



# Bay of Bengal Large Marine Ecosystem Project



## Report of the ICM best practices Southeast Asia workshop 12-13 January 2011 • Bogor Indonesia

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## **ICM Best practices Southeast Asia workshop**

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## PREFACE

The Bay of Bengal Large Marine Ecosystem (BOBLME) Project aims to assist the eight countries sharing the Bay – Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka and Thailand - in developing a collaborative framework to work together towards a common goal: a healthy ecosystem and sustainability of living resources for the benefit of the coastal population. The project is implemented by the Food and Agriculture Organization of the United Nations (FAO).

The project covers a wide range of disciplines and topics, including ecology, biodiversity, fisheries, habitats, oceanography, pollution, ecosystem health, climate change, and in particular socio-economic and coastal management.

The FAO BOBLME Component 2 (Coastal/Marine Natural Resources Management and Sustainable Use) is to promote the development and implementation of regional and sub-regional collaborative approaches to common and/or shared issues affecting the health and status of BOBLME. Results and outputs of the various activities will serve as inputs into the finalization of the Transboundary Diagnostic Analysis (TDA) and into the development of the Strategic Action Programme (SAP).

In line with the 2010 Annual Regional Work Plan, adopted by the Project Steering Committee (PSC) in March 2010, FAO BOBLME has engaged the services of the Center for Coastal and Marine Resources Studies (CCMRS) of the Bogor Agricultural University (IPB), as its ICM Implementation Partner in Indonesia, for the organization and conduct of the ICM Best Practices Workshop (Southeast Asia Sub-regional), to be accomplished on January 12-13, 2011.

As part of the whole program, the objectives of the workshop are: 1) to discuss and come to general consensus with regards to the Status of CB-CRM, ICM, and Co-management in each of the four BOBLME Southeast Asia countries: Indonesia, Malaysia, Myanmar, and Thailand; 2) to discuss among groups and decide upon a statement that defines the way forward for CB-ICM in BOBLME Southeast Asia sub-region.

The two days workshop from 12-13 January 2011 has resulted in a positive understanding on how far the ICM program has been initiated and implemented in every country and what hindrances should also be overcome in order to promote and support ICM program in the BOBLME's countries. The recommendations are expected to be a good material to pursue the next program of ICM in the Bay of Bengal.

The appreciation is passed to the sponsors of the workshop, especially to the BOBLME of FAO, to the Center of Coastal and Marine Resources Studies and its OC, and all participants who made this workshop worthwhile.

Bogor, February 2011

## 1 INTRODUCTION

### 1.1 Background

There have been different starting points for initiating and implementing ICM in the countries surrounding the Bay of Bengal, among them addressing over exploitation of natural resources and other forms of unsustainable management due to illegal fishing. Conflicts also occur either in between fishers and other coastal users (not only the cross-border community but also for the commercial fisheries) or inter governmental. These conflicts resulted in inefficient and ineffective management of BoB resources, leading to a decreasing quality life of coastal communities.

Over 400 million people in the Bay of Bengal area are dependent on coastal and marine resources for their food, livelihood and security. Rapid population growth, high dependence on resources and increased land use has resulted in over exploitation of fish stocks and habitat degradation, and has led to considerable uncertainty whether the ecosystem will be able to support the livelihoods of the coastal populations in the future. Most of the Bay of Bengal's resources are shared by two or more countries and therefore trans-boundary or multi-country collaboration is required to ensure their sustainable management and conservation.

Despite the large number of international, regional and sub-regional bodies and programmes operating in the Bay, none have a clear mandate, geographical scope and/or capacity to support a regional initiative that would effectively address the issues confronting the coastal communities of the BoB. Furthermore, the current existence of many ineffective policies, strategies and legal measures at the National level would likely impede the development of any regional arrangements. Other major constraints include weak institutional capacity at national levels, insufficient budgetary commitments, and lack of community stakeholder consultation and empowerment.

Maldives, India, Sri Lanka, Bangladesh, Myanmar, Thailand, Indonesia and Malaysia, have declared their willingness to work together through the Bay of Bengal Large Marine Ecosystem (BOBLME) Project and lay the foundations for 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*.

The objective of **BOBLME Component 2 (Coastal/Marine Natural Resources Management and Sustainable Use)** is to promote the development and implementation of regional and sub-regional collaborative approaches to common and/or shared issues affecting the health and status of BOBLME.

Objective of the **Subcomponent 2.1 (Community-based Integrated Coastal Management)** is to identify and evaluate the large and diverse body of information and experience associated with promoting: (i) community-based fisheries and habitat management; (ii) co-management; and (iii) the creation of alternative livelihoods among fisher communities in the region; activities designed for

purposes of reducing impact on coastal resources.<sup>1</sup> Specifically this subcomponent will complete a “stocktaking” exercise of the extensive experience in the BOBLME region and distil “lessons learned” to be used as a basis for supporting the future “mainstreaming” through activities supported under a subsequent BOBLME phase. To achieve these objectives, the subcomponent will support the following activities: (i) a literature review and synthesis of findings, (ii) stakeholder consultations through focus group encounters and facilitated workshops, (iii) site visits and development of pre-selected case studies, and (iv) completion of the analysis.

Two sub-regional ICM reviews (South Asia and Southeast Asia) have been undertaken, and a sub-regional workshop (South Asia) has been implemented in July 2010 in Colombo, Sri Lanka.

In line with the 2010 Annual Regional Work Plan, adopted by the Project Steering Committee (PSC) in March 2010, FAO BOBLME collaborates with CCMRS - IPB, as the leading ICM Learning Center in Indonesia, for the organization and conduct of the ICM Best Practices Workshop (Southeast Asia Sub-regional), to be implemented on January 12-13, 2011.

