Conduct meetings and dialogue with key stakeholders;
  - Prepare a policy brief based on findings and discussion.
-

## **Phase II: Methods & Approaches**

### **(4) Capacity building**

- Conduct training on economic valuation and livelihood analysis;
- On-the-job training.

### **(5) Communicating results**

- Conduct a series of meetings with key stakeholders in various locations.
- Prepare and disseminate information materials (Flyers, brochure etc.)

## **Phase II: Key Deliverables**

- Synopsis of economic and livelihood values of inland fisheries;
- Technical report on analysis of conflicts over property rights and resource access in markets and fisheries;
- Policy brief on key policy instruments and recommendations;
- Summary of capacity and training activities and outcomes;
- Summary of the communication and dissemination efforts and outcomes.



# **Bioecology and Flood-Fish Modeling**

Dr. Eric BARAN  
M. CHHENG Phen  
M. LENG Sy Vann

## **IFReDI - 2**

The biology component will focus on:

### **BIOECOLOGY / MODELLING**

synthesize knowledge about

- the bioecology of major species
- the links between fish production, water regime and habitats

### **INFORMATION DISSEMINATION**

make key findings accessible to the public and produce recommendations

### **TRAINING**

of counterparts in bioecology and information dissemination

**Activities**

- Gather and synthesize information about the bioecology and requirements of dominant species

**Output:**

A book of about 100 pages about all published information on 10 selected dominant species in Cambodian fisheries

|                                      | September | October | November | December | January | February |
|--------------------------------------|-----------|---------|----------|----------|---------|----------|
| Review literature, use FishBase      |           |         |          |          |         |          |
| Publish a report on dominant species |           |         |          | D        |         |          |

- Synthesize knowledge about the links between fish production, water regime and habitats

**Output:**

- a CDROM of the model predicting the production of the Tonle Sap fishery;
- a short technical report with scenarios,
- summary of analyses and resulting guidelines

|   | September | October | November | December | January | February |
|---|-----------|---------|----------|----------|---------|----------|
| Update of the flood-fish relationship model |           |         |          |          |         |          |
| Development of scenarios                    |           |         |          |          |         |          |
| Technical report                            |           |         |          | D        |         |          |
| Contribution to brochures and guidelines    |           |         |          |          |         | D        |

### Activities

- Communicate key findings to the public and produce recommendations

#### Outputs:

- A one-day meeting in Phnom Penh
- five half-day meetings in the Lake provinces.
- two posters of fish and fish issues
- one educational brochure in English and Khmer on major species
- a policy brief for policy makers
- short news and documents for the IFRReDI web site.

|   | September | October | November | December | January | February |
|---|-----------|---------|----------|----------|---------|----------|
| Meetings with stakeholders                                  |           |         |          |          | D       |          |
| Production of posters, brochures and contribution to briefs |           |         |          |          |         | D        |
| 5. Monthly progress notes and end-of-assignment report      |           |         |          |          |         |          |

### Activities

- Skills improvement by on-the-job training

#### Outputs:

FULL OPERATIONAL CAPABILITIES IN BIOLOGY AND INFORMATION DISSEMINATION!

|                      | September | October | November | December | January | February |
|----------------------|-----------|---------|----------|----------|---------|----------|
| Tutoring supervision |           |         |          |          |         |          |
| On-the-job training  |           |         |          |          |         |          |

## Policy Development and Dialogue Component

Presentation by

John Kurien

So Nam

Mao Sam Onn

### **Goal and Context of Phase 2**

- The Overarching Goal:  
***Galvanize “Policy Development and Dialogue” Capability within IFReDI***
- The National Context in which this is undertaken:  
*Royal Government of Cambodia’s  
Decentralisation and Deconcentration Strategy*
- The Sectoral Context in which this is undertaken:  
*The Community Fisheries Strategy of the  
Department of Fisheries*

## **Key Questions**

- Cambodia's Decentralisation and Deconcentration Strategy and Community Fisheries: What is the Role of IFReDI?
- Does IFReDI currently have the capability to position itself in the above debate?

## **Approach & Process (1)**

### **Strategy for capability-building in policy development**

- Internal discussions and consensus within IFReDI on the current capability to play this role
- Discussions with other concerned actors to assess how they perceive the research and development needs of the inland fisheries sector
- Reps of Mol ( DoLA), DoF (CFDO); Tonle Sap Projects and MRC; Commune Councils and Community Fishery Committees; Research Organisations (e.g CDRI); NGO community; other stakeholders

### **Approach & Process (cont)**

- Policy-related inputs from other two components of TA (Bio-ecology and Socioeconomic R&D & Technology Transfer)
- Hold a workshop around the key questions with participation from all relevant actors
- Consolidation of ideas and inputs from all the above actions to create policy briefs

### **Expected Outputs**

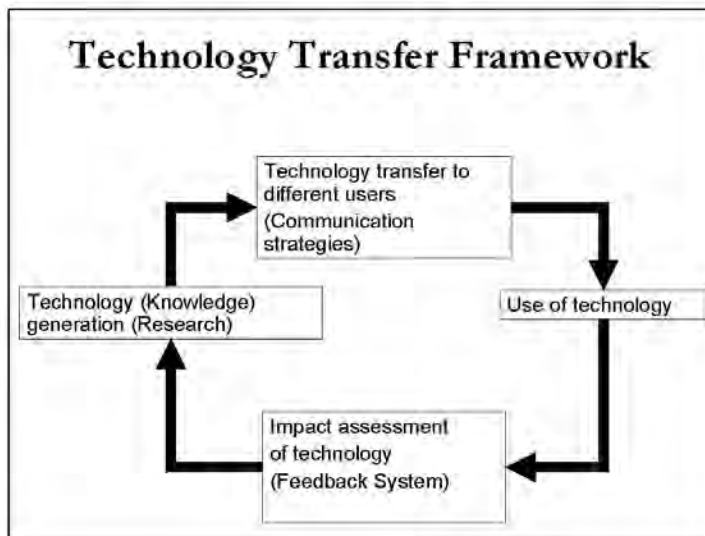
- Policy Brief to further the action on the key questions
- Policy Briefs related to Bio-ecology and Socioeconomic Research
- A Draft Proposal for appropriate governance structure for IFReDI to meet new challenges
- Trained Domestic Resource Specialists and other staff who can take IFReDI towards institutional policy development which is aligned with country's national and sectoral policy

**Technology Transfer Component  
ADB TA 4563-CAM**

Renato F. Agbayani, IRS  
Chhoun Chamnan, DRS  
Heng Samay, DRS

**Technology Transfer Phase 2**

- Objectives:
  1. To improve the capacity in technology transfer through formal and "learning-by-doing" training approaches;
  2. To design and speed-up dissemination of informational materials;
  3. To promote and conclude partnership arrangements with other institutes;
  4. To improve the governance structure of IFReDI.
- Target accomplishment  
Accelerated technology transfer of IFReDI



- ### Technology (knowledge) transfer or Communication strategies
- A. Research Products (Information)
    1. **Scientific publications**
      - a. Journal publications – international peer review
      - b. Proceedings of scientific forums and conferences – some are peer reviewed
      - c. Technical Reports – internal and peer review
    2. **Popular publications and other information materials**
      - a. Policy briefs
      - b. Technological, bio-physical, socioeconomic, and general information and updates
      - c. Training and extension materials
      - d. Organization information (events and people)



## Communication and Multi-Media Mix Strategies

### A. Print media

#### 1. Books, brochures, flyers

- Reference books can provide substantial information on specific or general topics of interest to potential readers; brochures and instructional manuals (use of appropriate fishing gears, how operate floating cage aquaculture of tilapia); institutional flyers in Khmer and English for distribution to different publics.

#### 2. Newspapers/magazines/newsletters

Can be used for straight news and feature story forms regarding IFReDI as an organization, events and people.

