

“Sustainable Coastal Resource Management: In The Hands of The Fishers” (IHOF#1)

A Regional Workshop

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Background

A number of countries within the Southeast Asia and South Asia Region have been following a development model where the ultimate goal is rapid economic growth, which will give them the status of a "Newly Industrial Country" or NIC. However, a very heavy price has been paid in the rapid excessive exploitation of natural resources of all forms including the coastal resources, water resources and forest resources. The greatest impact of this environmental exploitation has been to the rural communities whose livelihoods are most dependent on natural resources. We can say this development model has failed, in that, it has left many people poor or even poorer than before when they were able to maintain a self sufficient lifestyle, free from debt.

The present degraded marine and coastal resources in Thailand are good examples of the negative impact resulting from the previous National Socio-Economic Development Plans. The Asian region contains the largest area of mangrove forest in the world, but now the forest area has been significantly reduced due to unsustainable exploitation and the conversion to other uses. In some countries, such as Thailand, more than 50% of the mangrove forest as been lost and what remains is often degraded. Similarly, marine resources are facing the equally desperate situation caused by over harvesting and habitat destruction. Some species of marine animals have become extinct while others other are now endangered. Ironically, the numbers of marine animals have become so depleted in some areas, that coastal communities may soon face a protein shortage where they once lived beside a sea of plenty.

However, a growing number of fisherfolk communities have realized the impact of this situation and have decided to do something about it. Co-operation amongst fishing communities has been established in a number of countries often in the form of a federation or other network. They are co-organizing in coastal conservation and management to ensure suitable use of coastal resources particularly coral reefs, seagrass beds, mangrove forests and fishing grounds. The success of their work indicates the potential and capability of these local people in protecting their own well being. This is a good example of sustainable development where people have relied upon themselves. The exchange and distribution of local peoples' knowledge and experience is extremely important and useful for expanding the community based coastal resource management (CBCRM) network. With this in mind this regional workshop has been organized to help full fill this need.

Objectives:

1.) To provide an opportunity for fisherfolk leaders from Cambodia, Sri Lanka and Thailand to exchange their knowledge and ideas on coastal resource management based on their own personal experience.

2.) To gain a better understanding of the current socio-economic and environmental conditions facing their own communities.

3.) To encourage and support each other in sustainable management and initiate co-operation in community based coastal resource management amongst the three countries participating.

Venue: M.P. Resort Hotel, Trang THAILAND

Duration: 27 - 31 August, 1999

Participants: Fisherfolk representatives, lecturers from academic institutions and extension workers from NGOs in 3 countries :

- ◆ 6 persons from Cambodia
- ◆ 6 persons from Sri Lanka
- ◆ 12 persons from Thailand

Expected Outcome:

1.) The participants will have a chance to share their local knowledge and experience.

2.) Good friendships and co-operation will be established.

3.) The participants will be empowered through increased confidence in their coastal resource management skills, leading to improved coastal communities and environmental conditions.

Jointly organized by: ☆ Small Fishers Federation of Sri Lanka

☆ Yadfon Association, Thailand

Financially supported by: ☆ CCFD, France

☆ MAP, USA

☆ BOTH Ends, The Netherlands

☆ Coady International Institute, Canada

“IN THE HANDS OF THE FISHERS”

Fisherfolk of Sri Lanka, Cambodia and Thailand Join Together To Strengthen Community Based Coastal Resources Management (CBCRM)

27-31 August, 1999

M.P. Resort Hotel, Trang, Thailand

WORKSHOP PROGRAMME:

Thursday August 26

09:05 Sri Lankan group arrives by train
Check-in to M.P. Resort Hotel

Friday, August 27

09:05 Cambodian group arrives by train
Check-in to the M.P. Resort Hotel

12:00 - 13:00 Lunch

13:00 - 14:00 Registration, Review Schedule & Group Photo

14:00 - 14:15 Welcome address by Mr. Pisit Charnsnoh
President, Yadfon Association