The Center for Coastal and Marine Resources Studies, Institute for Tropical Coastal and Ocean, Bogor Agricultural University (CCMRS-IPB), has been established in 1996 through the merger of two centers: The Center for Marine Studies, Faculty of Fisheries, and The Coastal Zone Management Program Center for Environmental Studies of IPB. The vision of CCMRS-IPB is to become the leading institution in research, training, and community services for coastal and ocean development on a sustainable basis and welfare improvement of the people. The mission is to develop science and technology through research, training, and community services in order to achieve sustainable coastal and ocean development. The CCMRS-IPB research focuses are: Coastal and marine resources exploration and exploitation technology · Coastal and marine biodiversity management · Coastal and marine aquaculture · Marine biotechnology · Coastal and marine fisheries resources management · Coastal and marine zone development planning · Economic, institutional, and policy analysis for coastal and marine zone development · Spatial analysis, mapping, and coastal and marine zone management · Marine information system Coastal and marine management · Coastal commodity management. Most of the multi-disciplinary CCMRS-IPB researchers are members of the Faculty of Fisheries and Marine Sciences and IPB. They collectively have a vast experience and network on ICM and fisheries management, including capacity building programmes, both throughout Indonesia and in the Southeast Asian region, and also in cooperation with FAO. BOBLME expects to benefit from the national and regional linkages and considers CCMRS-IPB the preferred implementing partner for this project activity

## 1.2 Project Objective

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<sup>1</sup> In the BOBLME project, these fields of activities have been collectively termed “community-based integrated coastal management”. In the review, ICM covers best practices in coastal management, including fishery resources, habitats, and the human dimension (livelihoods). The scope, therefore, extends to other livelihood activities and coastal management that have impact on coastal communities, but from a fisheries perspective. Evidence of the successful implementation of an integrated plan is not considered a strict prerequisite.

The outcome of the workshop will provide a key contribution to the BOBLME Sub-Component 2.1 by providing a venue for discussion of the Sub-regional review report (Southeast Asia) on "ICM Best Practices and Lessons Learned" and drafting recommendations for the production of outreach material, capacity development , and other interventions.

This will be achieved taking into consideration input provided from country experts and other resource persons. Discussions will focus on information and knowledge management, policy and implementation gaps, as well as institutional issues.

### **1.3 Expected Output**

- Consensus on status of community based fisheries and habitat management and co-management in each of the four BOBLME Southeast Asia countries (Indonesia, Malaysia, Myanmar, and Thailand);
- Identification of factors that hinder or support the development of ICM in each country;
- Proposals for change that is required nationally and locally for "ICM" approaches to be more successful; and Recommendations as to how this change could be effected

### **1.4 Participants**

Participants of the ICM Best Practices Workshop Southeast Asia Sub-region were invited from Indonesia, Malaysia, Myanmar, and Thailand, with resource persons from Sri Lanka. For list of participants see Appendix 7.

## 2 WORKSHOP PRESENTATIONS

### 2.1 ICM Implementation in Indonesia (Dr. Soeseno Sukoyono)

The keynote speech of the workshop was from Ministry of Marine Affairs and Fisheries (MMAF), represented by Dr. Soeseno Sukoyono. He explained the new national policy of Indonesian Government (MMAF) that is focusing more to increasing fish production, with vision of MoMAF as "Indonesia, the biggest producer of marine and fisheries product in 2015" and mission "to increase marine and fisheries communities welfare".

To achieve this goal, four grand strategies are implemented, namely: (1) to strengthen human resources and institution; (2) to manage marine and fisheries resources sustainability; (3) to increase productivity and competitiveness based on knowledge; (4) to expand local and international market. In frame of this new national policy, the implementation of ICM in Indonesia is an important tool to achieve the sustainability of fisheries resources.

Since year 1984 until 2009, there were some output of ICM implementing program in Indonesia:

- 1) Established 15 Coastal Spatial Information Centre;
- 2) Availability of 15 provinces' Coastal Data Set and Information;
- 3) Conducted Capacity building program for central, 15 provinces and 40 district's government officials;
- 4) Availability of ICM Planning Document especially 15 provincials and 40 districts strategic plan, and 15 draft provincial spatial and zonation plans;
- 5) Enactment of 12 provincial coastal management regulations.
- 6) 40 Small Scale Natural Resources Scheme implemented in 40 villages

Furthermore, base on the lesson learn of MMAF, there are eight steps in implementing ICM in Indonesia, as following:

- 1) Development of both human and institutional resources;
- 2) Development of good quality development with intensive involvement of stakeholders;
- 3) Good quality of data, its management and retrieval;
- 4) Develop suitable legal framework and ensure its enforcement.
- 5) Integrating ICM Planning Documents and process with planning process at provincial and district level;
- 6) Development of Institutional framework with clear mandate and authority;
- 7) Implementing ICM Cycle consistently;
- 8) Development and implementing incentive, permit and monitoring system.

Finally, MoMAF supports the implementation of Bay of Bengal Large Marine Ecosystem Project (BOBLME) as a regional ICM case, as the opportunity to work together in a transboundary issue between eight countries. However, MMAF expected that the BOBLME project should be coincide with the current national policy of Indonesian government. Dr. Sukoyono emphasized that the current MMAF policy is part of national policy where the current Indonesian government policy is focusing on *pro-job, pro-poor, and pro-growth* program.

## 2.2 Ocean Policy Concept for the ICM Development in Indonesian Coastal Area of Bay of Bengal (Dr. Tridoyo Kusumastanto)

As the largest archipelagic country in the World with high density of population, Indonesia has quite a lot of experience on managing coastal resources. From those experiences, it could be concluded that changing a bad habit of coastal management need time and intensive facilitation process. The rate of coastal management changing approach from un-sustain to sustain is also dependent on local culture of community.

The main problems of ICM implementation in Indonesia could be classified into:

- Ø Vision
- Ø Government policy
- Ø Technical and economic
- Ø Legal
- Ø Internal-political

Lesson learn from ICM implementation in Indonesia:

- Ø Need to link management to improve biophysical conditions
- Ø Important role of stakeholders participation in decision process
- Ø Contribution to economic returns and livelihood
- Ø Having adequate legal and policy framework in place
- Ø Having capacity for law enforcement
- Ø Building durable institutions beyond leadership changes
- Ø Role of the private sector in performing tasks
- Ø Avoiding become too dependent on the project vs government
- Ø Need for education and raising awareness to accomplish tasks.