### B. Radio and television

- Radio can be used to reach out to fisherfolk, fish vendors and small-scale fish processors. Techno-tips and calls for community action and participation in seminar-workshops and training courses may be broadcast.
- Television stations have public affairs programs for issues discussion and for showcasing government development programs. IFReDI can use this public affairs programs to showcase its projects and use for demonstration for fish farming and environmental care

### C. Audio-visual aids

Audio/video clips, tapes and CDs for documentaries and instruction/demonstration on fishing and fish farming techniques for fish processors, fishery students and faculty, researchers and development workers. This may be an income generating project

#### D. Internet webpage

The IFReDI webpage [www.ifredi.org](http://www.ifredi.org) was set-up in Phase 1 and is now operational. The capability to harness the Internet for information dissemination and technology transfer drive is a major part of the capacity-building of IFReDI. Many of IFReDI stakeholders – researchers, students and academicians, policy-makers, donors are wired

#### E. Person-to-person communications

- > Policy briefings and dialogues
- > Scientific and trade forums, seminars, workshops, conferences/meetings
- > Community assembly meetings
- > Training and extension activities

### **Target clientele (Stakeholders)**

- First level – policy makers, planners, technocrats (DOF, MAFF, Ministerial Councils, Parliament)
- Second level - Researchers and development workers (Academe, R&D institutes, NGOs, donors)
- Third level – Local government units, provincial fishery officers, extension workers, community leaders and organizers, fisherfolk organizations
- Fourth level- Internal stakeholders (co-workers in the organization, IFReDI)

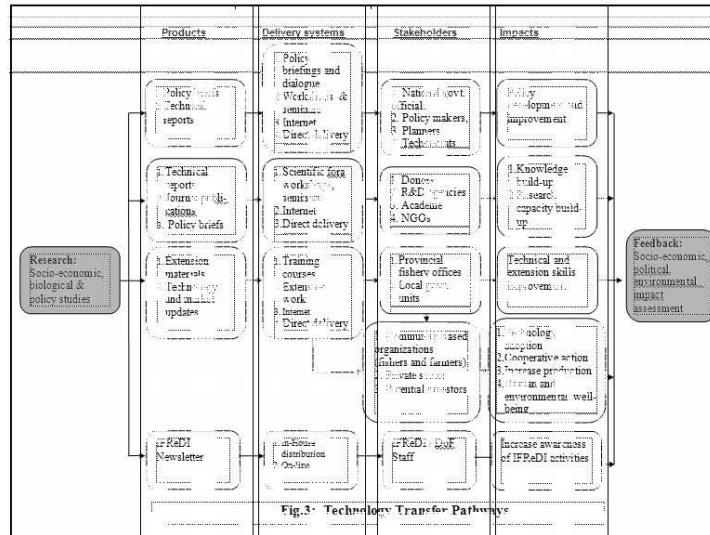



Fig. 3. Technology Transfer Pathways

| Activities and Deliverables  | 1 | 2 | 3 | 4 | 5 | 6 |
|--|---|---|---|---|---|---|
| <b>A. Training activities</b>  |   |   |   |   |   |   |
| 1. Seminar-workshop on technology transfer and communications strategies |   |   |   |   |   |   |
| 2. Training course on Technical Writing                                  |   |   |   |   |   |   |
| 3. Short courses and "learning-by-doing" on desk-top publishing          |   |   |   |   |   |   |
| 4. Short courses and "learning-by-doing" on audio-video production       |   |   |   |   |   |   |

| <b>B Deliverables</b>  | 1 | 2 | 3 | 4 | 5 | 6 |
|--|---|---|---|---|---|---|
| 1. Identified and selected research outputs for dissemination <ul style="list-style-type: none"> <li>• Bio-ecology</li> <li>• Socioeconomic</li> <li>• Aquaculture</li> <li>• Fisheries domain</li> <li>• Community fisheries</li> </ul>   |   |   |   |   |   |   |
| 2. Designed information materials and selected appropriate media <ul style="list-style-type: none"> <li>• Brochures, flyers, posters, newsletter</li> <li>• Audio-video clips</li> </ul>   |   |   |   |   |   |   |
| 3. Updated webpage <ul style="list-style-type: none"> <li>• ADB TA 4563-CAM Inception Report, Mid-term Report, Final Report</li> <li>• Technical reports (socioeconomics, bio-ecology, Aquaculture etc)</li> <li>• Policy briefs</li> <li>• Training activities</li> <li>• IFRwDI people and events</li> </ul> |   |   |   |   |   |   |
| 4. Reviewed/Produced/printed information materials (policy briefs, brochures, audio-visual clips etc)  |   |   |   |   |   |   |
| 5. Discussed/Communicated/Prepared at least two MOUs on the partnership arrangements with other institutes in the country, region and internationally  |   |   |   |   |   |   |
| 6. Discussed/Consulted/Recommended governance structure of IFRwDI  |   |   |   |   |   |   |

***Thank you for your attention!***

# Management and Conservation Programme on Endanger Species in the Coastal Areas of Cambodia: Mr. Pich Sereyath




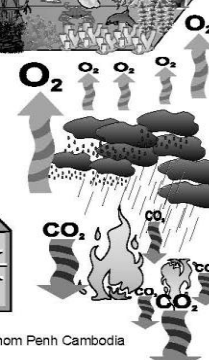
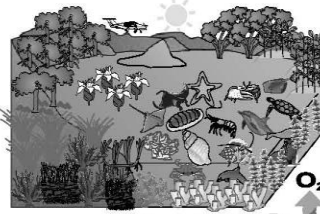
**Program  
on  
Conservation and Management of  
Marine Endangered Species in  
Cambodia**

**Pich Sereyath**

Department of Fisheries, # 186 Norodom Blvd, P.O.Box 582, Phnom Penh Cambodia  
21-23 September 2005

## Outlines

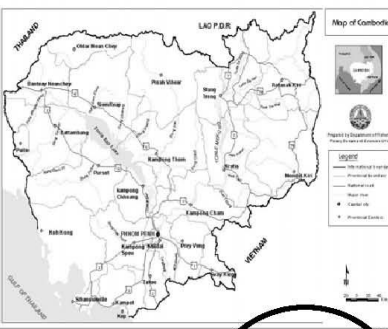
- Background brief
- Why conservation program ?
- Activities supporting program
- Future approach
- Needs to be done
- Suggestions
- Acknowledgement



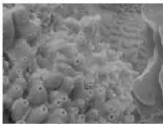
Department of Fisheries, # 186 Norodom Blvd, P.O.Box 582, Phnom Penh Cambodia  
21-23 September 2005

**BACKGROUND BRIEF**


- Land Area: 181,035 km<sup>2</sup>
- Marine areas: about 55, 600 km<sup>2</sup>
- Population: a bout 13 millions
- Coastline: 435 km (northern part bordering with Thailand and Southern part bordering with Vietnam)
- Animal species: > 400
- Two provinces and two municipalities
  - Koh Kong province, Kampot province
  - Keo city, Sihanoukville




**Potentials:**



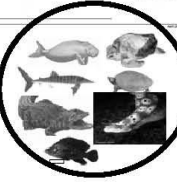
Coral reef



Seagrass



Mangrove



aquatic animals

**Why Conservation and Management ???**



**Threats**

- By-catch
- Habitat degradation through destructive fishing & illegal things
- Believe generates black market