14:15 - 14:45 Opening & Keynote Address by Mr. Chalermchai Preechanon
The Governor of Trang Province

14:45 - 15:15 A Global View: Environmental Marine Issues
Jim Enright, Network Co-ordinator, Yadfon Association

15:15 - 15:30 Coffee/Tea Break

15:30 - 16:15 The Potential & The Capacity of Local People to Achieve Sustainable
Coastal Resources Management
Pisit Charnsnoh, President Yadfon Association

16:15 - 17:00 Community Mangrove Forest Management
Dr. Pearmsak Makarabhirom, Regional Community Forestry
Training Center, (RECOFTC) Bangkok

18:00 - 19:00 Dinner

19:00 - 20:00 Social Activity
20:00 Cultural Evening

Saturday August 28

07:00 - 08:00 Breakfast
08:30 - 09:30 Country Report : The Situation of Fisherfolk Communities in Sri Lanka
09:30 - 10:30 Country Report : The Situation of Fisherfolk Communities in Cambodia
10:30 - 11:00 Coffee/Tea > games/video
11:00 - 12:00 Country Report : The Situation of Fisherfolk Communities in Thailand
12:00 - 13:00 Lunch
13:30 - 15:00 Small Group Discussion on: "Common Problems and Possible Solutions to Coastal Resources Management issues" (4 groups of 6)
15:00 - 15:15 Coffee/Tea
15:15 - 16:15 Group Summary Presentations (4 X 15 min. each)
16:15 - 16:30 Overall Summary & Conclusions
18:00 - 19:00 Dinner
19:30 - 21:00 Panel Discussion: "The Role of Academic Research Co-operation; Student / Youth Environmental Education & Civil Society in Supporting CBCRM"

Moderated by Mr.Pisit Charnsnoh, *President, Yadfon Association*

- ❖ Dr. Wattana Sugalasila, *Prince of Songkhla University, Pattani Campus*
- ❖ Assit. Prof. Nipon Jaipleum, *Rajamangala Institute of Technology, Nakhon Sri Thammarat Campus*
- ❖ Dr. Jamrat Sorapipat, *Chairman of Trang Assembly*
- ❖ Ajarn Pluerng Kongkaew, *Vichienmatu School*

Sunday August 29

07:00 - 8:00	Breakfast
08:00	Field trip to The Village <ul style="list-style-type: none"> ▪ Group 1 : Ban Tung Taseh ▪ Group 2 : Ban Laem Makham
09:30 - 12:00	A Brief On Village Background and the Experience in Community Mangrove Forest Management
12:00 - 13:30	Lunch in the village
13:30 - 16:30	Community Mangrove Forest Field Study Exercise and Tree Planting
16:30	Departure for hotel
18:00 - 19:00	Dinner // FREE EVENING

Monday August 30

07:00 - 08:00	Breakfast
08:30 - 10:30	Discussion on Village Field Study (2 village groups)
10:30 -10:45	Coffee/Tea Break
10:45 - 11:15	Presentation from Group Discussion : Ban Laem Makam
11:15 - 11:45	Presentation from Group Discussion : Ban Tung Ta Seh
11:45 - 12:00	Overall Summary of Village Field Study
12:00 - 13:00	Lunch
13:00	Field Trip To Kantang District <ul style="list-style-type: none"> * Visit women's group at Ban Yansue to learn the importance of Nypa Palm forest to villager life & livelihood * Visit fish cage culture at Ban Koh Keim * Visit Mangrove Forest Ecology Research Center, the Royal Forest Department (RFD)

17:00 Return to hotel
18:30 - 20:00 Dinner at local seafood restaurant.
20:00 Return to the hotel // FREE EVENING