The major issues of coastal management in Indonesia nearly the same with other area around the coast of Bay of Bengal

- Ø Illegal and destructive fishing
- Ø Habitat loss (reefs, mangroves, estuaries, beaches)
- Ø Uncontrolled development in shoreline areas
- Ø Poverty in coastal areas
- Ø Poor institutional coordination cooperation
- Ø Low awareness of the problems and solutions
- Ø No integrated approach to management

After observing the whole causal connection on the coastal resources management, some Indonesian experts propose IRCOM (Integrated River Basin-Coastal and Ocean Management for getting a good result of ICM implementation, which cover:

- Ø Intergovernmental integration;
- Ø Intersectoral integration
- Ø Local knowledge and wisdom
- Ø Local knowledge and wisdom
- Ø Law enforcement
- Ø Institutional arrangement
- Ø Consistency in planning and management

- Ø Consistency on development funding
- Ø Decentralization
- Ø Science-management integration
- Ø Ecosystem integration (land, coastal, marine, and ocean).

### 2.3 Lesson learned on ICM Practices in Indonesia (Dr. Rokhmin Dahuri)

Indonesia has a huge coastal and marine resources with 17,504 islands and 95,161 km coastline, 1.9 million km<sup>2</sup> total land area, total sea area 5.8 million km<sup>2</sup> (territorial waters 0.8 million km<sup>2</sup>, archipelagic & internal water 2.3 million km<sup>2</sup>, EEZ 2.7 million km<sup>2</sup>), and freshwater ecosystems (lakes, rivers, swamp areas, reservoirs, etc. 54 million ha. So, Indonesia is classified as a resource rich country.

With 238 million of population and 350 ethnic groups, the Indonesian get GNP per capita US \$3,000. About 65% of Indonesian people live within 50 km of the coastline, and 2/3 of Indonesian cities located within the coastal zone.

The Indonesian's coastal and ocean economy come from some subsectors:

- 1) Capture fisheries
- 2) Coastal aquaculture and mariculture
- 3) Fish processing industry
- 4) Marine biotechnology industry
- 5) Coastal forestry
- 6) Mines and energy
- 7) Coastal and marine tourism
- 8) Sea transportation
- 9) Maritime industry and services
- 10) Small islands
- 11) Non-conventional resources

Indonesian coastal and ocean areas are also one of the most susceptible regions on earth to various natural hazards e.g. earthquakes, tsunamis, floods, and storms. From the last ten years, the BoB coastal area has been hit by several strong earthquakes and tsunamis.

The Indonesian phenomena connected to coastal resources:

- 1) The contribution of coastal and ocean sectors to Indonesian economy is relatively small
- 2) Overfishing, overexploitation of other natural resources
- 3) Coastal and marine pollution
- 4) Physical degradation of mangroves, coral reefs, estuaries, and other coastal ecosystems
- 5) Sedimentation and abrasion (erosion)
- 6) Spatial use conflicts
- 7) Natural hazards: flood, tsunamis, earthquakes, global warming, etc.
- 8) About 55% of coastal communities live under poverty line.

Most problems related to coastal development are the result of placing too much stress on limited coastal resources, a condition known as exceeding the carrying capacity.

Some achievements of coastal and marine resources development:

- 1) 50 of 430 Indonesian regencies (districts) have developed an integrated coastal spatial planning
- 2) 10 of 33 Indonesian provinces have developed an integrated coastal spatial plan
- 3) About 10 million ha of MCA have been established
- 4) Act No. 27/2007 concerning Coastal and Small Island Management
- 5) Coastal community development through PEMP (coastal community economic empowerment program)
- 6) ICM implementation through MCRMP (Marine and Coastal Resource Management Project) COREMAP.

ICM Programs and projects in Indonesia (1987-2005):

- 1) The ADB-funded:
  - a. Marine Resource Evaluation and Planning (MREP) project implemented in 10 provinces between 1993-1998
  - b. Coastal Environmental Management Project (CEMP)
  - c. Coral Reef Rehabilitation and Management Program (COREMAP) implemented in three phases between 1998 and 2013.
  - d. BAPEDAL Regional Network Development Project
  - e. Sulawesi Mangrove Management and Rehabilitation Project
  - f. Segara Anakan Project
  - g. Marine and Coastal Resource Management Project
  - h. Marine and Coastal Resources Management Project (MCRMP) 2001-2006.
- 2) United Nation Environmental Program/UNEP:
  - a. Regional Seas Program Body on the Seas of East Asia (COBSEA)
  - b. Conference of Parties II on the Convention Biological Diversity (Jakarta-November 1995).
- 3) UN/FAO:
  - a. Cendrawasih Bay Coastal Area Development Project
- 4) UNDP:
  - a. Marine Pollution, Monitoring, and Training Program
  - b. Riau Zone Land Use Management Project
  - c. Reforestation in Critical Watersheds
  - d. Watersheds Rehabilitation in Nusa Tenggara.
- 5) Other sources:
  - a. Coastal and marine conservation programs of NGO's such as WWF, TNC, CI, Wetlands International, and Telapak/Jaring Pela.
  - b. Bilateral aid programs such as sustainable coastal and marine resource development by CIDA in 1987, US-ASEAN Coastal Resources Management Project in Segara Anakan 1989, Project Pesisir/CRMP by USAID 1995-1996, Joint Indonesia- Germany Marine Ecosystems and Resource Program (JIGMER) in 1999, the Norwegian Sea watch Project 1996-1998, and the Canadian Environmental Project in Indonesia (CEPI) 1998-2000.

The challenge for coastal and ocean management in Indonesia is then how to develop coastal and ocean resources which can generate economic growth and prosperity for all Indonesian people, particularly coastal communities, on a fair and sustainable basis.