**Less Capacity building and Cooperation**

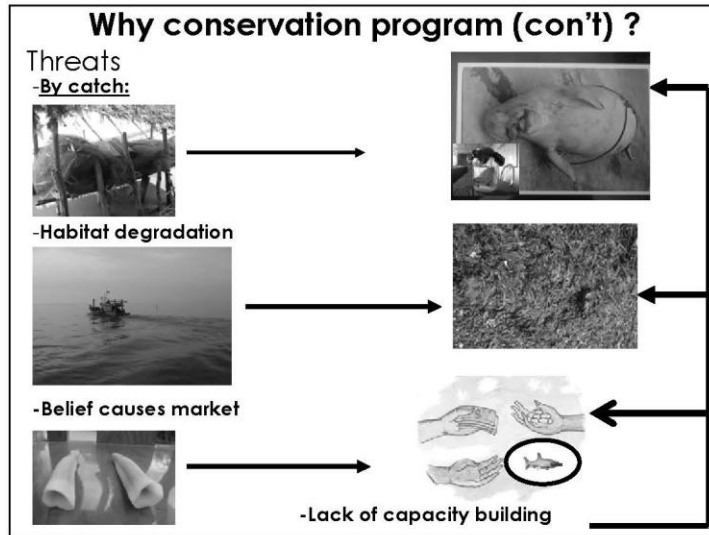
- Education and Awareness building, in terms of good management is limited.
- Poor cooperation







**Responsible to Global Concerns**

- Response to International, regional and national concerns





|   |   |  |
|---|---|--|
|  | <p>1. <b>Legislation:</b><br/>National<br/>Regional<br/>international</p> |  |
| <p>2. <b>Communicating Science</b></p>  | <p style="text-align: center;"><i>Ways to treat</i></p>                   | <p>3. <b>Joint cooperation:</b><br/>National Sector<br/>Outside Sector</p>           |
|  | <p>4. <b><u>New concept</u></b></p>                                       |  |



### Activities supporting program (con't)

#### Legislation:

##### ❖ National level:

- ❖ Finalized draft of sub-degree on endangered species
  - ❖ Endangered species list (only marine animals)
- ❖ Inspired existing legislations



##### ❖ Regional/international level

- Convention on Biological Diversity on 09/02/1995
- ASEAN's MoU- Sea turtle Conservation and Protection on 30/04/1999
- CITES- 2<sup>nd</sup> December 1997, and
- Others

*Remember: conservation is not only for Cambodia, but for all. LE, Try to do simple, but not simpler*



## Activities supporting program (con't)

### Public Education and Awareness Building

- \* Improved Education : Let people to be aware on **What is Endangered species** and its importance through training/ workshop.
- \* Developed Awareness tolls for conservation: notebooks, Pamphlets, and Posters. These materials were distribute to people who live in coastal areas.
- \* Distribution and Detailed Explanations

### Conducted study for Habitat and Refugia Distribution

- Seagrass beds

-Coral reefs

- Others

***Remember:*** conservation is not only for Cambodia, but for all. I.E, Try to do simple, but not simpler

## Activities supporting program (con't)

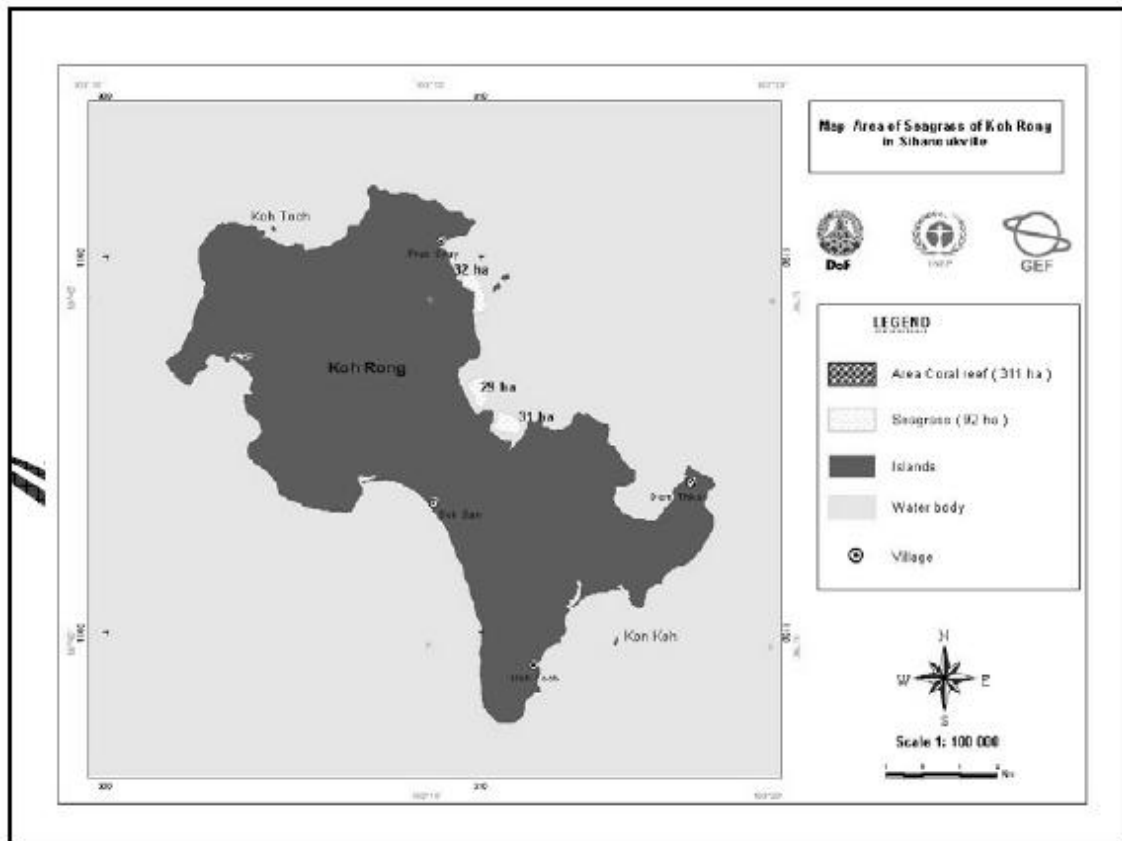
. Meeting workshop

. Research on habitats

. direct activities







## Activities supporting program (con't)

### New concept:

Conservation and management:

-Decentralized, community-based conservation scheme



-Collaborated within govt. line agencies and local communities/authorities, navy, police, etc.



**Remember:** conservation is not only for Cambodia, but for all. I.E, Try to do simple, but not simpler

## **Future Conservation and Management Approach to be done**

### Research Activities (if source available)

- \* Their current status
- \* Select Habitats or refugia for to be protected zone
- \* **Open door for more collaborative study between and within countries**



### Education and Awareness Building

- Generate and inspire Communicating Sciences effectively (if budget will be available)
- Activate knowledge building to all levels

### Knowledge Sharing

- \* To build networking: more regional/international cooperation, particularly ASEAN members in areas such as information exchange, legislation, enforcement, training, meeting, capacity building and awareness.
- \* To encourage any participation from all levels, especially policy maker to be involved in conservation and management program on endangered species project.

**Remember:** If YOU are stain with a coastal position please try to see WHAT happen and then DO IT

## **4\_C SUGGESTIONS**

- Conservation and management program should be fully accessed to all areas, typically national educational program and grassroots
- Concepts on **public Awareness Extension** and **decentralized, community-based conservation should be inspired.**
- Capacity building to country on the importance of conservation and management **Endangered species** should be more focused.
- Collaborative study program should be enhanced.

### **needs:**



- Co-management and benefit sharing in inside or outside sector.
- More either financial or technical support is the major way to enable to overcome all constraints.
- NGOs, relevant stakeholders and line agencies should proceed and access their **activities and goals**, in association with the Department of Fisheries, Cambodia.