Tuesday, August 31

07:00 - 08:00 Breakfast
08:30 - 09:30 Group Discussion: "Future Plans in CBCRM" (3 country groups)
09:30 - 10:15 Panel Presentation From Three Groups (3 x 15 min.)
10:15 - 10:30 Group Discussion Summary
10:30 - 10:45 Coffee/ Tea Break
10:45 - 11:30 Workshop Evaluation & Recommendation for the 2nd workshop
11:30 - 12:00 Workshop Closing Ceremony
12:00 - 13:00 Lunch
Shopping in Trang for those interested
17:10 Cambodian group departs by train for Bangkok - Bon Voyage

Wednesday, September 1

17:10 Sri Lankan Group departs by train for Bangkok - Bon Voyage

“IN THE HANDS OF THE FISHERS WORKSHOP”

ACTIVITY GUIDE

Friday, August 27

Session 1:

A Global View: Environmental Marine Issues

Objectives:

- 1.) Show examples of the global environmental crisis facing the marine and coastal regions in order to broaden the participants view.
- 2.) Give examples of how non-government (NGOs) and peoples' organizations (Pos) in different countries are organizing to address these problems
- 3.) Give examples how NGOs and PO's linked through networks are achieving a greater capacity and effectiveness in pressuring governments not to carry out destructive projects or to influence government policy to support conservation.

Procedure: A lecture presentation accompanied by slides and a handout in the workshop kit.

Time: 30 mins.

Materials: slide projector, screen, slides

Facilitator: Pluenjai Charnsnoh

Presenter: Jim Enright

Summary: Jim Enright

Language: English

Translators: Sri Lanka - Chandana // Cambodia - Sophat // Thailand -

Session 2:

The Potential and the Capacity of Local People to Achieve Sustainable Coastal Resources Management

Objectives:

- 1.) To confirm local people's wisdom.
- 2.) To support fisherfolk leaders efforts through confidence building.
- 3.) To show examples of the potential of local people.
- 4.) To illustrate the power of peoples' cooperation

Procedures: A lecture presentation accompanied by slides and a handout in the workshop kit.

Time: 45 mins.

Materials: slide projector, screen, slides

Facilitator: Pluenjai Charnsnoh

Presenter: Pisit Charnsnoh

Summary: Pisit Charnsnoh

Language: English

Translators: Sri Lanka - Chandana // Cambodia - Sophat // Thailand -

Session 3:

Community Mangrove Forest Management

Objectives:

To gain a better understanding of the advantages, problems, structure, and methods of community mangrove forest management.

Procedure:

Time: 45 mins.

Materials:

Facilitator: Pluenjai Charansnoh
Presenter: Dr. Pearmsak Makarabhirom
Summary: Dr. Pearmsak Makarabirom
Language: English
Translators: Sri Lanka - Chandana // Cambodia - Sophat // Thailand -

Saturday August 28

Session 4:

Country Reports: The Situation of Fisherfolk Communities in Sri Lanka, Cambodia and Thailand

Objectives:

- 1.) An opportunity for fisherfolk to explain the background and overview of the situation in their own communities to the other 2 country participants represented.
- 2.) To evaluate the status of coastal resources in their own area.
- 3.) To explain the main issues and problems such as resource conflicts, resource over exploitation, land tenure issues etc... that the local people are facing.
- 4.) To explain any activities, special programmess, or attempts taken by the communities to deal with these problems

Procedure:

Part 1:

Country Report Presentations

- i) Several representatives from each country will be present this information using visuals where possible to help explain their local community situation following the above objectives.