## 2.4 The Bay of Bengal Large Marine Ecosystem (BOBLME) Project: an Overview (Dr. Rudolf Hermes)

The Bay of Bengal Large Marine Ecosystem (BOBLME) Project is a five year (2009-2014), \$31 million collaboration involving Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka and Thailand. These eight countries, four of them from the ASEAN Region, and four belonging to South Asia, are working together to develop 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. The major implementation partners are the Fisheries and Environment Departments of each country. The BOBLME Project is funded principally by the Global Environment Facility (GEF), Norway, Sweden, the Food and Agriculture Organization of the United Nations (FAO), and the National Oceanic and Atmospheric Administration of the USA. FAO is the executing agency. The Project offices are located in Phuket, Thailand, hosted by the Department of Fisheries, Thailand.

The BOBLME Project has two major expected outputs. The first is a Transboundary Diagnostic Analysis (TDA). The TDA identifies and ranks or prioritizes water-related environmental transboundary issues, and their causes, according to the severity of environmental and/or socio-economic impacts. It provides the scientific basis for the development of the Strategic Action Programme (SAP) that will formulate nationally and regionally coordinated activities to address the issues and their causes. The SAP is the prerequisite for a second phase of the Project, beyond 2014 and towards 2020, which will be tasked to implement the SAP. More information on the BOBLME Project can be found on [www.boblme.org](http://www.boblme.org)

Furthermore, the **expected outcomes** of the BOBLME Project are:

- (1) **Stronger governance**, that is, improvements in policy development, processes for planning and dialogue;
- (2) **Improved resource management**, indicated by: (1) better understanding of small-scale fisheries issues, (2) Co-management - Multi-sectoral involvement, (3) Healthier ecosystems, and (4) Sustainable fisheries;
- (3) **Improved socio-economic well-being, greater resilience of coastal communities;**
- (4) **Better knowledge** of: (1) fisheries for hilsa and Indian mackerel, (2) BOBLME's large-scale processes and ecology, (3) likely effects of climate change, and (4) basic ecosystem health indicators in the BOBLME

In the two years since it became operational, the BOBLME Project has initiated an extensive programme of studies, reviews, workshops and trainings that have established baseline information in the Project's theme areas of fisheries, pollution and critical habitats. The Project will assist countries implement an Ecosystem Approach to Fisheries Management (EAF) for the transboundary or shared stocks of hilsa shad and Indian mackerel, and strengthen their natural resource management and policy development capabilities in general. The BOBLME will also contribute to regional knowledge of the Project's focus species (hilsa, Indian mackerel and sharks), the large-scale processes affecting the Bay and its ecology, and the likely effects of climate change.

### **3 MAIN ISSUES OF ICM: A REVIEW ON BEST PRACTICES AND LESSONS LEARNED FROM INDONESIA, MALAYSIA, MYANMAR AND THAILAND (DR. DEDI ADHURI)**

#### **A Review on Best Practices and Lessons Learned from Indonesia, Malaysia, Myanmar and Thailand (Dr. Dedi Adhuri)**

The literature review on Integrated Coastal Management (ICM) reviews the concepts, theories and case studies on ICM. This Review specifically covers case studies in the Southeast areas of the Bay of Bengal comprising of coastal regions in four countries: Aceh and Northern Sumatra of Indonesia, West Coast of Peninsular Malaysia, Myanmar and West Coast of Thailand.

The Review was conducted over a period of six weeks (June 2010 to July 2010). Literature for this review was largely obtained through (1) a secondary data search from various electronic library databases; (2) a wider web-based search to locate case studies through localized project websites and case studies that are not documented in academic literature; and (3) to a limited degree, expert input.

In recent years the concept of ICM, in the countries reviewed, has gained some political acknowledgement. In all the countries reviewed, with exception of Myanmar, there are policies related to the management of coastal areas and resources using the ICM approach.

The major findings of the Review are as follows:

- The review on the status and threats to the coastal area and resources in the four focal countries reveals what Cicin-Sain and Knecht (1998) call ecological effects and multiple-use conflicts. This underlines the importance of the adoption of ICM.
- International experience suggests that ICM does not come about automatically but requires some impetus. In all countries reviewed, it is the recognition of a specific sectoral coastal management problem that triggered ICM initiatives. Overfishing in Indonesia, coastal erosion in Malaysia and coral reef pollution in Thailand are some examples of the problems that stimulated government responses that led to the adoption of ICM. Interestingly, socioeconomic conditions such as poverty and threat to livelihood were not the causal reasons that propelled governments to experiment with the ICM approach in the countries reviewed.
- The review on scale issues identified that scaling up (linking local actions to a higher level context of management) or scaling out (replication of ICM approaches from one place to others) are still persisting challenges. Project efforts commonly remain in the domain where they have been initiated. However, ICM is a process. The pilot programmes have demonstrated that it is optimum if ICM initiatives are started based on one major coastal issue, and then gradually factor in other coastal related problems. There is a high risk to starting any ICM initiative on an ambitious scale as its very complexity can cripple it from the start. However, ICM initiatives have to gradually scale up beyond a sectoral focus. To have any real positive impact on the coastal areas multiple coastal issues and multiple stakeholders must be included.
- The review of good practices highlights the importance of the balance between short-term and long-term gains; e.g. a community having access to micro credit programmes (short-

term gains) while participating in replanting of mangroves and coastal forests along the coastal areas (long-term gains); participation and incorporation of local people and their knowledge in developing coastal management plans; the decision of agencies responsible on ICM pilot programmes to be based close to primary users; political will from government to support ICM practices; and localised creative dissemination efforts such as folk dramas and radio programmes that include community members are more successful as ICM dissemination tools.

- The review of practices highlights that most pilot programmes despite being termed as 'integrated management' are still focused within one major sector: the fisheries. The programmes rarely move on to include other coastal related problems; some of the pilot programmes are too small in scale to have any real impact; there is no budget to hire individuals from coordinating sectors during the lifespan of the pilot programmes; there are no appropriate communication strategies to enable information exchange and information dissemination on ICM related issues; there is no reliable assessment and community participation in developing ICM plans; and ambiguous definition of governmental and community responsibilities in the ICM plans.