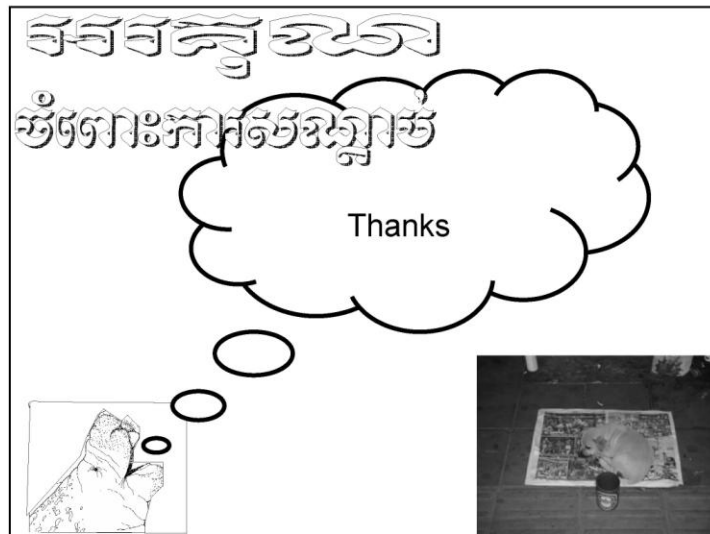
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## Acknowledgement

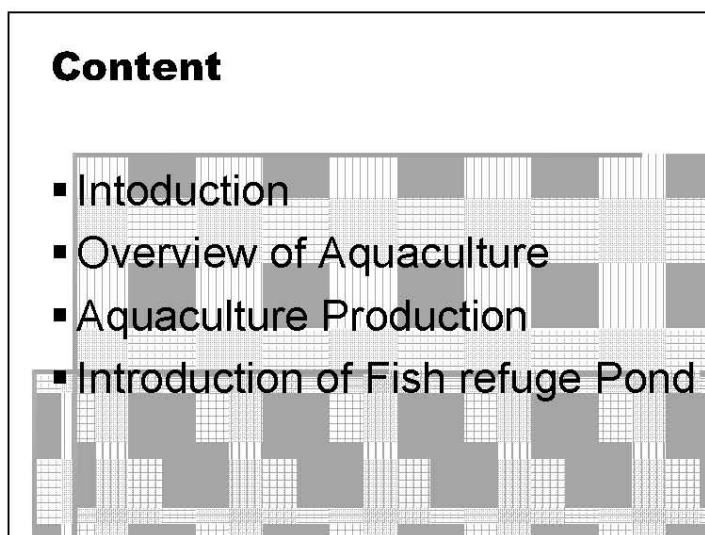
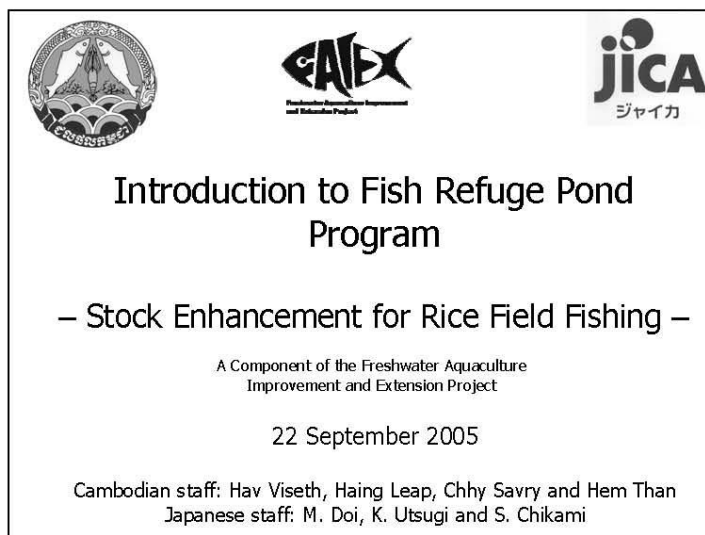
### TO:

- The Department of Fisheries
- Technical and Financial Supporter
- Colleagues in the Marine Working Group
- Someone who has helped any of project's activities.

Marine Working Group, [maric@online.com.kh](mailto:maric@online.com.kh) or [sereywath\\_pich@yahoo.com](mailto:sereywath_pich@yahoo.com)

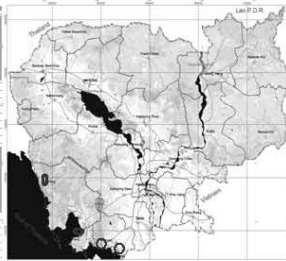


**Introduction to Fish Refuge Pond Program: Stock Enhancement for Rice Field Fishing:  
Mr. Haing Leap**



## Introduction

- Cambodia has a coastline of 435 km located in the Gulf of Thailand
- 4 provinces located along the coastline: Koh Kong, Sihanouk Ville, Kompot and Kep
- Rich biodiversity: about 474 indigenous fish species in Cambodian sea water
- Range of annual catch from 21,000 to 45,000 tones



## Overview of Aquaculture

- Cage and pen culture of freshwater fish, which is reported to have originated in Cambodia.
- around the 1960s, pond culture of Chinese carps and tilapia was attempted around Phnom Penh, the capital city.
- Aquaculture in coastal areas has just begun with the setting up of several shrimp and fish farms. Expansion is expected in this area because of the high-value shrimp and fish and their potential to generate foreign exchange through export.

## **Development of Aquaculture**

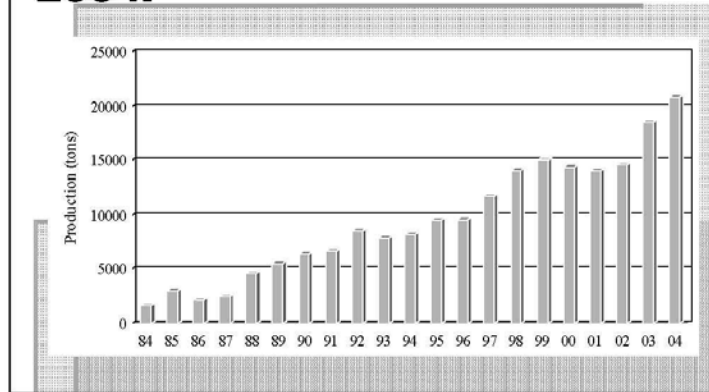
- Inland aquaculture: Fish culture in cages is reported to have originated in Cambodia about a century ago and it is still the major system contributing to inland aquaculture in the country.
- Coastal aquaculture: is a relatively new development started in the latest 1980 with the setting up of several shrimp and fish farms, and significantly expanded since 1991, but never reaching the same level as inland aquaculture.

## **Aquaculture Production**

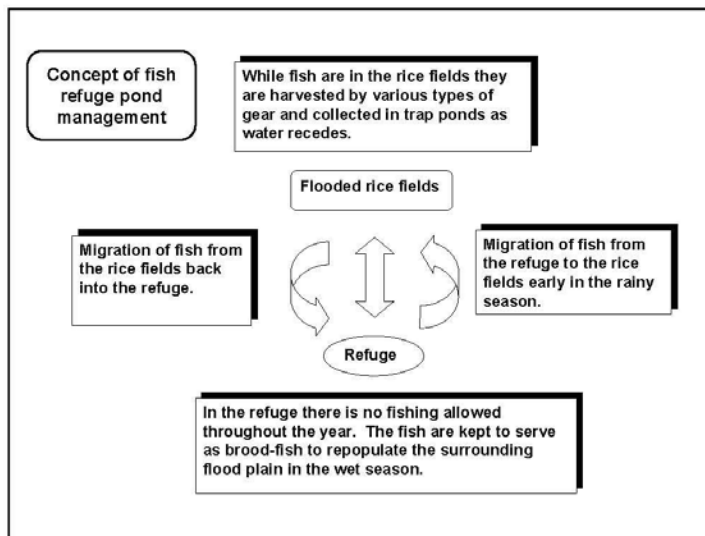
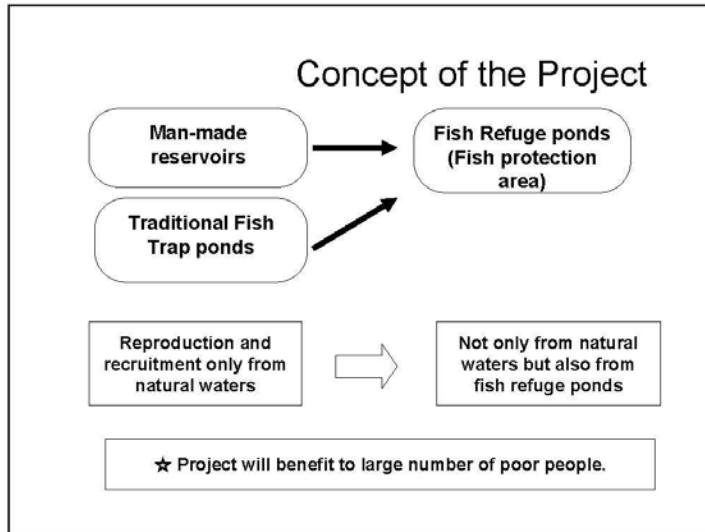
- Total aquaculture production exponentially increased from 1610 tons in 1984 to 14,100 tons in 1998 and 20,835 tons in 2004 (Figure 1).
- The share of aquaculture in the total fish production was only 2.5% in 1984; this ration has increased to 6.4% of the total National fish production of 326,635 tons in 2004.