Part 2:

Small Group Discussion on: Common Problems and Possible Solutions to Coastal Resource Management Issues

- ii) The 24 participants are split into 4 groups with 6 participants representing two countries plus one facilitator.
- iii) The group will first select a representative to present the summary of the group's discussion to the whole group in the final session
- iv) The facilitator gives each participant 3 blank cards and each person is asked to think what they feel are the three most serious problems or issues facing their community. One problem is written on the upper half of each card in a short concise phrase or word in their local language. The lower half of the card will be used to translate the problem or issue into English by the translators in each group.
- v) With the assistance of the facilitator the participants try to group similar problems under a common heading.
- vi) Each problem category is taken up in turn by the group to discuss. Firstly what strategies have already been tried by local people to solve these problems and then secondly brainstorm on what other possible solutions that could be attempted

Part 3:

Group Summary Presentations

- vii) One representative from each of the 4 groups will briefly summarize the key points of their small group discussion for all participants. The use of the main points on flip chart paper will help explain the presentation.

Part 4:

Overall Summary & Conclusions

- viii) Two facilitators will try to draw together the overall highlights of what was learned from this activity and what are the needs, or issues that still require further attention to achieve satisfactory solutions for the major problems facing the local communities.

Time: Part: 1 - 3 hours (3 countries X 1hr.
Part: 2 - 1.5 hours
Part: 3 - 1 hour (4 groups X 15 min.)
Part: 4 - 15 min.

5 hours & 45 mins.

Materials: 36 blank cards; 24 markers; masking tape; tacks; flip chart paper

Facilitator: Overall Facilitator - Jim Enright
Small Group Facilitators - Dr. Pearmsak
Dr. Wattana
Ajarn Praneet
Ajarn Nipon

Presenter: Representative participants from Sri Lanka, Cambodia, Thailand

Summary: Jim Enright & Ajarn Praneet

Language: All languages will be used.

Translators: Sri Lanka - Chandana & Anuradha // Cambodia - Sophat & Vanntha
Thailand - Dr. Pearmsak, Dr. Wattana, Adjarn Praneet, Adjarn Nipon

Session:

The Role of Academic Research Co-operation; Student / Youth Environmental Education & Civil Society in Supporting CBCRM

Objectives:

- 1.) To learn the roles of different groups in supporting CBCRM.
- 2.) To explore how (strategies & techniques) these groups can work with communities to support CBCRM.
- 3.) To learn the benefits for both parties that comes from working cooperatively on CBCRM issues.

Procedure: Each of the four panel members will give a brief presentation followed by discussion and questions from the audience.

Time: 1.5 hours

Materials: overhead projector, transparencies & pens, whiteboard & markers

Facilitator: Pisit Charnsnoh

Presenters: Dr. Wattana Sugalsila, Assit. Prof. Nipon, Dr. Jumrat Sorapipat, Ajarn Pluerg Kongkaew

Summary: Pluenjai Charnsnoh

Language: Thai & English

Translators: Sri Lanka - Chandana // Cambodia - Sophat // Thailand -

Sunday, August 29

Session 1:

Field Trip To The Village

NOTE: Bring a hat, rain coat or umbrella in case of rainy weather.
Participants may want to bring a note book and a camera if they have one.

Objectives:

- 1.) To learn about the local uses of animals & plants found in the mangrove forest and compare these with the Cambodian & Sri Lankan experience.
- 2.) To learn the story of one village's experience of achieving community mangrove forest management, including history, problems, issues, procedures and management techniques.
- 3.) To gain some first hand experience within the community mangrove forest.
- 4.) To do a small scale planting in the village to symbolize the participants concern for the future environment, to show friendship and cooperation, and to leave a positive "sign" of their visit.

Procedure:

NOTE: All participants should take notes during the field trip to the village as they will be important for future group discussions tomorrow. Each group will also designate ONE official record keeper.

- i) Several representatives from the village will present the complete story about their village community mangrove forest.
- ii) The group will then go into the community mangrove forest and carry out a field survey on biodiversity of species (animals & plants) found within a 2 metre square area.
- iii) The group is given 2 pieces of 8 metre length of rope which will be used to demarcate two 4 sq. metre exploration zones in a rich area of community mangrove forest.
- iv) The team working together should attempt to identify as many species as possible within these 2 squares making a list in local languages &

scientific names, where known. The team will have a mangrove tree identification to help put scientific names on trees.

