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BOBLME contract: LOA/RAP/2014/36

For bibliographic purposes, please reference this publication as:

Report of the training course on Integrated Coastal Management in the Bay of Bengal

Chonburi, Thailand
October 20-24, 2014
Executive summary

The Training Course on Integrated Coastal Management in the Bay of Bengal was conducted at Tao Thong Hotel, Burapha University, Chonburi, Thailand from October 20-24, 2014. The Sustainable Management of the Bay of Bengal Large Marine Ecosystem Project (BOBLME Project) engaged the PEMSEA Resource Facility through the Food and Agriculture Organization Regional Office for Asia and the Pacific (FAO-RAP) in the organization and conduct of the training course. The project is funded by the Global Environment Facility (GCP/RAS/236/GFF), Norway (GCP/RAS/246/NOR) and Sweden (GCP/RAS/248/SWE).

Participants of the training consisted of 25 middle level and junior level personnel from BOBLME countries, namely: Indonesia, Malaysia, Myanmar and Thailand representing the Fisheries Resource Management Department, Ministry of Environmental Conservation and Forestry, Department of Marine and Coastal Resources and from the academe. The five-day training consisted of classroom sessions, workshops and a field visit to ICM initiatives of municipalities of Saensuk and Laemchabang.

The course was structured into 5 sessions consisting of nine (9) modules including three case studies and a field visit to the municipalities of Saensuk and Laemchabang in Chonburi province.

**Session I** on the ICM Concept, Principles and Elements of Integrated Coastal Management discussed the importance of coastal areas and their management in East Asia, and the urgency of adopting an integrated approach instead of traditional sectoral approaches to effectively and efficiently sustain their development. It consists of three modules (module 1-3): first, on the Concept, Principles, Framework and Processes of ICM; second on the Framework for Sustainable Development of Coastal Areas; and third, on the Concept, Principles and Process of Ecosystem based Approach to Fisheries Management.

**Session II** on ICM Program Development and Implementation Cycle provided the participants with an in-depth discussion of the individual stages of the ICM cycle. It consists of five modules as follows: Module 4 on the Overview of the ICM Program Development and Implementation Cycle, Module 5 on Preparing and Initiating an ICM Program, Module 6 on Developing Strategies and Action Plans and Adopting an ICM Program, Module 7 on Implementing and Managing an ICM Program and Module 8 on The Next ICM Cycle: Refining and Consolidating. It helped the participants gain better understanding and appreciation of the process-driven and holistic nature of the cycle as well as the requirements for each stage.

**Session III** on the ICM Site Field Visit allowed participants to observe the practical application of the principles, framework, and concepts discussed in the previous modules through the field visit. The field visits to Saensuk municipality provided the participants a venue to interact and gain first-hand information from ICM program implementers and to examine the ground-level processes, systems, and activities in the implementation of ICM governance systems and sustainable development programs.

**Session IV** on the Indicators of Good Practice in ICM Implementation provided the participants with a better understanding on the ICM dynamics, how the governance elements and implementation of management programs were strengthened through the ICM process.

**Session V** on Action Planning provided the participants an opportunity to discuss good practices, lessons learned and challenges in ICM implementation as observed from the field visits and apply the key concepts and elements in initiating and implementing an ICM program through the development of an action plan.

The training enhanced knowledge and understanding of participants on integrated coastal management (ICM). In general, the participants indicated that the training course met their expectations and would help them in their respective work related to coastal resources management particularly in promoting sustainable fisheries management. The training also enabled
the participants from the academe to gain a better understanding on their roles, and the required scientific support to effectively implement ICM.

Key outcomes of the training include: a) deeper appreciation and understanding of ICM as a framework, its principles and important elements, the process, the realities and challenges as well as strategies needed to implement ICM; b) recognition of ICM as an essential and effective approach to provide needed solutions to complex coastal problems and to realize sustainable development of coastal areas, c) better understanding on how ICM can complement fisheries management, d) recognition of the need for local government support in ICM implementation and the role that each sector has to play in ICM, and e) realization on the benefits of ICM.
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Acronyms used

AFDEC Andaman Fisheries. Development Centre
BOBLME Bay of Bengal Large Marine Ecosystem
CCRMS Centre for Coastal Resources Management Studies
DMCR Department of Marine and Coastal Resources
EAFM Ecosystem Approach to Fisheries Management
EEZ Exclusive Economic Zone
FAO Food and Agriculture Organisation
ICM Integrated Coastal Management
IMCRM Institute for Marine Coastal Resources Management of Padang
IMO International Maritime Organisation
MPA Marine Protected Area
NTF National Task Force
PCC Program Coordinating Committee
PEMSEA Partnerships in Environmental Management for the Seas of East Asia
RAP Region Asia-Pacific
SDCA Sustainable Development of Coastal Areas
SOC State of Coast
1. **Date and venue**

The Training Course on Integrated Coastal Management in the Bay of Bengal was conducted from October 20-24, 2014 at Tao Thong Hotel, Burapha University, Chonburi, Thailand. Field visits were conducted at the municipalities of Saensuk and Laemchabang, Chonburi province, Thailand.

2. **Course objectives and approaches**

2.1. **Objective**

The training aimed to provide participants with a better understanding of the ICM framework and processes which can be employed as a useful methodology to promote sustainable development of coastal areas and how it supports the application of ecosystem-based approach to fisheries management. Designed for middle level and junior level coastal management practitioners in BOBLME participating countries, the 5-day training was aimed to:

1. Enhance the participants’ knowledge and skills on the ICM concept, framework, processes and practices and ecosystem approach to fisheries management;
2. Familiarize the participants with the Framework for Sustainable Development of Coastal Areas through ICM implementation; and
3. Enable participants to develop a road map and action plan for initiating an ICM program in the respective localities.

The training consisted of classroom sessions, workshops and field visits to ICM sites in the province of Chonburi, Thailand.