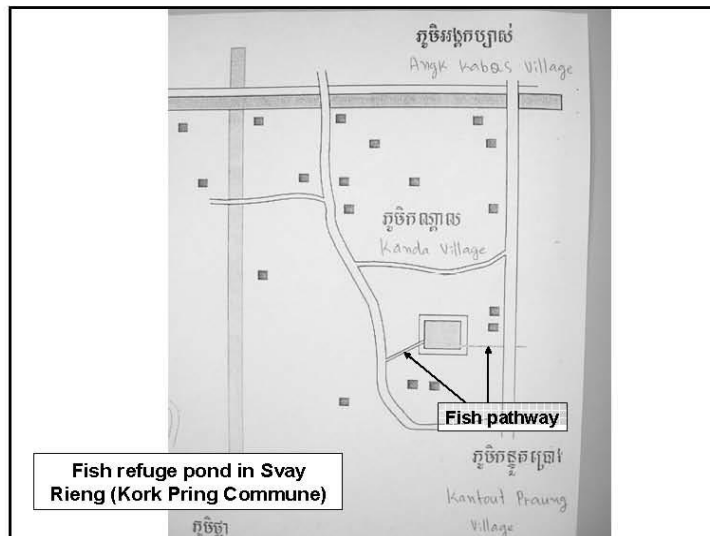
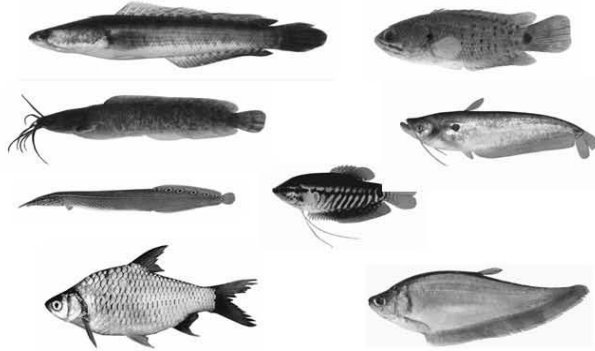
**Figure 1: Production of aquaculture from 1984 to 2004.**

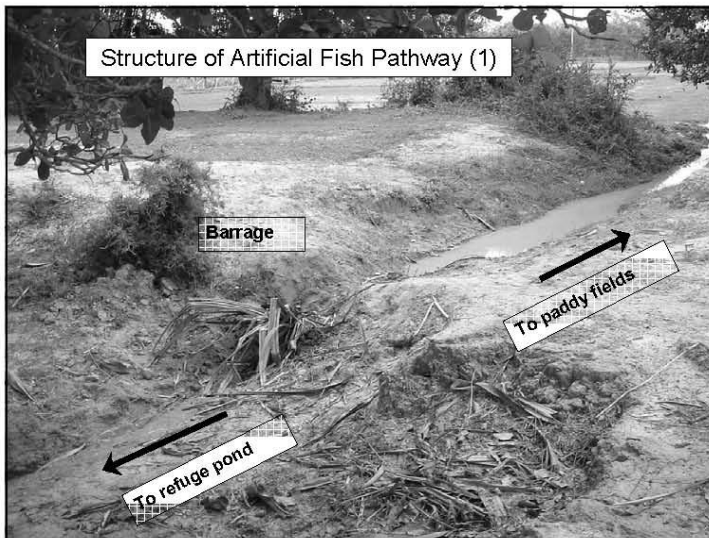
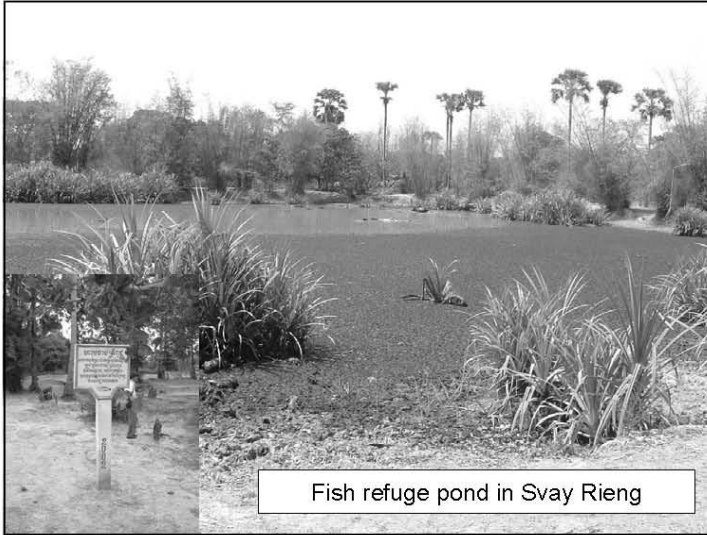


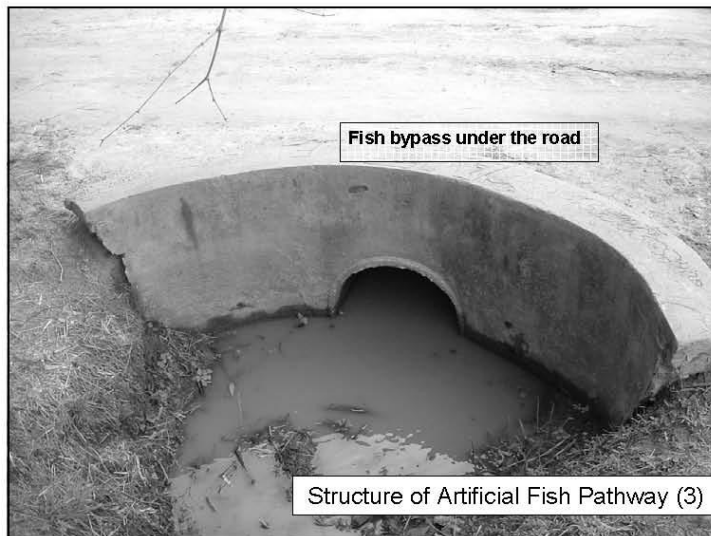
## **Introduction of Fish refuge Pond**



Major target species

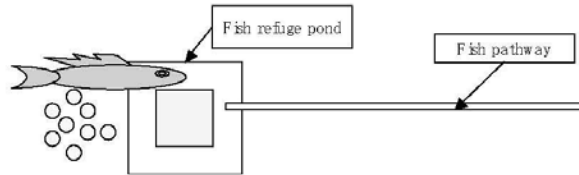






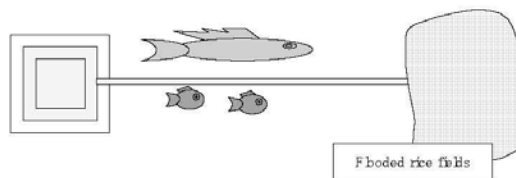
At the beginning of rain: from June to August