The Review on good practices highlights that the success of ICM pilot programs is facilitated when there is some form of evidence of success from the initial stages and when implementing agencies are based closely to the community. In addition, incorporation of local knowledge and political will from government to support ICM initiatives does make a difference. On the other hand, practices to be avoided highlight the importance of the balance between short-term and long-term gains through proper assessments. In addition, for ICM programs to be mobilized, it is crucial that community recognizes the need for ICM initiatives.

The presentation of the Southeast Asia Review was followed by presentations from Thailand, Myanmar, and Malaysia. These, together with the findings from Indonesia are summarized in the following.

Briefly spoken that the first ICM initiatives at the national level in the four countries of BOBLME Southeast Asia (Indonesia, Malaysia, Thailand, and Myanmar) was:

### **3.1 Indonesia:**

- 1 Main issues: overfishing, degradation of coastal carrying capacity, un-sustain management of coastal area, unclear understanding of vision on coastal development in between the government ministries and their policies, lack of political will, having technical and economic difficulties in the field, overlapping on legal aspect and law enforcement;
- 2 Programs: Marine Resources Evaluation and Planning (MREP) project in 1993 focused in capacity building activities that enabled development & management of ICM plans, 10 provinces; in 1988 State Policy Guidelines (GBHN) noted that "it is necessary to improve the management of coastal and marine areas so as to increase utilization and maintain their sustainability"; furthermore, the 1993 GBHN noted that "coastal and marine resources-related aspects are considered as a development sector in itself "; in the first Repelita (Five Year Development Plan) or PJP-II (the Second Long-term Development Plan), 1993 – 1998.
- 3 Policy on ICM management: implementing the Environmental Impact Assessment (AMDAL) to all coastal development, Laws on Decentralization No. 27/2007, on Coastal and Small

Island Management; starting to implement Ocean Policy as an umbrella of National ICM implementation.

### 3.2 Malaysia:

- 1 Main issues: coastal erosion;
- 2 Programs: National Erosion Study 1984-85; 47 critical sites identified; two institutions related to coastal zone management established – the Coastal Engineering Control Unit (CECU) & National Coastal Erosion Control Council (NCECC)
- 3 Policy on ICM management: Environmental Impact Assessment (EIA) Order, 1987, on large scale developmental project such as conversion of mangrove swamps, port expansion, coastal reclamation, construction of resorts; National Policy on Coastal Resource Management, 1992 (implementation started in 1996)

### 3.3 Thailand:

- 1 Main issues: coral reef destruction, mangrove deforestation, fishery stock decline;
- 2 Programs: Phuket Island Action Plan (pilot study 1986-1989, implemented in 1992); community-based fisheries management program in Ban Don Bay & Phang-Nga Bay 1993
- 3 Policy on ICM management: multi or bi-sectoral laws that refer to integrated approach towards managing the coastal zones. Natural Resource Exploitation Act (groups 5 other Acts: the Forest Act of 1941, the Fisheries Act of 1947, the Minerals Acts of 1967, the Petroleum Act of 1971, and the Tourism Act of 1979); The establishment of Tumbol Administrative Organisation (TAO): to represent community problems to the federal or provincial government and to conduct community-based projects.

### 3.4 Myanmar:

- 1 Main issues: coastal resources destruction caused by: fishing activity (shrimps pond, poisoning), Agricultural, Fire Wood, charcoal production, logging, etc.)
- 2 Program: local community capacity building (1990); establish LAMPI Marine National Park (1996); rehabilitation mangrove ecosystem (Myanmar Government 1995; JICA 2007; FAO 2009)
- 3 Policy on ICM management: there are NCA (National Committee Association), National Legislation/Law, Navy role support for resources protection.

## Discussion of the Review Report

The cause of major issues in the coastal areas of Bay of Bengal could be generalized as follows:

1. Lack of understanding and awareness concerning the strategic value of coastal and ocean resources in between coastal community and the government.
2. Lack of environmentally friendly and affordable technologies.
3. Greed of most government official and business community (private sector).
4. Except for mining and energy sector, other coastal and ocean sectors have not: (1) applied appropriate technology, (2) met economy of scale, (3) used an Integrated Supply Chain Management System, and (4) applied sustainable development principles.
5. Most coastal communities have a low access to productive economic assets (e.g. capital, technology, infrastructure, market, and information) and lack of viable alternative livelihoods.

6. Regional leakages of most quick-yielding economic activities (e.g. oil and gas, mining of other minerals, manufacturing industries, and coastal reclamation).
7. Undervaluation or no apparent market values of many environmental services of coastal ecosystems.
8. The number of population and impacts of development activities exceed the carrying capacity of a coastal zone.
9. Sectoral and partial development management approach.
10. Shortage of capable and dedicated manpower.
11. Lack of political will and law enforcement.
12. Low awareness of the problems and solutions.
13. Most problems related to coastal development are the result of placing too much stress on limited coastal resources, a condition known as exceeding the carrying capacity
14. Uncontrolled development in shoreline areas (without involving local community and local government, spatial use conflict, etc.).
15. No integrated approach to manage a coastal resource neither at the local level nor at the cross border area.

The workshop discussion resulted in several points of conclusion and recommendation:

1. The review on the status and threats to the coastal area and resources in the four focal countries reveal 'ecological effects and multiple-use conflicts'
2. This underlines the importance of the adoption of ICM
3. International experience suggests that ICM does not come about automatically but requires considerable effort and stimulus
4. Starts from specific sectoral coastal management problem that triggered ICM initiatives - overfishing in Indonesia, coastal erosion in Malaysia and coral reef degradation / pollution in Thailand
5. The review of 'good practices' and 'practices to avoid' highlights the importance of the balance between short-term and long-term gains, participation and incorporation of local people and knowledge, and political will from government to support the ICM
6. The review on scale issues identified that scaling up (linking local actions to a higher level context of management) or scaling out (replication of ICM approaches from one place to others) are still persisting challenges
7. Majority of pilot programmes, while called 'Integrated', still focused on one sector, e.g. fisheries, and cross-cutting areas (coordination, communication, knowledge management, M&E etc.) are less well covered
8. Need to link management to improved biophysical conditions
9. Important role of stakeholders and private sector participation in decision process
10. Contribution to economic returns and livelihood
11. Having adequate legal and policy framework in place and also capacity for law enforcement
12. Building durable institutions beyond leadership changes
13. Avoiding to become too dependent on the "project" vs. government
14. Need for education and raising awareness to accomplish tasks
15. Measurable goals and standards: a multi-sector perspective
16. Permanent advisory committees
17. Implementation of planning, management and regulatory powers
18. Need for dedicated funding, investment and other incentives
19. Adoption of strategies (international, national, regional and local levels)