2.2. **Course expectations**

Upon course completion, participants were expected to:

1. Understand and appreciate the basic concepts and principles of ICM as a governance strategy for sustainable development of coastal areas;
2. Explain the essential elements of the Framework for Sustainable Development of Coastal Areas (SDCA) through ICM implementation emphasizing on the governance elements;
3. Understand how ICM supports the application of an ecosystem approach to fisheries management;
4. Discuss the ICM program development and implementation cycle including activities, requirements and outputs on each stage;
5. Share their experiences and good practices in ICM implementation;
6. Prepare a plan of action for developing and initiating an ICM program in their respective localities or an action plan to strengthen ICM implementation in respective localities.
2.3. **Course design and approaches**

- The course reviewed the basic principles, framework, and processes of ICM implementation based on PEMSEA’s 20 years of experience;
- Key components of the Framework for Sustainable Development of Coastal Areas reinforced by experiences from various ICM programs in the East Asian region were discussed;
- An overview of the concept, principles and process of ecosystem approach to fisheries management application were discussed;
- Case examples and application of the various tools and methodologies utilized at different stages of the ICM program development and implementation cycle were presented;
- Case studies/best practices on the experiences and lessons learned from PEMSEA ICM sites and other coastal management programs were provided;
- Field observations to ICM sites were conducted;
- Action plans on initiating an ICM program on specific sites in BOBLME countries were formulated.

3. **Training course program**

The course was structured into 5 sessions consisting of nine (9) modules including three case studies and a field visit to the municipalities of Saensuk and Laemchabang in Chonburi province.

Session I on the ICM Concept, Principles and Elements of Integrated Coastal Management discussed the importance of coastal areas and their management in East Asia, and the urgency of adopting an integrated approach instead of the traditional sectoral approaches to effectively and efficiently sustain their development. It consists of three modules (module 1-3): first, on the Concept, Principles, Framework and Processes of ICM, second on the Framework for Sustainable Development of Coastal Areas; and third, on the Concept, Principles and Process of Ecosystem based Approach to Fisheries Management.

Session II provided the participants with an in-depth discussion of the individual stages of the ICM program development and implementation cycle (modules 4–8). It helped the participants gain better understanding and appreciation of the process-driven and holistic nature of the cycle as well as the requirements for each stage.

The discussion on each stage of the cycle focused on key activities and outputs and tools that will assist ICM practitioners in developing and implementing an ICM program. Practical issues were discussed and lessons learned from various ICM sites were presented and discussed.

Session III on the ICM Site Field Visit allowed participants to observe the practical application of the principles, framework, and concepts discussed in the previous modules.

The field visits to Saensuk municipality provided the participants a venue to interact and gain first-hand information from ICM program implementers and to examine the ground-level processes, systems, and activities in the implementation of ICM governance systems and sustainable development programs.

Session IV on the Indicators of Good Practice in ICM Implementation provided the participants with a better understanding on the ICM dynamics, how the governance elements and implementation of management programs were strengthened through the ICM process.
Session V on Action Planning provided the participants an opportunity to discuss good practices, lessons learned and challenges in ICM implementation as observed from the field visits and apply the key concepts and elements in initiating and implementing an ICM program through the development of an action plan.

The detailed training schedule is presented in Appendix I.

4. Training materials and references

The following materials were used as reference for the training:

1. Chua Thia Eng. 2006. The Dynamics of Integrated Coastal Management: Practical Applications in the Sustainable Coastal Development in East Asia
5. PEMSEA. 2007. Securing the Future through ICM: The Case of the Batangas Bay Region
6. PEMSEA. 2006. Xiamen. An ICM Journey

Reading materials on 1) A Tale of Two Initiatives: Integrated Coastal Management in Xiamen and Batangas Bay Region and 2) Utilizing Science in Advancing Marine Ecosystem-based Management, were also provided to participants.

A training kit containing the detailed training schedule, PowerPoint presentations of all lectures, and reading materials were provided to participants.

Seven (7) training posters on the ICM Cycle, the Sustainable Development of Coastal and Marine Areas (SDCA) Framework and various ICM Tools were also displayed inside the training room to enhance participants’ learning and understanding.

5. Training participants, lecturers, resource speakers, and training secretariat

The training course was attended by 25 participants representing the Fisheries Resource Management Department, Ministry of Environmental Conservation and Forestry, Department of Marine and Coastal Resources and the academe from four BOBLME countries, namely Indonesia, Malaysia, Myanmar and Thailand. Eight out of the twenty five participants are female.

Lecturers and resource speakers consisted of the PEMSEA Regional and National Task Force for ICM, namely: Ms Cristine Ingrid Narcise (ICM Regional Task Force - PEMSEA Resource Facility), Dr Luky Adrianto, (ICM Learning Center–Indonesia/CCRMS Bogor Agricultural University), Dr Praparsiri Barnette (Chonburi ICM Learning Network, Burapha University), and Mr Narongchai Kunplome (Mayor of Saensuk Municipality) and Ms Nisakorn Wiwekwin, (ICM National Task Force/ICM Coordinator-Saensuk Municipality).

The list of participants, lecturers, resource speakers and facilitators is presented in Appendix II.
6. Highlights of the training

6.1. Opening ceremony

The Opening Ceremony was attended by Mr. Vitaya Khunplome, Chief Executive of Chonburi Provincial Administration Organization, Dr. Ekarak, Dean, Faculty of Science, Burapha University and Ms. Ratana, Director, Public Health and Environment of Saensuk Municipality. In his opening message, Mr. Vitaya emphasized that a key contribution of the ICM program to marine and coastal management in Chonburi is the establishment of a coordinating mechanism which enabled local governments and various stakeholders to collaborate in addressing issues and concerns affecting its coasts and marine resources. He further stressed the importance of local government commitment to implementing the common strategy and action plans in terms of allocation of financial, human and material resources.

An introduction on the Bay of Bengal Large Marine Ecosystem (BOBLME) Project was presented by Mr. Muralidharan Chavakat, Project Manager, BOBLME. The presentation explained the project objectives, activities and five major components of the BOBLME regional programme. The BOBLME Project has eight participating countries, namely: Maldives, India, Sri Lanka, Bangladesh, Myanmar, Thailand, Indonesia and Malaysia. The countries are committed to work together in a coordinated programme of action designed to improve the lives of the coastal populations through improved regional management of the Bay of Bengal environment and its fisheries. He also discussed salient features of the Transboundary Diagnostic Assessment and the Strategic Action Plan of the BOBLME participating countries.

6.2. Training schedule

Although there was a slight deviation from the schedule on the first day, the time allotted for each module was followed in the succeeding days. All modules were covered, complemented with open discussions with participants.