- v) The members of the team representing 3 countries should share with others which species they use for food, building material, medicinal medicines or any other use.
- vi) The participates along with villagers will either plant some Nypa Palm seedlings or mangrove seedlings in the village.

Time: 5.5 hours

Materials: 4 pieces of 8 metre rope with pegs , ID mangrove tree books,
Ban Laem Makam 200 mangrove seedlings
Ban Tung Taseh 100 Nypa Palm seedlings

Overall Facilitator: Ajarn Nipon

Village Facilitators: Dr. Wattana - Ban Laem Makam
Ajarn Nipon - Ban Tung Taseh

Presenter: Village representatives from Ban Laem Makam & Ban Tung Taseh

Summary: Ajarn Praneet & Jim Enright

Language: Thai used by village representatives

Translators: Sri Lanka - Chandana & Anuradha // Cambodia - Sophat & Vanntha
Thailand - Usa Ungsunantwiwat for Ban Laem Makam
Ajarn Nipon for Ban Tung Ta Seh

Monday August 30

Session 2:

Discussion of Village Field Study

- Objectives:
- 1.) To share participant's impressions and feedback on what they thought of the community mangrove forest.
 - 2.) Compile and compare data collected in the community mangrove survey.
 - 3.) What was learned from the village presentation and field study activity.
 - 4.) Summarize information for presentation

Procedure:

The group facilitator will lead the group discussion following the above objectives as a guideline.

- Time: 2 hours
- Materials: flip chart paper & markers, overhead projector, transparencies & markers
- Facilitator: Seak Sophat - Ban Laem Makam Anuradha - Ban Tung Taseh
Dr. Wattana - Assistant Adjarn Nipon - Assistant
- Presenter: All participants should contribute.
- Language: All participants will use their local language.
- Translators: Sri Lanka - Chandana & Anuradha // Cambodia - Vanntha & Anuradha
Thailand - Usa Ungsunantwiwat for Ban Laem Makam
----- for Ban Tung Taseh

Session 3:

Presentations From Group Discussion

- Objectives:
- 1.) To share information from village field study and group discussion with the whole group.
 - 2.) The presenting group has an opportunity to summarize what was learned while the other village group gains more information which can be compared with their own village field trip experience.
- Procedure: Each group presents their findings in any format they choose.
- Time: 1 hour (2 X 30 mins.)
- Materials: flip chart paper & markers; overhead projector, transparencies & markers
- Facilitator: Ajarn Wattana
- Presenter: Representatives selected by each village group.
- Summary: Ajarn Praneet & Jim Enright (15 min. oral summary)
- Language: All languages will be used

Translators: Sri Lanka - Chandana // Cambodia - Sophat // Thailand - Usa Ungsunantwiwat,

Session:

Field Trip To Kantang District

Objectives:

- 1.) To learn the importance of Nypa Palm forest to the environment and to the community of Ban Yansue.
- 2.) To learn about Ban Yansue's experience of income generation from a small scale enterprise.
- 3.) To learn about women's role in conservation.
- 4.) To learn the methods, successes and failures of fish cage culture.
- 5.) To learn about the Royal Forest Department's (RFD) role in mangrove forest ecology research. To find out if there are benefits to communities.

Procedure:

NOTE: Each country will select a representative who will briefly give their impressions to the whole group at the beginning of the next day's session.

- i) Several village representatives of Ban Yansue will give a brief background on the Nypa Palm forest and utilization by the villagers.
- ii) The group will be divided into smaller groups for a village tour. The Sri Lankan participants will go as a group with several Thai translators. The Cambodian participants will also go as a group with several Thai translators. The Thai participants will form a third group.
- iii) The group will then travel to Ban Koh Kiem where there will be a brief presentation on the fish cage culture. This will then be followed by questions from the participants.
- iv) The group will finally travel to the Mangrove Forest Ecology Research Center operated by the Royal Forest Department where a brief background overview on the function of the center will be presented. This will be followed by a walking tour of the center and questions from participants.