## 4 GENERAL CONCLUSION AND RECOMMENDATION

1. The coastal and marine resources management in the four focal countries has been concluded as in a critical situation in term of sustainability and resources degradation
2. The ICM concept has to be implemented all at once in the four countries to avoid cross boundaries conflict.
3. National and international effort should be in a good collaboration supporting the ICM program, either on funding or sharing experiences.
4. The ICM program could be started from specific sectoral coastal management problem that triggered ICM initiatives-overfishing in Indonesia and Myanmar, coastal erosion in Malaysia, coral reef degradation/pollution in Thailand.
5. The review of 'good practices' and 'practices to avoid' highlights the importance of the balance between short-term and long-term gains, participation and incorporation of local people and knowledge, and political will from government to support the ICM.
6. The review on scale issues identified that scaling up (linking local actions to a higher level context of management) or scaling out (replication of ICM approaches from one place to others) are still persisting challenges.

## Appendices

The Focus Group Discussion (FGD) was conducted to review and to build consensus on status of community based fisheries and habitat management and co-management in each of the four BOBLME Southeast Asia countries. Four questions were used as a guide on the FGD:

- Q-1: What is the current status of CB-ICM in each country?
- Q-2: What factors support or hinder the development of CB-ICM in each country? Identifying case study examples either documented or undocumented.
- Q-3: What change is required nationally and locally for CB-fisheries/ habitat management and co-management approaches are to be more successful and more widely spread?
- Q-4: How could this change be effected, what action is necessary, and who could do it (responsible actor, support actors)?

Due to limited information available from some countries, specific bio-geophysical and socio-economic conditions of those countries and capability of the participants, there are variations in the level of output from each group. However, additional and updated information were obtained through the FGD to validate the report on the review of best practices of ICM of BOBLME from Southeast Asian countries prepared by the WorldFish Center as the background document for the workshop. Summaries of the FGD result are presented in the following attachments.

## Appendix I: Indonesia

The result of discussion from the Indonesian Group is reported for each of the provinces included in the management area of BOBLME, namely Nanggro Aceh Darussalam (NAD), North Sumatera, Riau and West Sumatera Provinces. The related issues were analysed together with the key national related institutions working with the BOBLME project in Indonesia: Ministry of Environment (MOE) and Ministry of Marine Affairs and Fisheries (MMAF). The results are then summarised at the national level as Indonesian ICM best practices. The current status of CB-ICM in Indonesia is presented in this report based on key person summaries and results of the response of the FGD for Q-2 to Q4 mentioned above.

### A. Nanggro Aceh Darussalam Province

#### Q-2: Hindering Factors:

- There is no follow up regulatory mechanism for implementing the national regulations,
- The border of Aceh for BOBLME work is not clear,
- No information networks in the context of restricted areas in Andaman Islands,

#### Q-2: Supporting Factors:

- Adoption of local fisheries management into formal management of fisheries in the province,
- Adoption of Conservation regime in the local coastal districts,
- Andaman Islands/waters as border area with Aceh,
- Adoption of local regulation (Qanun) for environmental management in most of the districts border with BOBLME,
- National Act No 27/regarding Coastal and Small Island Managements,
- Aceh Green Vision as platform for development in Aceh.

#### Q-3: Needed

- Fisheries cooperation with India should be modified,
- Development of Rondo Island,
- Need to develop regional regulation on fisheries and environment in the BOBLME,
- Need for integration ICM into local government development plans.

### B. North Sumatera Province

#### Q-2: Hindering Factors:

- There are no common regulations in the context of Industrial waste management,
- Limited information dissemination on fisheries or ICM regulation among fishers,
- Limited coordination between stakeholders,
- Border problems (not clear information among fishers),
- Sea hijacking problem.

#### Q-2: Supporting Factors:

- Relatively larger number of fishers in the North Sumatera province,
- Marine waters area and its potential resources in the context of marine resources development,

- Relatively good governance,
- Potential economic growth in the context of marine resources utilization in the area.

**Q-3: Needed**

- Better coordination mechanism,
- Need special task force for BOBLME (in the context of Indonesia),
- Positive mindset of the stakeholders on the importance of ICM for BOBLME,
- Better Law enforcement.

**C. Riau Province**

**Q-2: Hindering Factors:**

- Cultural versus governance mechanism does not work properly in term of ICM in Riau Province.

**Q-2: Supporting Factors:**

- Local Commitment on Riau Sustainable Development (committed to environmental considerations in the all of aspects of development)

**Q-3: Needed**

- Focal point for the project should be appointed.

**D. West Sumatera Province**

**Q-2: Hindering Factors:**

- Too many changes (uncertain) in the management of coastal area in West Sumatera Province.

**Q-2: Supporting Factors:**

- Local Regulation No 3/2009 on coral reefs management
- Local regulation on ICM (completed 2011)
- Experiences in COREMAP and MCRMP Program

**Q-3: Needed**

- Better adoption of local knowledge

The supporting or hindering factors and management needed at the national level for CB-ICM in Indonesia in the context of Ministry of Environment (MOE) and Ministry of Marine Affairs and Fisheries (MOMAF) according to the Indonesian Participants are as follows:

**A. Ministry of Environment (MOE)**

**Q-2: Hindering Factors:**

- Coordination and leadership problems

**Q-2: Supporting Factors:**

- Complete regulation on ICM

**Q-3: Needed**

- Commitment of national and local leaders,
- Institutionalizing ICM in the local development plan.