6.3. Lecturers

The lecturers’ exposure and experience in ICM implementation in various ICM sites in the East Asian Seas region facilitated the discussion on practical issues in ICM implementation and their solutions, particularly in the BOBLME countries. Lecturers were able to provide specific examples of interventions on some of the challenges in ICM implementation, from various ICM sites with different government systems, levels of capacity and local conditions. For example, the implementation of ICM in China and Vietnam are faster given a centralized system of governance as compared to other countries.

6.4. Summary of lectures and discussions

Each country was assigned to provide the summary of lectures and discussions from day 1 to 5, thereby giving them an opportunity to present their understanding of the lectures and discussions and to raise some questions relating to the lectures. Through this approach, the lecturers were able to assess participants’ level of understanding on the various modules that were discussed.

6.5. Open discussions

Questions raised during the open discussions included strategies for gaining political support, how to change perception of decision-makers to support ICM, how to start an ICM program, how to ensure sustainability of the program, among others. The ICM study tour program for local chief executives and senior government officials was cited as one of the most effective strategy for gaining political support and for changing the mind set of decision-makers from a sectoral approach to an integrated approach to coastal and resource management. Examples
of private sector involvement in ICM through the experience of Batangas and Bataan, Philippines were presented to emphasize on how an ICM program can be sustained. The participants were also encouraged to share their experiences in coastal management in their respective countries.

6.6. Case studies

Case studies on ICM implementation in Chonburi and Batangas provided the participants with specific examples on how the ICM framework and processes were applied in addressing different environmental issues and concerns in different political systems and geographical and administrative scope, the contributing factors for the successful implementation of an ICM program and the challenges that the sites were encountering during its implementation. It was highlighted that local government leadership and support were key factors to successful implementation of an ICM program. The details on good practices and lessons learned from the case studies in Chonburi and Batangas are discussed in section 6.8 below.

6.7. Field visit

The field visit to Saensuk municipality provided participants an opportunity to meet and interact with stakeholders, particularly with Mayor Narongchai Khunplome who has shown leadership and strong commitment to ICM implementation. The Integrated Coastal Erosion Management Program was highlighted in his presentation. He stressed that various options for an integrated coastal erosion management program were developed through the conduct of scientific studies. These studies helped in obtaining support from various stakeholders. Thus, the importance of scientific support in the implementation of management programs was emphasized. It was also stressed that the local government of Saensuk have very limited budget. Therefore, the mayor underscored the need to tap additional funding sources from national government agencies and the private sector. Examples of funding sources that were tapped are the Department of Marine and Coastal Resources and the Marine Department, in the conduct of environmental impact assessment and feasibility study on the appropriate design of the infrastructure that will be constructed to address coastal erosion in Saensuk. On the other hand, private sector expertise particularly the oil companies are tapped in the development of an oil spill logistical and operational plan for Saensuk municipality.

As a result of the presentation and discussions, participants recognized that an ICM program should obtain local government commitment and should provide an enabling mechanism to promote partnerships among various stakeholders. Leadership was also recognized as an important element in ICM implementation.

The field visit to Laemchabang port discussed the Green Port initiative including the installation of wind energy facility to promote a low carbon operation in the port, use of electricity in cargo handling operation and introduction of rail transport as an alternative to trucks to reduce air emissions in port areas. Mr Yuttana emphasized that the port is complying with the requirements of international regulations such as the IMO international convention relating to the prevention of marine pollution from ships and handling of dangerous cargoes in ports.

6.8. Exercise on good practices in ICM implementation

The objective of the workshop was to identify good practices from the case studies on ICM implementation in Batangas, Philippines and Chonburi, Thailand. Participants were grouped per country with Thailand having 2 groups and were given the following questions to discuss:

1. What were the good practices that you have learned from the ICM Implementation in Batangas (Philippines) and Chonburi (Thailand)?
2. Which of these good practices can be applied to your country?
3. What do you think are the challenges in implementing ICM in your country? Identify recommendations to address the challenges.

Results of discussions presented in the plenary were as follows:

Thailand
Chonburi had a well defined vision, good network with other organizations, had access to scientific data as reference to developing management programs. Financing was sourced both from own budget of the local government as well as from national government.

The strength of Batangas is on their approach to replication and scaling up. It demonstrated a high level of stakeholder awareness. Stakeholder awareness and understanding on ICM is essential in starting an ICM program. The need to establish a framework and timeline for activities was emphasized. It should be noted that adaptive management should be practiced in ICM implementation. This means that a good practice in one site does not necessarily result as a good practice in another site as they may have different level of capabilities.

Considering that the Department of Marine and Coastal Resources (DMCR) of Thailand have a lot of data, the institution can help in providing the data and information needed for the development and implementation of ICM. DMCR can provide a strong scientific support to ICM program in the provinces.

Myanmar
Chonburi ICM program is strong in terms of scientific support and shows how the academe can be mobilized to assist the local government in identifying options for a management program.

In Myanmar, ICM concepts, approaches and good practices can be applied to fisheries and waste management programs.

Malaysia
Chonburi ICM program demonstrated a strong leadership, strong commitment and cooperation between agencies. Scientific support is very evident.

The establishment of a local government environmental laboratory with sustainable financing mechanism is a good practice that can be implemented in other ICM sites. The institutionalization and mobilization of “bantay dagat” undertaking enforcement functions is a good initiative.

The establishment of a multi-sectoral/inter-agency Program Coordinating Committee (PCC) helps address the issue of lack of coordination among agencies/sectors. Change of administration and government bureaucracy is seen as a challenge in any ICM program.

Indonesia
Chonburi ICM program demonstrated a strong leadership. It also shows how ICM was introduced as a tool for addressing emerging issues or social issues. Sustainable financing mechanism was emphasized through partnership with international organizations, national government and the private sector. Access to scientific support helps in the decision making
process of the local government. Networking between or among scientists and the scaling up of ICM program from 5 to 99 municipalities is quite impressive. These good practices can be applied to Indonesia with special focus on information and education campaign for students and capacity building for government officials and legislators.

6.9. **Action planning**

Participants were grouped per country and were asked to identify a potential site in respective countries for ICM implementation. Activities for initiating an ICM program were identified including strategies for undertaking such activities. It was difficult to prepare a detailed action plan including the timeframe since participants lack the necessary data/information of the proposed ICM site such as environmental profile of the site, key stakeholders to be involved in the program. Below is the summary of the plenary session on action planning:

The outputs of the action planning exercise are attached as Appendix III, Appendix IV, Appendix V, Appendix VI, and Appendix VII.