Time: 4 hours in total including travel time

Materials: Bring a hat, rain coat or umbrella in case of rainy weather. Participants may want to bring a note book and a camera if they have one.

Facilitator: Gowit & Yadfon staff.
Presenter: Villagers and a government officer.
Summary: One representative from Cambodia, Sri Lanka, & Thailand
Language: Thai by villagers & government officer
Translators: Sri Lanka - Chandana // Cambodia - Sophat
Thailand -

Tuesday, August 31

Session:

The Participants' Future Plans for CBCRM

Objectives:

- 1.) To find out what are the future needs, plans and strategies for participants to strengthen their CBCRM

Procedure:

- i) The group will divide into three country groups to brainstorm and discuss what they would like to do and how to achieve it.
- ii) A panel will then be formed with a representative from each country who will in turn present their ideas to the whole group.
- iii) These presentations will then be summed up noting any common plans.

Time:

1 hour - group discussion
45 mins. - 3 country presentation (3 X 15 min)
15 mins. - over all summary of future plans

Materials:

2 hours in total
flip chart paper & markers

Facilitator:

Anuradha

Presenter:

Representatives from 3 countries.

Summary:

Anuradha

Language:

All countries

Translators: Sri Lanka - Chandana // Cambodia - Sophat // Thailand -

Session:

Workshop Evaluation and Recommendations

Objectives:

To get feed back on the workshop and ideas / recommendations for the second workshop.

Procedure:

- i) An evaluation questionare in will be included in the participants kit which should be filled out after the sessions as not to forget.
- ii) A feedback discussion will be directed by a facilitator.

Time:

45 mins.

Material:

Questionarie

Facilitator:

Pisit Charnsnoh

Summary:

Pisit Charnsnoh

Languages:

All languages will be used in this session.

Translators:

Sri Lanka - Chandana // Cambodia - Sophat // Thailand -

Session:

Closing Ceremony

Procedure:

A represntative from each country will briefly say a few words on their impressions of the last 4 days workshop.

A Global View : Environmental Marine Issues

By Jim Enright

Objectives:

- 1.) To give a few examples of the global environmental crisis facing the marine and coastal regions in order to broaden the participants view.
- 2.) To give examples how NGOs and PO's linked through networks are achieving a greater capacity and effectiveness in pressuring governments not to carry out destructive projects and how they can influence government policy to support conservation.

Introduction:

Marine and coastal resources issues are really global in scope, as all marine water bodies on the planet are connected. The negative impact from one source really does effect the whole system, only it is more difficult to see farther from origin. Also the cumulative impact of many individual sources of destruction has an impact much larger than we imagine. For example when one individual throws some plastic bags and bottle waste into the water it does not appear to cause much problem. When I've confronted individuals for throwing something into the sea the person has often responded "look how big the sea it's just a piece of plastic". But when millions of individuals throughout the world throw a couple plastic items in the sea or rivers, the result is the situation we have now face that you can't go to any spot in oceans and not see plastic debris floating on the water or on the bottom. When I was on Lanta Island in Krabi province the beaches were covered in plastic and other rubbish and in discussion with local people they said it mainly comes from Malaysia. No doubt some does, but it is common phenomena to blame problems on someone else. I suppose in Malaysia the local people are saying most of the plastic trash on the beaches is from Thailand. We as individuals must start taking a much greater responsibility for the problems causing the crises on, in and under our seas.

The planet's seas and coastal regions throughout the world are facing a tremendous variety and complexity of problems. It is a very disturbing when we look at the information presented by the media, from the e-mail reports, environmentalists and the scientific community. Nearly all data points to every single issue becoming more serious and the scope of the problems in the coastal region continues to expand. The fisherfolk present here understand the local problems and issues extremely well from first hand experience, but I just want to take the opportunity to highlight several examples of global issues that will also have serious local consequences.