1 Broodfishes start reproduction in refuge pond.



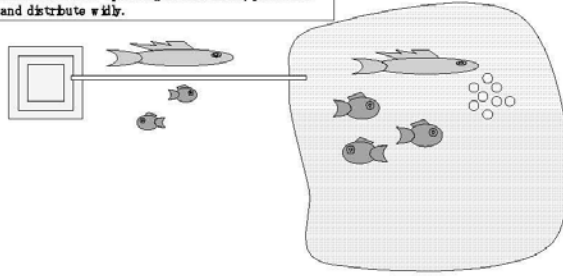
At the start of flooding: from August

2 Juveniles as well as broodfishes move toward flooded rice fields through fish pathway.



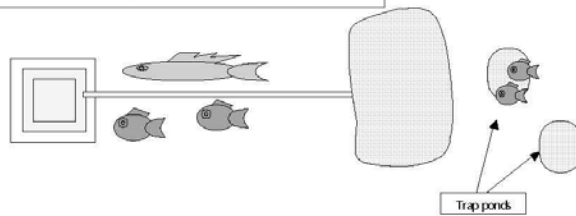
In the peak of flooding: from September to November

3 Broodfishes continue spawning in rice fields, Juveniles grow and distribute widely.



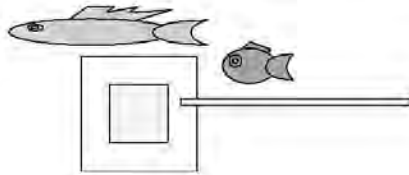
At receding of water: from November to January

4 Fishes migrate to deeper areas including refuge pond.



During dry season: from January to May

5 Fishes stay in refuge pond during the dry season.



### Site Selection Criteria

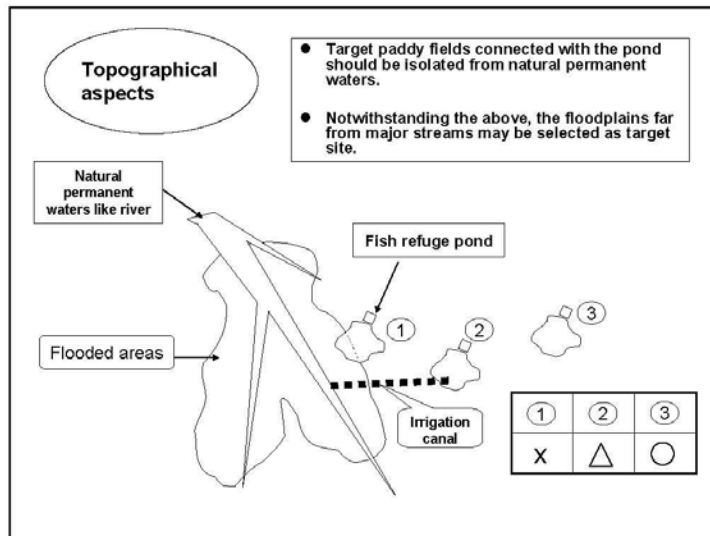
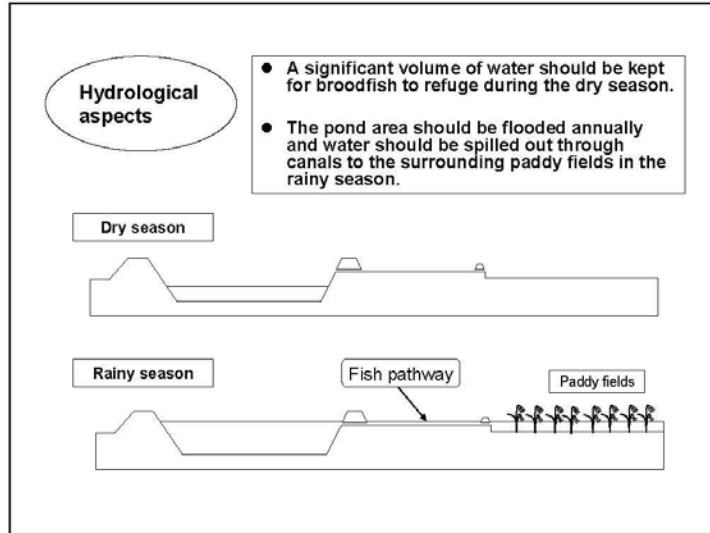
Hydrological aspects

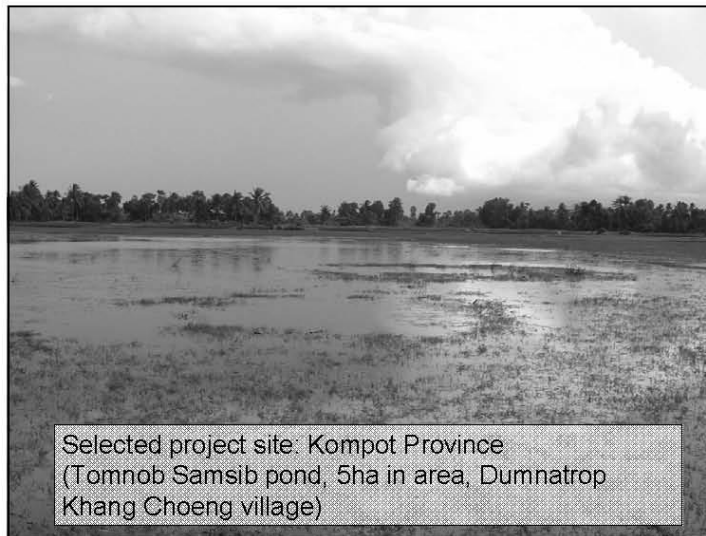
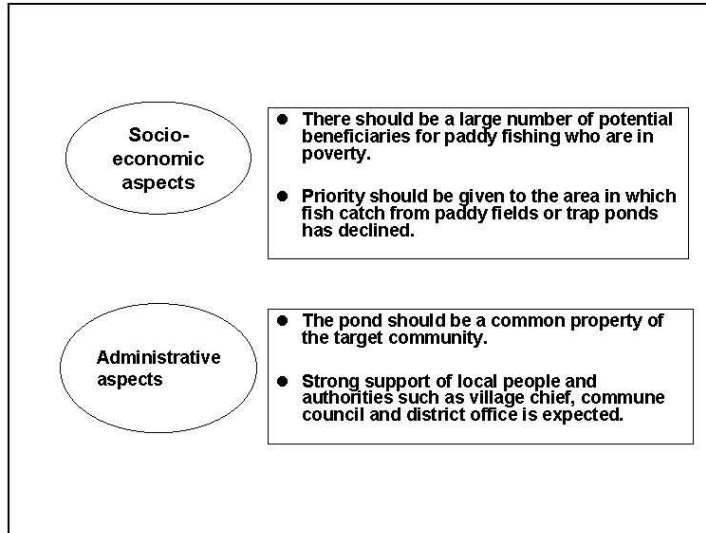
Socio-economic aspects