<table>
<thead>
<tr>
<th>Country</th>
<th>ICM Site</th>
<th>Multi uses</th>
<th>Action proposed</th>
<th>ICM Champion</th>
<th>Notes for action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Sabang Island District</td>
<td>Conservation, economic zone, fisheries, port</td>
<td>Coordination mechanism, institutional arrangement</td>
<td>Mayor</td>
<td>ICM framework</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Langkawi Island</td>
<td>Fisheries, port, tourism</td>
<td>Stakeholder awareness, zoning</td>
<td>Assemblyman</td>
<td>ICM and EAFM using ICM framework</td>
</tr>
<tr>
<td>Myanmar</td>
<td>Taninthary Coastal Area</td>
<td>MPA, tourism, economic special zone</td>
<td>Stakeholder consultation, capacity development, zoning</td>
<td>Governor, Central Government?</td>
<td>ICM framework</td>
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<tr>
<td>Thailand BOBLME</td>
<td>Sarai Island</td>
<td>Fisheries, conservation</td>
<td>Communication</td>
<td>Mayor</td>
<td>EAFM using ICM framework</td>
</tr>
<tr>
<td>Thailand PEMSEA</td>
<td>Chatanburi Province</td>
<td>Fisheries, shrimp pond, tourism, economic activities</td>
<td>Communication</td>
<td>Governor</td>
<td>ICM framework</td>
</tr>
</tbody>
</table>

7. **Evaluation**

7.1. **Course objectives and content**

Majority or fifty six percent (56%) of participants concluded that the objectives of the course were **fully achieved** and forty four percent (44%) concluded that it was **somewhat achieved**. They considered all topics as relevant and suggested to include co-management approach and additional modules on fisheries management.

In terms of usefulness and relevance of the exercises and group work, fifty two percent (52%) of participants rated it as **generally useful** and forty four percent (44%) evaluated it as **very useful**, and only one (1) participant concluded that it was **somewhat useful**.

In general, the participants felt that the training course met their expectations and would help them in their respective works related to ICM such as in promoting sustainable fisheries
management and in providing scientific support to ICM. For participants from the academe, the training encouraged them to do more research and studies related to ICM.

Key outcomes of the training include: a) deeper appreciation and understanding of ICM as a framework, its principles and important elements, the process, the realities and challenges as well as strategies needed to implement ICM; b) recognition of ICM as an essential and effective approach to provide needed solutions to complex coastal problems and to realize sustainable development of coastal areas, c) better understanding on how ICM can complement fisheries management, d) recognition of the need for local government support in ICM implementation and the role that each sector has to play in ICM, and e) realization on the benefits of ICM.

7.2. Lecturers and training materials

Generally, participants rated the lecturers excellent and outstanding. On the training materials, fifty two percent (52%) rated the materials as very useful while twenty six percent (26%) rated them generally useful. Twenty one percent (21%) of the participants rated the materials as somewhat useful. Participants suggested that the hand-out should only have 2 slides per page to make it more readable.

Majority of participants (60%) rated the PowerPoint presentations very useful and twenty four percent (24%) as generally useful. Only one participant rated them as somewhat useful.

For the reading materials, sixty percent (60%) rated them as very useful, twenty six percent (26%) as generally useful and thirteen percent (13%) as somewhat useful.

7.3. Organization, coordination and training facilities

Over-all coordination of training activities was rated as outstanding. Sixty four percent (64%) of the participants rated the lectures as excellent, while forty percent (40%) of participants rated the field visit as outstanding and forty (40%) rated travel arrangements as excellent.

Fifty six percent (56%) rated the training coordinator as outstanding. Thirty two percent (32%) of participants rated lodging as outstanding and twenty eight (28%) percent as average. Food and catering was rated as average by forty percent (40%) of participants with thirty six percent (36%) rating it as outstanding.

For training facilities, most of the participants rated the lecture room, audio visual equipment and training aids as excellent and outstanding.

8. Conclusions and recommendations

Based on participants’ evaluation of the course, the ICM Training Course in the Bay of Bengal achieved the main objectives set and majority of the participants’ expectations were met.

Likewise, training participants offered the following recommendations to improve future ICM training initiatives:

1. BOBLME to increase activities relating to ICM in the coming year to achieve sustainable resource management in participating countries.
2. More ICM training is requested and to be held regularly.
3. Continue with the conduct of ICM training and improve the course by adding a visit to other successful ICM sites and to have discussions with stakeholders.
4. Continue to build ICM capacity to concerned people/stakeholders.
5. Include local government leaders in ICM training and organize a camp for all potential ICM champions;
6. Training course duration to be extended since the current schedule is quite intense;
7. Include a lecture on “indicators” to determine a successful ICM program taking into consideration the budget invested into the program;
8. Translate the training manual into local language; and
9. Some modification on the ICM framework to include impact of activities on coastal areas.

In addition, PEMSEA as the training provider suggests the following:

1. For regional training, organizers must ensure that participants are proficient in the English language to achieve the desired outcome of the training;
2. Training participants should include local government personnel and other key stakeholders who will be directly involved in the development and implementation of ICM program of potential ICM sites;
3. To ensure immediate application of ICM knowledge gained from the training, participants should have a key role in the ICM project of potential ICM sites;
4. Action planning is more effective if the area to be covered with ICM has been identified prior to the training and initial data of the site is available.
Appendix I

**Agenda**

DETAILED TRAINING SCHEDULE

TRAINING COURSE ON INTEGRATED COASTAL MANAGEMENT
FOR THE BAY OF BENGAL
Tao Thong Hotel, Burapha University, Chonburi, Thailand
October 20-24, 2014

<table>
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<tr>
<th>TRAINING SCHEDULE</th>
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<tr>
<td>Oct 19, Sunday</td>
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<td>Oct 20, Monday</td>
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<td>12:00 –1:00</td>
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<td>1:00 – 3:00</td>
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### Areas (Ms Ingrid Narcise, Country Programme Manager, PEMSEA)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Facilitator</th>
</tr>
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<tbody>
<tr>
<td>3:00 – 4:30</td>
<td>Module 3. Concept and Principles and Process of Ecosystem Approach to Fisheries Management (Dr Luky Adrianto)</td>
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<tr>
<td>4:30 – 5:00</td>
<td>Open Discussion #1. Why ICM?</td>
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<tr>
<td></td>
<td>▪ What drives the development of ICM?</td>
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<td>▪ ICM and EAFM as complementary approaches to coastal resource management</td>
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<td></td>
<td>▪ What makes multi-sectoral and multi-disciplinary mechanisms and process possible?</td>
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<td></td>
<td>▪ Is it possible to achieve integration and coordination in coastal management? How?</td>
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<tr>
<td>Facilitator: (Dr Luky Adrianto)</td>
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Oct 21, Tuesday