**B. Ministry of Marine Affairs and Fisheries (MMAF)**

**Q-2: Hindering Factors:**

- Egoistic sectoral focus among government institutional (agencies) in implementation of ICM
- Limited political willingness to adopt ICM,
- Imbalance in technology (fishing gears) between countries in BOBLME,
- Limited focus on sustainable fisheries in the BOBLME area.

**Q-2: Supporting Factors**

- Regulation completed on fisheries and ICM
- Budget support from government for the development of ICM

**Q-3: Needed**

- Best practices management mechanism
- Mechanism of dissemination of ICM related regulations

Table 1. The summary of FGD of Indonesian Group for Q4 (action needed) and actors at each province and national level

No	Province/ National	Action needed	Actors
<b>A. Local</b>			
	Aceh	<ul style="list-style-type: none"> <li>• Local regulation developed and adopted</li> <li>• Border area development</li> <li>• Spatial planning adopted</li> <li>• Consolidation and coordination</li> <li>• Capacity building</li> </ul>	<ul style="list-style-type: none"> <li>• DPRA and Aceh government</li> <li>• Fishers and private sectors</li> <li>• NGO and universities</li> </ul>
	North Sumatera	<ul style="list-style-type: none"> <li>• Better regulations needed</li> <li>• Institutional development</li> <li>• Capacity building</li> </ul>	<ul style="list-style-type: none"> <li>• National level to village level</li> </ul>
	West Sumatera	<ul style="list-style-type: none"> <li>• Assessment of actual issues including cultural</li> </ul>	<ul style="list-style-type: none"> <li>• Local government</li> </ul>
	Riau	<ul style="list-style-type: none"> <li>• Dissemination of the program</li> </ul>	<ul style="list-style-type: none"> <li>• National level institution</li> </ul>
<b>National</b>			
	MOE	<ul style="list-style-type: none"> <li>• Training on ICM</li> <li>• Reassessing Logical Framework Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Government</li> <li>• Universities</li> </ul>
	MMAF	<ul style="list-style-type: none"> <li>• Management guidance for BOBLME</li> <li>• Technical facilitation</li> </ul>	<ul style="list-style-type: none"> <li>• Local and national government</li> </ul>

## Appendix II: Malaysia

### Q-1: Current Situation:

The current status of CB ICM in Malaysia was not presented at the workshop by the participants from Malaysia.

### Q-2: Hindering Factors:

- Legislation is not in place,
- Lack of community leadership and social cohesion,
- Lack of cross-sectoral coordination,
- Political interference.

### Q-2: Supporting factors:

- Availability of input (monetary, training, infrastructure, etc)
- Lessons learned and best practices derived from case studies (Langkawi, Kuala Teriang, Juru)
- Juru: Cockle Culture, Sebrang Perai: Giant Prawns, Marudu Bay, Sabah: Small-scale fisheries.

### Q-3 & 4: Needed:

- Increase the awareness of benefits of CBM among the communities,
- Amendments to the Fisheries Act to allow CBM,
- Provide public interest litigation based on natural resources law,
- Increase community development work and involvement of community in this development,
- Capacity building for community in resource management, leadership, etc
- Empowerment of women through access to micro-credit.

### Q-3 and Q-4:

**Community participation in driving research to generate community relevant science and reduce research transaction cost, with actors:**

- Greater political support from the government,
- Community to advocate for greater rights to manage resource,
- Politicians need to think of long term benefits of CBM,
- To forge relations Universities, Scientist, Academic communities and NGO,s with community for research involvement,
- Private Companies to empower CBM through support of Corporate Social Responsibility,
- International Agencies to demonstrate benefit of CBM (supporting activities)

### The international transboundary program suggested by Malaysian Group:

- Management of shared stocks (small pelagic),
- To look into bilateral agreements (formal and informal arrangements),
- Economic valuation of IUU fishing,
- Harmonization of fisheries regulation,
- Customary resource management practices.

## Appendix III: Thailand

### Q-1: Issues

- According to laws, people are not allowed to fish in the Marine National Park,
- Law enforcement is not strong,
- Local villagers do not have land rights,
- The lack of people organization group in the local communities,
- Illegal fishing gears in the coastal areas,
- The implementation of artificial reef in unsuitable areas,
- Lack of clear jurisdiction between government organizations,
- The deterioration of natural resources.

### Q-1: Country priorities

- Degradation of marine and coastal resources including climate change/ global warming,
- Pollution from marine transportation
- Fisheries & food security
- Coastal development and industries
- Water supply & use

### Q-1: Current status

- Draft promotion of marine and coastal resources management act
- A case study learned from CHARM project
- Networks of coastal communities supported by NGOs and DMCR,
- There are many coastal activities but mostly small (village level),
- Provincial level committee on ICM with guidelines for implementation.

### Q-2: Hindering Factors:

- Draft bill to support CB still pending
- No clear jurisdiction between government agencies
- There are overlap in the activities of OEPP, DMCR, DOF, DNP, PCD, DEQP etc.
- Lack of collaboration between government agencies
- Marine National Park exclude people in mgt & affect people
- Present management structure is not supportive of ICM
- Difficulty to accommodate security, large scale commercial concern in ICM
- CHARM model is not used at national level or replicated
- Regulations are not well enforced
- Lack of knowledge management
- Lack of incentives for the conservation of natural resources

### Q-2: Supporting factors:

- The new constitution supports community rights for the natural resources management
- The establishment of DMCR
- An ongoing project on boat registration to collect database on fishing gear/boat by DOF
- Lessons learned from CHARM: collaboration between communities and government agencies and between government agencies]
- Existing community network
- Tourism provided alternative livelihoods but need better management
- Research and monitoring program on natural resources & fisheries statistics are available

**Q-3 & 4: Needed:**

- Need modification of the National Park Act
- Enact the DMCR Act
- Utilize the boat registration information to support management
- Capacity building is needed for provincial/ Tambon / community leader
- More bottom up planning is required
- Reform management structure for improved coordination
- Awareness relatively high, but not practiced.