- ◆ **Global Warming:** Both the poles contain a huge storage of water in the form of glacial ice and just a few degree change in temperature will result in the seas rising. This process has already been occurring since the last ice age, 10,000 years ago, but now the atmosphere is warming quicker due to the high levels of carbon dioxide (CO₂) caused by burning fossil fuels and deforestation. The rising ocean water level could flood entire island countries and inundated coastal areas where most of the world's population lives. Bangkok is an example of a city which will be seriously effected, because some of it is all ready is below sea level. Storms such as hurricanes, typhoons, and cyclones will all be much more dangerous resulting in higher loss of life. Erosion of coastal areas by higher wave action will be also be very destructive. Coastal habitats will change, for example, large areas that are presently of mangrove will die due to higher water levels.

- ◆ **Coral Bleaching:** This is another major problem which results from global warming and warming of the mean sea temperature. Just an average of 1 to 3 °C increase can cause corals to turn snow white, thus the term "bleaching" 1998 saw the most serious coral bleaching occurring throughout the tropical region. This was due to the changing of ocean currents caused by the El Nino effect warming the seas in some regions. Preliminary studies show that 60-80% of the coral in the Gulf of Thailand were effected and it is still unclear if some or all of this will die. In the Maldives 90% of corals have been negatively effected. The result will be disastrous for coral reef associated fish and hundreds of other species living in, on and near coral reefs. Fish catches will further decline. The whole sports scuba diving and snorkeling tourism industry is totally depended on a healthy productive coral reef ecosystem. Tourists do not want to look at white and brown algae covered reefs. It will be like viewing a undersea nature program on black and white TV instead of in techno colour. The frightening aspect of this problem, is it seems there is little that can be done in the short term, and in the long term discontinuing the use of fossil will present the greatest challenge yet to mankind.

- ◆ **Red Tides:** Another serious problem in coastal waters is too many harmful nutrients from cites, farms and industries end up causing large algae blooms, know as red tides, due to colour of the algae species. These algae blooms essentially suffocate the marine environment robbing the water of oxygen which kills fish and shellfish. What is even more dangerous is the red tide blooms harbour a toxic phytoplankton that results in fish and shellfish being poisonous if consumed by humans. Both the size and duration of red tides have been increasing in recent years. In 1998 there were 22 red tides off China the largest was 3,125 sq. miles in size and lasted 40 days.

- ◆ **Oil Spills:** More and more oil is dumped into our marine environment with immediate and long term impacts. This oil ends up in our seas from three major sources; The drilling and exploration activities from off shore drilling rigs, from oil tanker spills, and the largest source is from people disposing of used motor oil from vehicles and from small spills fueling boats. When an oil slick ends up

on a beach or coral reef most marine life is killed and oil coated duck and turtle eggs are killed or born deformed. Many shore birds also parish and it is often only possible to save a few at the huge expense of a rescue and cleaning operation. Seagrass is very sensitive to oil and this means the 340 known marine fauna species that depend on seagrass also suffer. The entire marine ecosystem is disrupted.