### Session II: ICM Program Development and Implementation

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
<th>Facilitator</th>
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<tbody>
<tr>
<td>8:30 – 9:00</td>
<td>Recap of Previous Days Discussion</td>
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<tr>
<td>9:00 – 10:00</td>
<td>Module 4. ICM Program Development and Implementation Cycle (Dr Luky Adrianto)</td>
<td></td>
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<tr>
<td>10:00 – 10:15</td>
<td>TEA BREAK</td>
<td></td>
</tr>
<tr>
<td>10:15 – 11:30</td>
<td>Module 5. Preparing and Initiating an ICM Program (Ms Ingrid Narcise)</td>
<td></td>
</tr>
<tr>
<td>11:30 – 12:00</td>
<td>Open Discussion #2 : Challenges in Initiating an ICM Program</td>
<td>(Dr Luky Adrianto)</td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td>LUNCH BREAK</td>
<td></td>
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<tr>
<td>1:00 – 3:00</td>
<td>Module 6. Developing Strategies and Action Plans and Adopting an ICM Program (Ms Ingrid Narcise)</td>
<td></td>
</tr>
<tr>
<td>3:00 - 3:15</td>
<td>TEA BREAK</td>
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<tr>
<td>3:15 – 4:30</td>
<td>Module 7. Implementing and Managing an ICM Program (Dr Luky Adrianto)</td>
<td></td>
</tr>
<tr>
<td>4:30 – 5:00</td>
<td>Module 8. The Next ICM Cycle: Refining and Consolidating (Ms Ingrid Narcise)</td>
<td></td>
</tr>
<tr>
<td>5:00 - 5:30</td>
<td>Presentation on ICM Implementation in Chonburi: Strategies, Achievements and Impacts (Ms Nisakorn Wiwekwin, PCC)</td>
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</tr>
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</table>
### Oct 22, Wednesday

#### Session III: ICM Site Field Visit

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 8:30</td>
<td>Departure to the Mayor’s Office of Saensuk Municipality</td>
</tr>
<tr>
<td>8:45 - 9:30</td>
<td>Presentation on <em>Integrated Coastal Erosion Management in Saensuk Municipality</em> (Mayor Narongchai Kunplome, Saensuk Municipality)</td>
</tr>
<tr>
<td>9:30 - 11:00</td>
<td>Tour at Bangsaen Beach/ Interaction with Stakeholders</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
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<tbody>
<tr>
<td>11:00 - 12:30</td>
<td>LUNCH BREAK</td>
</tr>
<tr>
<td>12:30 - 1:30</td>
<td>Travel to Laemchabang Port</td>
</tr>
</tbody>
</table>
| 2:00 – 4:00 | • Presentation on *Enhancing Environmental Performance through the Implementation of Port Safety Health and Environmental Management System* (Lt. Sutthinan Hatthawong, Managing Director, Laemchabang Port)  
  • Facility Tour                        |
| 4:00 - 4:30 | Travel to Hotel                                                            |

### Oct 23, Thursday

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>8:30 - 9:30</td>
<td>Module 9. Setting the Baseline Through the State of the Coasts Reporting (Dr Luky Adrianto)</td>
</tr>
<tr>
<td>9:30 - 10:30</td>
<td>Exercise #1 SOC Reporting System</td>
</tr>
<tr>
<td>10:30 – 10:45</td>
<td>TEA BREAK</td>
</tr>
</tbody>
</table>
| 10:45 – 12:00 | Case study #1: *Scientific Support to ICM Implementation in Chonburi* (Dr Praparsiri Barnette, PEMSEA NTF)  
  • application of scientific tools to strengthen ICM implementation  
  • scientific advise to support ICM implementation  
  • establishment and mobilization of the ICM learning network  
  • networking with international scientific institutions |
| 12:00 - 1:00 | LUNCH BREAK                                                                |
| 1:00 - 2:00 | Case study #2: *ICM Implementation in Batangas* (Ms Ingrid Narcise)         |
| 2:00 - 3:00 | Exercise #2: Good Practices in ICM Implementation                          |
1) Identify good practices from the ICM Implementation in Batangas and Chonburi
2) Which of these good practices can be applied to your ICM program?
3) What do you think are the challenges in implementing ICM in your locality?

**Facilitator:** Ms Diana Factuar

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Aims</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00 – 3:15</td>
<td>TEA BREAK</td>
</tr>
<tr>
<td>3:15 - 4:00</td>
<td>Open Discussion #3: How ICM can be applied to facilitate ecosystem approach to fisheries management?</td>
</tr>
<tr>
<td>4:00 – 4:30</td>
<td>Recap of the Day’s Discussion</td>
</tr>
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</table>

**Oct 24, Friday**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session V: Action Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 10:00</td>
<td>Workshop #3: Developing the Road Map or Action Plan</td>
</tr>
<tr>
<td></td>
<td>1) Preparing and Initiating an ICM Program Development and Implementation, or</td>
</tr>
<tr>
<td></td>
<td>2) Developing an Action Plan for Strengthening ICM Implementation in the respective localities</td>
</tr>
<tr>
<td>10:00 – 10:15</td>
<td>TEA BREAK</td>
</tr>
<tr>
<td>10:15 - 12:00</td>
<td>Presentation of Workshop Outputs</td>
</tr>
<tr>
<td></td>
<td>Panelists: Dr Luky Adrianto, Ms Ingrid Narcise, Ms Diana Factuar</td>
</tr>
<tr>
<td>12:00 - 1:00</td>
<td>LUNCH BREAK</td>
</tr>
<tr>
<td>1:00 - 2:00</td>
<td>Summary and Course Evaluation</td>
</tr>
<tr>
<td></td>
<td>(Ms Diana Factuar)</td>
</tr>
<tr>
<td>2:00 - 3:00</td>
<td>Closing Ceremony</td>
</tr>
</tbody>
</table>
# Appendix II  List of participants