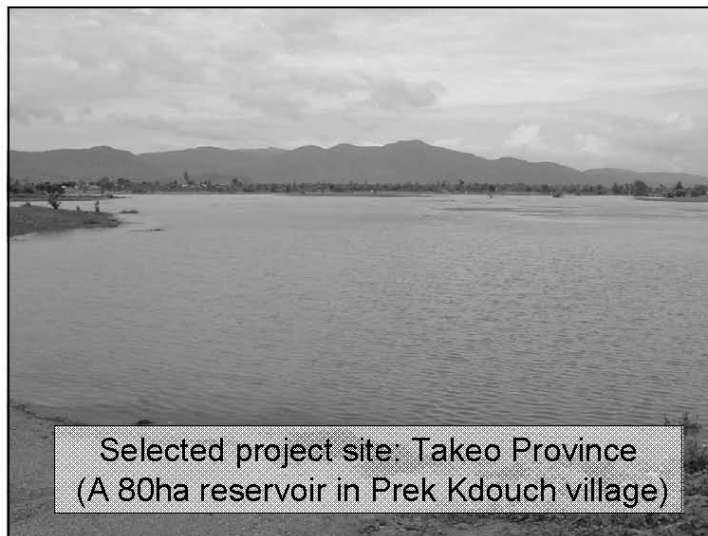
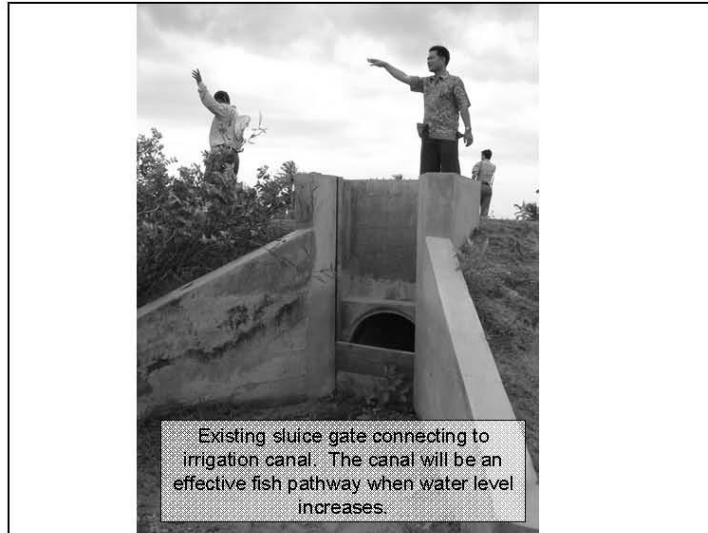
Topographical aspects

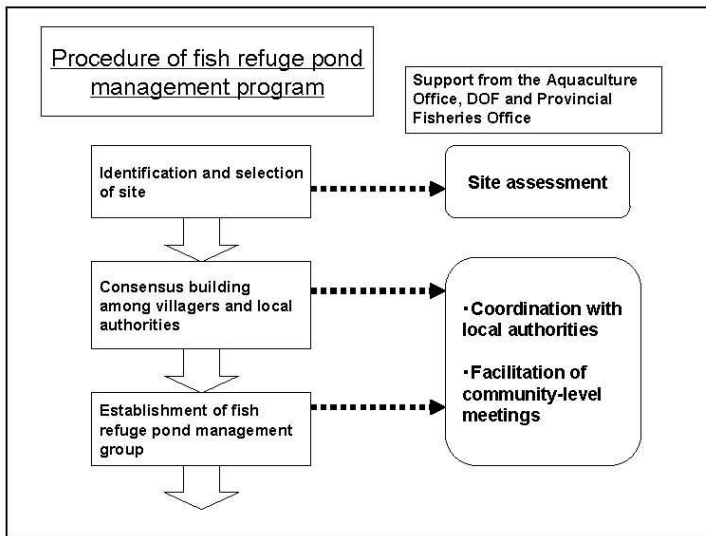
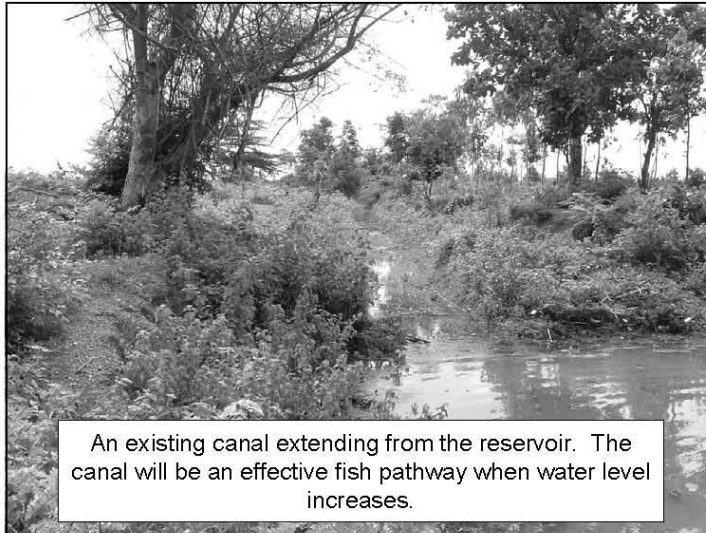
Administrative aspects

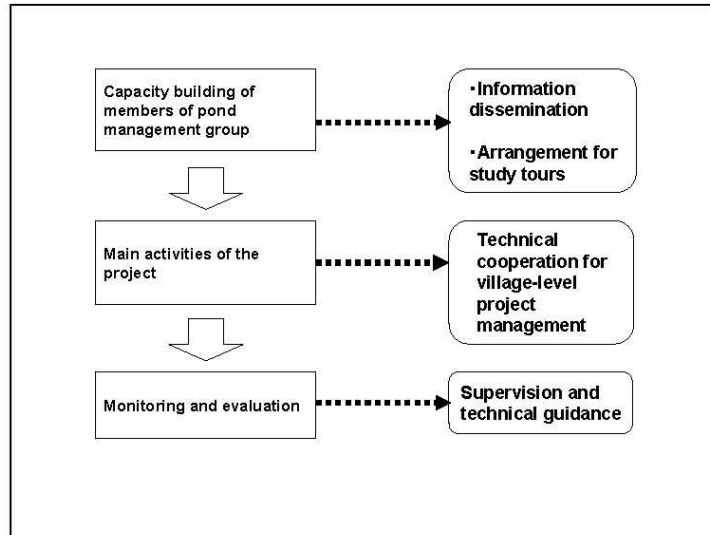








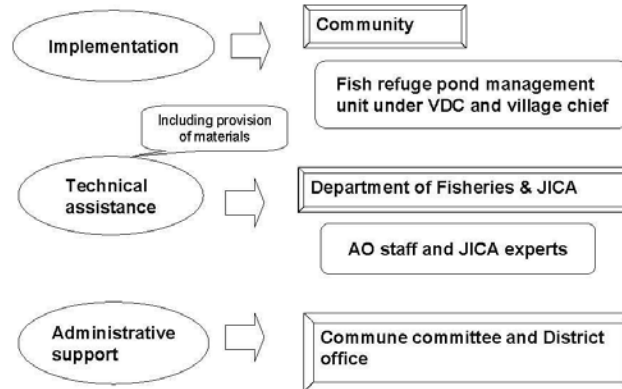




### Menu of the project

- Public notification (clarification of the boundary and construction of sign boards)
- Release of fish breeders and/or seeds
- Improvement of fish pathways
- Improvement of pond environment for fish reproduction
- Establishment of management rules and regulations for refuge pond.


### Implementation structure of the Project





Thank You

**Human Resource Development Experience of Management of River and Reservoir Fisheries (MRRF) Cambodia Sub-Component, A Case Study at Tukchar Reservoir:  
Mr. Heng Samay**



**Human Resource Development  
Experience of Management of River  
and Reservoir Fisheries, Cambodia  
Sub-component (MRRF), MRC, Fishery  
Programme: Case Study at  
Tukchar/Thormda Reservoir**

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Presented by :  
Mr. Heng Samay  
Former Technical Staff of MRRF



**Contents of the Presentation**

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1. Brief Background of the Cambodia Sub-component
2. Brief Activities Related to Human Resource Development of the Cambodia Sub-component
3. Case Study of Human Resource Development Experience at Tukchar/Thmorda Reservoir



### **Brief Background of the MRRF, Cambodia Sub-component**

- MRRF has been started since early 2000 to 2004 and has been extended to present and is expected to continue until year 2010
- **Development objective of MRRF:**  
Coordinated and sustainable management, use and development of the economic and nutritional potential of the inland living aquatic resources in the Mekong Basin are achieved.
- **Immediate objective of MRRF:**  
Fishing communities and concerned authorities jointly develop, implement and disseminate sustainable reservoir/river co-management models.