- ◆ **Over Fishing:** The U.N. Food and Agricultural Organization (FAO) warns that 11 of the world's 15 most important fishing areas and 60% of the major fish species are in decline. In the Gulf of Thailand commercial trawlers were introduced in the early 1960s and by 1982, fisheries experienced an 80 percent drop in their daily catches. Thailand now harvests about 3 million tons/year from the sea, but the catch is moving down the food chain to lower quality non-target species. The result is that only 40% of the total catch is used for human consumption and 60% is trash and turned into fish meal. Thailand has probably about twice the number of trawlers operating than are needed to fish the sustainable maximum yield. Large deep-sea factory ships and drift net boats with up to 30 kms long nets have been able to sweep the ocean. Simply put, the fishing gear technology has become too efficient and there is just too much of it on our seas.
- ◆ **Shrimp Farming:** In the past 20 years intensive and extensive shrimp aquaculture as had a tremendous negative impact to the coastal regions of the tropics where this industry has established. Clearly the greatest impact has been the loss of mangrove forest and other important coastal wetland ecosystems. Many studies have shown the importance of the mangrove to a health fishery, a connection local fisherfolk have long known without the need for scientific data. An estimated 90 percent of commercial fish in the Bay of Bengal, for example, rely on healthy mangroves as a nursery for their young, while in East Africa and Sri Lanka, 95% of shrimp and marine fish live out their entire existence in coastal areas. A second major impact is the water pollution create from the fertilizers, uneaten feed, shrimp excrement, water treatment chemicals and antibiotics. This has been particular damaging in waterways and confined lagoon systems which has meant the loss of sheltered fishing areas for small scale fisherfolk during stormy weather. In some countries nearly all seed shrimp is collected in the shallow coastal water by very fine meshed hand push nets. This collection is extremely wasteful and destructive as only the shrimp larva are collected, while all others are thrown away. Finally even the drinking water supply of coastal communities has been lost from the salinization of the ground water.

In conclusion one marine scientist summed up the current state of affairs simply as

"Too much is taken from the sea and too much is put into it"

NGO Networks & Individuals Connected by E-mail Can Help Address Problems:

Many of you may be aware that I spend long hours sitting in front of a computer, but you may wonder what I do there. Most of what I do can be summed by the one word, networking, which simply means sharing information. You may also wonder what is the purpose of all this information exchange? Honestly some of it is difficult to see the results, in the short term, unlike when you go out to sea and return with some fish, crab or squid to show for your effort. There are some benefits which I would like to briefly explain and then give several examples how Yadfon has utilized our network connections to help put pressure on certain government policy.

- ◆ **Increased awareness of the cause and effect of problems:** Through the e-mail network we are connected to many groups and individuals both in the south and in the north so we can learn about coastal resources management issues in others parts of the world. We can also learn what others are doing in there local area to help solve problems. This helps us better understand local problems and find possible solutions.
- ◆ **Sharing information about local problems and issues:** Many people have come to learn about the local coastal resource, issues both problems and success through reading our e-mail letters. I've send information about local issues, such as mangroves, shrimp farming and fishing issues for others to gain a better understanding of the situation here.
- ◆ **Campaigning and Lobbying:** The e-mail network allows us to reach many groups and individuals with information on a local issue or conflict which they can use to write letters or publicize it through the media. I will give you several examples how we have used this tool which I believe helped bring about a positive outcome. Last year when the conflict was occurring, caused by shrimp farmers moving into the central plans region and other freshwater region converting productive rice land to shrimp ponds, and the salinization of land and water, we initiated a letter writing campaign. Through the networks of the Mangrove Action Project (MAP) and the Industrial Shrimp Action Network (ISA-Net) e-mail letters were requested to be sent to the Prime Minister of Thailand asking the government to ban shrimp farming from freshwater zones and this eventually was the final outcome. A second example occurred several months ago in Thailand when a large conflict developed over the destructive method of catching anchovies using bright luring lights and fine meshed nets, which also catches large numbers of immature non-target species. During the blockade of Songkhla harbour by small scale fisherfolk we requested through our e-mail network that our international friends send letters to the Prime Minister, The Minister of Agriculture and the Director General of the Department of Fisheries to ask the Thai government to ban this method of destructive fishing. This is issue is now before a government established committee, but we hope this international pressure will help to bring a positive decision.

- ◆ **Bringing People In Personal Contact:** E-mail communications is also a way we can establish contacts which can lead to visits, exchanges, and attending workshops, seminar and meetings. Many people from many countries have come to visit Yadfon and the villages we work in through e-mail contact. This "In the Hands of the Fisherfolk" workshop itself was arranged largely planned through the use of e-mail communications.