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of participant</th>
<th>Position/Name of Organization/Address/e-mail</th>
</tr>
</thead>
</table>
| Indonesia | 1. Ms Sofi Chullatus Sofia | Head of Asst. Deputy Fisheries Resources Mgmt to Identification of EEZ and High Seas  
Directorate of Fisheries Resource Management  
Directorate General of Capture Fisheries  
Ministry of Marine Affairs and Fisheries  
Jl Medan Merdeka Timur 16  
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|         | 2. Ms Zainab Tahir          | Underwater Heritage Analyst  
Directorate General of Marine, Coasts and Small Islands  
Ministry of Marine Affairs and Fisheries  
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|         | 3. Mr Andry Indryasworo Sukmoputro | Head,  
IMO  
(IMCRM-Padang)  
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|         | 4. Mr Chairul Anwar         | Head f Assistant Deputy for Fisheries Resources Management in Territorial Seas  
Directorate of Fisheries Resource Management  
Directorate General of Capture Fisheries  
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Tel: +628161605080 |
<table>
<thead>
<tr>
<th>Country</th>
<th>Name of participant</th>
<th>Position/Name of Organization/Address/e-mail</th>
</tr>
</thead>
</table>
|        | **5. Mr Taufik Ashari**   | Staff of Functional Statistics  
Subdivision of Data and Statistics  
Directorate of Fisheries Resource Management  
Directorate General of Capture Fisheries  
Ministry of Marine Affairs and Fisheries  
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| Malaysia | **6. Mr Mohd Amin Ghazali** | Principle Assistant Director  
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|         | **9. Mr Mohd Redhvan Bin Arif** | Marine Park Officer  
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Putrajaya, Malaysia  
Tel: +60-17-6964264  
Email: redhvan@nre.gov.my |
<table>
<thead>
<tr>
<th>Country</th>
<th>Name of participant</th>
<th>Position/Name of Organization/Address/e-mail</th>
</tr>
</thead>
</table>
|         | **10. Ms Choo Poh Leem**    | Team Leader  
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WorldWide Fund for Nature- Malaysia  
Suite 1-6-W11, 6th floor, CPS Tower, Jalan Centre Point 88800  
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| Myanmar | **11. Ms Thuzar Htun**      | Deputy Assistant Fishery Officer  
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<table>
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<tr>
<th>Country</th>
<th>Name of participant</th>
<th>Position/Name of Organization/Address/e-mail</th>
</tr>
</thead>
</table>
| Thailand| **16. Ms Suphalak Ruaylap** | Fisheries Biologist  
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kunkeng2524@hotmail.com |
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Fax/Tel: 66871051081/ +66 3449 7073-4  
Email: phaothep1313@hotmail.com |
<table>
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<tr>
<th>Country</th>
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<th>Position/Name of Organization/Address/e-mail</th>
</tr>
</thead>
</table>
|         | 22. Mr Aphisit Wongpromcharoen | Forestry Technical Officer  
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Tambon Thapradu  
Amphoe Muang, Rayong Province 21000  
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|         | 23. Ms Thamon Satayatham | Environmentalist  
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Email: porpla3003@gmail.com |
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|         | 26. Dr Luky Adrianto | Director  
Center for Coastal and Marine Resources Studies Bogor Agricultural University, Indonesia/PEMSEA Regional Task Force  
Email: lukyadrianto@pksplipb.or.id; lukyadrianto@gmail.com  
Tel: +62-81314288865 |
|         | 27. Ms Cristine Ingrid Narcise | Country Programme Manager  
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cinarcise@pemsea.org  
Tel: +63-09228691822 |
<table>
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<th>Position/Name of Organization/Address/e-mail</th>
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<tbody>
<tr>
<td></td>
<td>28. Mr Narongchai Khunplome</td>
<td>Mayor  &lt;br&gt;Saensuk Municipality  &lt;br&gt;Chonburi Province</td>
</tr>
<tr>
<td></td>
<td>29. Dr Praparsiri Barnette</td>
<td>Head of the Department of Aquatic Science  &lt;br&gt;Faculty of Science, Burapha University  &lt;br&gt;Chonburi 20131, Thailand  &lt;br&gt;Advisory Committee of the Chonburi ICM Program Office (66 38) 745-900 Ext. 3093, Fax (66 38) 393-491  &lt;br&gt;email: <a href="mailto:praparsi@buu.ac.th">praparsi@buu.ac.th</a>, <a href="mailto:mayschonicm@yahoo.com">mayschonicm@yahoo.com</a></td>
</tr>
<tr>
<td></td>
<td>30. Ms Nisakorn Wiwekwin</td>
<td>ICM Coordinator  &lt;br&gt;Saensuk Municipality/  &lt;br&gt;PEMSEA National Task Force (ICM)  &lt;br&gt;Email: <a href="mailto:nisakorn.w@hotmail.com">nisakorn.w@hotmail.com</a>  &lt;br&gt;Tel: +66-818636544/ +66 813571995</td>
</tr>
<tr>
<td>Organizers</td>
<td>31. Mr Chavakat Muralidharan</td>
<td>Project Manager, BOBLME  &lt;br&gt;Phuket, Thailand  &lt;br&gt;<a href="mailto:chavakat.muralidharan@boblme.org">chavakat.muralidharan@boblme.org</a></td>
</tr>
<tr>
<td></td>
<td>32. Ms Diane Factuar</td>
<td>Training Coordinator  &lt;br&gt;Partnerships in Environmental Management for the Seas of East Asia  &lt;br&gt;PEMSEA Office Building  &lt;br&gt;DENR Compound, Visayas Avenue  &lt;br&gt;Quezon City  &lt;br&gt;Email: <a href="mailto:dfactuar@pemsea.org">dfactuar@pemsea.org</a>  &lt;br&gt;Tel: +63-09157101972</td>
</tr>
<tr>
<td>Local Secretariat</td>
<td>33. Mr Arkom Yangnok</td>
<td>Staff  &lt;br&gt;Saensuk Municipality</td>
</tr>
<tr>
<td></td>
<td>34. Ms Pumarin Deesong</td>
<td>Staff  &lt;br&gt;Saensuk Municipality</td>
</tr>
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</table>
Appendix III  Indonesia presentation

The Initiation of ICM in the Bay of Bengal Large Marine Ecosystem areas in Indonesia

Indonesian Team:
Andry I. Sukmaputro
Chairul Anwar
Sofi C. Sofia
Taufik
Zainah Tahir

The Bay of Bengal Large Marine Ecosystem (study area in blue). Map provided by the Sea Around Us Project, 2010.
The BOBLME areas cover 4 provinces in the western part of Sumatera, Indonesia:

1. Nanggroe Aceh Darussalam
2. North Sumatra
3. West Sumatra
4. Riau Province
Proposed location for ICM initiation in the BOBLME areas is,

Sabang Island

Sabang is a municipality, within Nanggroe Aceh Darussalam province, off the northern tip of Sumatera. It consists of 5 main islands (Weh, Klah, Rubiah, Seulako and Rondo) and several smaller islands.
Why Sabang...