### **Brief Background of the MRRF, Cambodia Sub-component**

- **Outputs:**
  - Recommendation for the development or improvement of reservoir/river management strategies are elaborated for each participating country;
  - A structure for the preparation and implementation of reservoir/river fisheries co-management plans is established for selected reservoirs/rivers;
  - Reservoir/river fisheries co-management capacity of all participating institutions, fishers and other water resource users is strengthened.

### **Brief Background of the MRRF, Cambodia Sub-component**

- Activities:
  - Help organize and strengthen stakeholders groups who will become partners in the co-management process;
  - Organize and implement various activities that will increase the capacity of project partners in effecting reservoir/river fishery co-management – such as trainings; study tours and other related undertakings;
  - Document, package and disseminate experiences in reservoir/river fishery co-management among concerned institutions and individuals.

### **Brief Activities Related to Human Resource Development of the Cambodia Sub-component- inside country**

- Training: PRA( village map, wealth ranking seasonal calendar and preparing questionnaire etc.); Community Development, Planning, Organizing, Plan Evaluation and Facilitation Skill; Fisheries Co-management (Follow up); Training of Trainer, Participatory Research, Gender Concept; Community fisheries management plan; Use of computer software (GIS, Access); English Language

**Brief Activities Related to Human Resource Development of the Cambodia Sub-component- inside country**

- **Study tours:** Community Based Fisheries Resource Management at Kampong Phlok, Siem Reap province, Kampong Chhnang province, Sihanouk Ville.
- **Symposium:** MRC annual symposium in Cambodia
- **Workshop:** Pre-inception Workshop of MRRF; 3<sup>rd</sup> National Follow up Workshop of Regional Training Course on Co-management in Inland Fisheries, Kampong Chhnang.
- **Meeting:** Monthly meeting of all component staff and leaders to exchange experience and inform activities.

**Brief Activities Related to Human Resource Development of the Cambodia Sub-component-outside country**

- **Training:** Community Based Fisheries Co – management; Regional Training Course on Co-management in inland fisheries.
- **Symposium:** MRC Annual Technical Symposium.
- **Meeting:** 6 Months component directorate meeting to exchange experiences and inform what has been done in each sub-component.

### **Case Study of Human Resource Development Experience at Tukchar/Thmorda Reservoir**

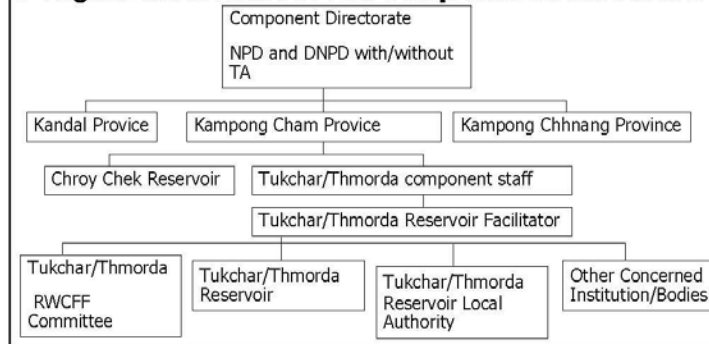
- **Location of Tukchar/Thmorda Reservoir:**
  - Situated in two commune(Boeung Night and Croch), Prey Cho district, Kampong Cham province
- **Number of Organized Fisheries Communities :**
  - 4 with total members of 285 members from 4 villages- Thmorda, Chheubak, Ta Ok and Thmey since mid-year 2000

### **Case Study of Human Resource Development Experience at Tukchar/Thmorda Reservoir**

- **Activities Have Been Carried Out in the Areas:**
  - Conduct PRA, Selection of Core Group, Draft CF Constitution and By-laws, Organization of CF, Formation of CF constitution and by-laws, Establishment of Reservoir-wide Community Fisheries Federation (RWCFE), Formation of RWCFE Constitution and By-laws, Consultation on Draft of Sub-decree on CF, Reservoir-wide Plan Fisheries Management (RWPFM), Implementation of RWPLM-Training, Study Tours, Meetings, Workshop, Formation of Fish Sanctuary, Reservoir Fish Stocking, Livelihood Support Activities( Rice Bank, Pond Aquaculture, Mobile Hatchery), Extension of CF Sub-decree

## Case Study of Human Resource Development Experience at Tukchar/Thmorda Reservoir

### ■ Organization Chart of Sub-component in the Areas:



## Case Study of Human Resource Development Experience at Tukchar/Thmorda Reservoir

| Type HRD Activities     | To Whom  | By Whom  | For What Purposes   | Method   | Place                                      |
|-------------------------|--|--|---|--|--|
| Trainings And workshops | Technical Staff, Reservoir facilitators, local authority, CFFC, other stakeholders | Sub-/Component directorate, non-component expert, component staff/Reservoir facilitators | To build up capacity of concerned institution and Exchange experience | Conduct Training need analysis, Training & study tours | Local/ outside Reservoir/ abroad           |
| Meetings                | Ditto  | Sub-component Directorate, staff, Reservoir facilitator                                  | Ditto & solved problems   | Meeting and discussion                                 | Local/ outside Reservoir/ Component Office |
| Study Tours             | Technical Staff, Reservoir facilitators, local authority, CFFC                     | Sub-/component Directorate and concerned institution                                     | To build up capacity of concerned institution and Exchange experience | Field visit, Discussion, and Training                  | Local/ outside Reservoir/ abroad           |



### **Case Study of Human Resource Development Experience at Tukchar/Thmorda Reservoir**

- Conclusion: The ways of giving HRD is in sequent and fit to the needs of each concerns institutions/ bodies, but still need supplement study tours to all concerned institutions.
- Recommendation: Needs to provide more study tours and English Training to concerned sub-component staff and concerned stakeholders.



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Thank You

**Closing Speech by Mr. Ing Try  
Deputy Director of Fisheries Department  
For the On-site Training and Workshop on Development of Community Based Fishery  
Management in Coastal Areas of Cambodia  
20-23 September 2005, Borey Bokor Hotel, Kampot Province, Cambodia.**

**Distinguished guest, ladies and gentlemen,**

First of all, on behalf of the Department of Fisheries, I would like to express my pleasure to close the National Workshop on “Training and Development of Community Based Fishery Management in Cambodia” under cooperation between SEAFDEC-Sida and the Department of Fisheries.

In addition, I would like deeply to thank the working group of the Fisheries Department in cooperation with delegations of SEAFDEC Secretariat during for three days, especially I appreciate very much the discussions and exchange of experiences including the finding of solution to strengthen human resource development in fisheries at the future. At the same time, I would like to thank Sida-SEAFDEC both for fund support and initiative idea to conduct this workshop. This workshop plays a very important role to support the plan on human capacity building of provincial fisheries, particularly provincial fisheries office along coastal area. The result of the workshop is part of government’s policy on human resource development for poverty reduction, thus, improving the standard of living.

The discussion in this workshop provided fruitful of SWOT analysis, thus it’s a main guideline to find appropriate way to conduct and carry out plan of action on human capacity building for fisheries management in Cambodia in the future.

**Distinguished guest, ladies and gentlemen,**

At current, knowledge, skills and experiences, considered as the tool to strengthen economic in the society in the world. Therefore, human resource is necessary needed in Cambodia as well the Department of Fisheries.

King of Cambodia had considered fisheries as prioritized for poverty reduction and encourages people living condition. So, it is necessary to have enough human resource for development.

In connection with this, I would like all of you to cooperate with the donor and pay attention to contribution existing skills in order to gather more resources of experiences in capacity building for fisheries management as in this workshop. On other hand, I am very proud and support the useful comment of workshop, which will be used for encouraging human resource for fisheries management in Cambodia. Moreover, I would like to encourage all the participants to bring these comments as tool for implementation.

One again, I would like to thank to SEAFDEC-Sida for the support: both fund and spirit to this national workshop, to be a fruitful success.

Finally, I officially announced to close this workshop and wish you ladies and gentlemen to come back to your home safely.

**Thank you.**