1. High biological diversity (e.g. the coral reefs around Weh teem with a great diversity of fish species. The island’s water are areas of whale sharks, manta rays, dolphins and reef sharks and sea turtles).

2. Sabang is also rich in reef fishes biodiversity and abundance (Rudi et al. 2009). Allen & Adrim (2003) reported six endemic fish species from Sabang waters

3. Rapid development of tourism industry

4. Fisheries activity

5. Future port development
### Governance

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<th>Status</th>
<th>Details</th>
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<tbody>
<tr>
<td>Policy/strategies/Plans</td>
<td>Yes</td>
<td>Atlas of Natural Resources of Sabang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coastal strategy (qanun)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zoning system (on going)</td>
</tr>
<tr>
<td>Institutional arrangement</td>
<td>Yes/No</td>
<td>Existing traditional law (Customary marine tenure – Panglima Lao)</td>
</tr>
<tr>
<td>Legislation</td>
<td>Yes</td>
<td>National level and local level</td>
</tr>
<tr>
<td>Information/Awareness</td>
<td>No/Yes</td>
<td>Partial</td>
</tr>
<tr>
<td>Financing</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Capacity Development</td>
<td>Yes/no</td>
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### Sustainable Development Aspects

<table>
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<tr>
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<th>Status</th>
<th>Details</th>
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<tbody>
<tr>
<td>Natural and man-made hazards prevention</td>
<td>Yes</td>
<td>Disaster and risk reduction plan</td>
</tr>
<tr>
<td>Habitat protection, restoration and management</td>
<td>Yes/No</td>
<td>Requires effective implementation of zoning and management</td>
</tr>
<tr>
<td>Water use/Supply management</td>
<td>Yes</td>
<td>National level and local level</td>
</tr>
<tr>
<td>Food security</td>
<td>Yes</td>
<td>Fisheries Management Areas 571/572 (adopting EAFM?)</td>
</tr>
<tr>
<td>Pollution reduction</td>
<td>Yes/No</td>
<td>Existing national law, local (?)</td>
</tr>
</tbody>
</table>
Critical issues in Sabang Island

Degradation of the critical habitat and important coastal ecosystem (overexploitation of several fish species and coral bleaching)

The Goal

to improve the quality of life together by promoting ecological well-being
Report of the training course on Integrated Coastal Management in the Bay of Bengal

Relevant stakeholders

More influence
- Bappeda/Fisheries Unit
- University
- Local leaders

Less impacted
- NGOs
- Local community
- Tourism industry
- General public

Less influence

More impacted
- Fishers

Preparation

<table>
<thead>
<tr>
<th>Steps</th>
<th>Priorities (1 low – 6 high)</th>
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<tbody>
<tr>
<td>Project management mechanism</td>
<td>5</td>
</tr>
<tr>
<td>Work plan and budget</td>
<td>5</td>
</tr>
<tr>
<td>Training</td>
<td>4</td>
</tr>
<tr>
<td>Project monitoring system</td>
<td>3</td>
</tr>
<tr>
<td>Requirement of SoC</td>
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<tr>
<td>Interest for application of the ICM</td>
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Initiation

<table>
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<tr>
<th>Steps</th>
<th>Priorities (1 low – 5 high)</th>
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<tbody>
<tr>
<td>Develop a communication plan</td>
<td>5</td>
</tr>
<tr>
<td>Set-up Information Manag. System</td>
<td>5</td>
</tr>
<tr>
<td>Preparing SoC</td>
<td>4</td>
</tr>
<tr>
<td>Initial ERA</td>
<td>3</td>
</tr>
<tr>
<td>Prepare coastal strategy</td>
<td>2</td>
</tr>
<tr>
<td>Stakeholders consensus building</td>
<td>5</td>
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</tbody>
</table>

References


Source of pictures:
- http://2.bp.blogspot.com/
  - Dei6cU/QbF5Y5mC/AAAAAAAAta8/97YCu0OHdKU/s1600/100093729b.jpg
Terima Kasih – Salamat –
Kob Kun Kaa - cè-zù tin-ba-deh
Appendix IV  Malaysia presentation

Action Planning for ICM Site in Kuala Triang, Langkawi
Bay of Bengal Large Marine Ecosystems

Long Term Objectives of BoBME Strategic Action Plan (SAP)
Promote sustainable development of the Bay of Bengal marine region

Operational Objective

1. Fisheries issues: Reversing over-exploitation and managing renewable fish resources
   1.1 To develop measures to control and control IUU fishing
   1.2 To establish fishing zone management and local community-based resource management

2. Ecosystem and habitat issues: Restoring degraded ecosystem and habitats for sustainability
   2.1 To strengthen the management of mangrove ecosystems
   2.2 To strengthen the management of local fisheries resources
   2.3 To strengthen the management of large-scale coastal ecosystems comprising of ecology, residential, agriculture and tourism activities

   To prevent and reduce inputs of pollutants from point and sources:
   - Waste water treatment plants (sewage, industrial, domestic)
   - Sedimentation (Inland and coastal habitats)

CRITICAL ISSUES IN KUALA TRIANG, LANGKAWI

Intrusion by illegal or foreign fishing boats into their areas.
- Difficulty to access the open sea due to the silted canal
- Inconsistency in fish prices.
- Limited market to sell fish product.
- Fish resources getting less.
- Need alternative livelihood.
- Lack of knowledge in fish processing, boat building and engine repair.
- Conflict with other fishing community.
STAKEHOLDERS IN KUALA TRIANG

- Local government
- Fisherman community
- Resort and hotel operator
- Marina operator
- Tourism operator
- Enforcement agency
- Residential

EXISTING IMPACTED COMMUNITY

<table>
<thead>
<tr>
<th>Items</th>
<th>Kuala Teriang</th>
<th>Kuala Melaka</th>
<th>Kuala Chenang</th>
<th>Pantai Kok/Sg.Kok</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of fishermen</td>
<td>386</td>
<td>268</td>
<td>220</td>
<td>13</td>
</tr>
<tr>
<td>No. of KEPEP members</td>
<td>47</td>
<td>13</td>
<td>105</td>
<td>-</td>
</tr>
<tr>
<td>No. of Women Group Members</td>
<td>17</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
OBJECTIVES AND TARGETS

<table>
<thead>
<tr>
<th>Short Term Target (less than 3 years)</th>
<th>Mid Term Target (3 – 10 years)</th>
<th>Long Term Target (more than 10 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% fishing boat intrusion</td>
<td>Project adoption and implementation on local authority</td>
<td>Increase in fish resources through better management and surveillance</td>
</tr>
<tr>
<td>access to open sea and clear water way</td>
<td>Research on key areas identified</td>
<td>Improvement of community livelihood through diversification of economic activities</td>
</tr>
<tr>
<td>Public awareness on ICM</td>
<td>Training for local communities in alternative livelihood skills and fisheries related products</td>
<td>General development of area</td>
</tr>
<tr>
<td>Inter agency communication /meeting platform</td>
<td>Establish distribution system and marketing venues for coastal related products</td>
<td></td>
</tr>
<tr>
<td>Setting up steering /technical committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICM plan for state/ federal authorities/mandate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FINANCIAL RESOURCES

- Initiation: State funding
- Setting up of tourism fee for conservation fund (trust fund)
- Private sector contribution (CSR)
- Federal government fund (development fund)
- External grant (SEAFDEC/GEF/BOBLME/PEMSEA/JIRCAS)
Appendix V  Myanmar presentation

Preparing and Initiating an ICM Program
Development and Implementation
in
Myanmar

Introduction
1. **Three main Coastal areas;**
   (1) Ayayawaddy Delta
   (2) Rakhine Coastal Area
   (3) Tanintharyi Coastal Area

2. **Tanintharyi Coastal Area** is the most possible location for ICM model site.
3. (a) **The ICM initiation program**
   **Internal trigger for ICM program**
   - political issues
   - lack of adequate budget
   - poor-education of rural-people
   - lack of land-use policy of coastal area (zoning)
   - lack of adequate infrastructure and well-trained person

(b) **Relevant Stakeholders**
   - Local Government
   - Myanmar Port Authority
   - Department of Fisheries
   - Department of Forestry
   - Department of Environmental Conservation
   - Myanmar Navy
   - NGOs, INGOs and local people
(C) The Steps of Initiation of the ICM program

- to hold meetings, workshops, site visits and data analysis are led by local government
- to enact the rules and regulations for the future plans from the result of meetings
- To train different levels of stakeholders by cooperating with the technicians
- To identify the land-use plan of the coastal area (zoning)
- To cooperate and solve insufficient funding by inviting the INGOs

Thank you for your Attention
Appendix VI  Thailand–Andaman presentation

ICM in Sarai Island
Satun province, Thailand

Study areas
Sarai islands (seaweed)
community base survey since 2009 - 2012

Sighting calendar

GPS Datalogger

Dolphins were sighted by fishermen
Routes of fishing activities

- Crab net
- Hand line
- Shrimp net
- Fish trap

Reduction of fisheries resources (blue swimming crab, mackerel, mantis shrimp)

Problem

???

???

???

???
Data from community base

- Long time ago
  - 2009-2012
  - DMCR: collect data from the BIG supplier form each village

Data analysis

Villagers said: size and number of crab were reduced!!!

Local gov.

not clear

Source of problem

- Over fishing and unsuitable fishing gear
- Unsuccessful of crab bank
- Leader and gov. officer not continuous to follow up and communicate to villager
- Degraded of hatcheries and nursing areas
Expand the mesh size

Collapsible crab trap

Over fishing and unsuitable fishing gear

Over demand
+ high value

Supplier should deny the small size of crab

• Unsuccessful of crab bank

Committee not have harmony

Talk, talk, talk, talk to understanding each other
• Leader and gov. officer not continuous to follow up and communicate to villager

A lot of routine job

Find more staff or organization to cooperation work with villager directly

Sometime, leader and gov. officer need to deal with villager directly (meeting)

Degraded of hatcheries and nursing areas

Mangrove

Cut for charcoal

Plantation

Seagrass

Fisheries activities

Zoning
Follow the ICM framework in promoting sustainable fisheries mgmt

- Moderate fishing and suitable fishing gear
- Successful crab bank
- Leader and gov. officer: continued follow up and communication with villager
- More hatcheries and nursing areas

Evaluate

Successful or not
Appendix VII  Thailand–Chantaburi presentation
5 Districts of Province

Natural resources Profile of Chantaburi Province

- Mangrove area
- Seagrass beds
- Coral
- Erosion problem
Goals of Chantaburi province

- coastal area management
- Resources rehabilitation
- Mangrove rehabilitation
Current issue

- Coastal erosion
- Waste water, shrimp pond discharged, tourism facility
- Resources degradation; mangrove, coral reef
- Fisheries resources decreasing due to unsustainable fishing practice; fishing traps
- Solid waste
Mainstreaming ICM into province management plan

ICM preparation

1. Gap analysis
2. Project work plan and resources needed
3. Set up project monitoring and evaluation system
4. Assess the requirement of SOC report
ICM initiation

1. Communication plan
2. Integrated information management system
3. Prepare SOC report
4. Conduct initial environment risk assessment
5. Prepare coastal strategy
Appendix VIII Photos
Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka and Thailand are working together through the Bay of Bengal Large Marine Ecosystem (BOBLME) Project to lay the foundations for a coordinated programme of action designed to better the lives of the coastal populations through improved regional management of the Bay of Bengal environment and its fisheries.

The Food and Agriculture Organization (FAO) is the implementing agency for the BOBLME Project.

The Project is funded principally by the Global Environment Facility (GEF), Norway, the Swedish International Development Cooperation Agency, the FAO, and the National Oceanic and Atmospheric Administration of the USA.

For more information, please visit www.boblme.org