**Q-4. How could this change be effected, what actions are necessary and who could do it.**

- Knowledge management
- Public awareness program on the management of BOBLME and CB-ICM
- Capacity building
- Planning and management of coastal resources by fishing communities

**Responsible actors**

- Department of Fisheries (DOF)
- Department of Marine and Coastal Resources (DMCR)
- NGOs & People Organization
- Department of National Park, Wildlife and Plant Conservation (DNP)
- Pollution Control Department (PCD)
- Office of Environmental Policy and Planning (OEPP)
- Department of Environmental Quality Promotion (DEQP)
- Tambon Administrative Organization (TAO)
- Provincial offices

## Appendix IV: Manmar

### Q-1: Current Situation:

1. There are 3 coastal provinces/division
2. Current status of CB-ICM  
"CB-ICM is just in the initiation stage and has not yet become a concrete framework"
3. There are some activities related with mangrove forest community base management established (in Irawadi Delta) funded by JICA (2007). Related with this activity are also activities related with fisheries management in the mangrove forest area supported by FAO-Italy Funding (2009)
4. Government so far only supports technical program: mangrove seedling (1995)
5. There is 1 Marine national park called LAMPI (established in 1996), under Government Management (Navy, Dept. of Fisheries, Dept. of Forestry). Some fisher communities are living surrounding the LAMPI MNP.
6. The main issue is Resources Destruction (causes: Fishing Activity (shrimps pond, poisoning), Agricultural, Fire Wood, charcoal production, logging, etc.)

### Q-2: Hindering Factors:

1. Political transitional problem, effected by government regulation
2. Negative role of navy
3. Rehabilitation Program carried without community advantages/involvement.
4. Not enough benefit for local people on exploiting the natural resources; because Elite community from the city has invested in many of the projects and the local people only act as providers of labor.

### Q-2: Supporting factors:

1. The are local wisdom relating to environmental management: Buddhism
2. There are NCA (National Committee Association)
3. National Legislation/Laws
4. Navy's role and support for resources protection
5. Development of tourism could be used as supporting factor for sustaining the natural resources
6. NGO's Support

### Q-3 & 4: Needed:

1. Rehabilitation program
2. Alternative livelihood program
3. Training and education of local people (started since 1990 but the development is too slow)
4. Baseline study for fisheries
5. Resources inventory
6. Funding support is urgent

## Appendix V: General Conclusion

Program	Malaysia	Thailand	Myanmar	Indonesia
Management of shared stocks	√		√	
Bilateral agreement	√		√	√
Economic valuation of IUU Fishing	√			
Customary resources management practices	√			
Transboundary ecosystem management			√	√
Combating IUU Fishing (MCS)			√	
Capacity building (fishing fisher, tourism, etc)		√	√	√
Student exchange programs			√	
Action program (alternative livelihood)			√	
Fisher forum		√	√	
Public Awareness Program		√		
Institutional Arrangements for cooperation				√
Development of a common vision and mission				√

## Appendix VI: Workshop Agenda

Day 1 (Botani Room, Hotel Royal)		Time
Introduction to BOBLME	Dr. Rudolf Hermes, CTA, BOBLME	10.30-10.40
Introduction to Technical Session	Co-Facilitated by PKSPL Team of Facilitators	10:40–10:50
CB-ICM Review Southeast Asia Presentation	Dr. Rudolf Hermes, CTA, BOBLME	10:50-11:20
Presentation CB-ICM Overview-Thailand	Sakanan Plathong	11:20-11:35
Presentation CB-ICM Overview – Myanmar	Bo ni	11:35-11:50
Presentation CB-ICM Overview-Malaysia	Co-management and Community based management, lessons from decentralization and experiences of local authorities (Prof. Dr. Kuperan Viswanathan, UUM Malaysia)	11:50–12:10
Lunch		12:30–13:45
CB-ICM Review and Workshop Process South Asia	Ms. Maeve Nightingale, Regional Coordinator, Regional Coastal & Marine Programme (RCMP), IUCN	13:45-14:00
CB-ICM Review Presentation South Asia	Dr. Jayampathy Samarakoon, ICM Consultant, Sri Lanka	14:00–14:30
Open Discussion	Facilitators	14:30–15:10
Introduction to Working Group	Facilitators	15:10–15:15

<b>Session 1</b>		
Tea Break		15:15–15:30
<b>Day 1 (Botani Room, Hotel Royal)</b>		<b>Time</b>
<b>Workshop 1 – National Working Group discussions</b>	Overview and consensus on status of community based fisheries and habitat management and co-management in each of the four BOBLME Southeast Asia countries (supporting and hindering factors, change required, action needed)	15:30-16:45
<b>Feedback and Synthesis from Workshop I</b>	Participants and Facilitators	16:45 – 17:15
<b>Wrap up of the Day 1</b>	Facilitators	17:15 - 17:30
<b>Dinner</b>	Venue to be determined	19:00-21:00
<b>Day 2</b>		<b>Time</b>
<b>Recap of Day 1 and Introduction to Workshop 2</b>	Co-Facilitated by PKSPL Team of Facilitators	09:00-09:15
<b>Group discussion on the future of CB-ICM in BOBLME Southeast Asia</b>	Output: Statement on 'the way forward' for CB-ICM in BOBLME Southeast Asia sub-region: Recommendations & Action Plan (to BOBLME, Governments, and/or NGOs or other facilitators) Under consideration of information / knowledge management; policy and implementation gaps; institutional and transboundary issues	09:15-12:00
Tea break		(as needed)
Lunch		12:00–13:30
<b>Feedback and Synthesis from Workshop II (Group presentations</b>	Facilitators	13:30-15:00

and Discussion)		
Tea Break	(Consolidation of Workshop Outputs)	15:00-15:45
<b>Day 2</b>		<b>Time</b>
<b>Adoption of recommendations / work plan and Wrap up</b>	Facilitators	15:45-16:15
Feedback from Participants	Participants	16:15–16:30
Closing of workshop	IPB-PKSPL and BOBLME	16:30-16:45

## Appendix VII: Workshop Participants

### List of Participants on ICM Best Practices Workshop (Southeast Asia Sub-Region)

No	Country/Name	Institution
A	Indonesia	
A.1	National Focal Point	
1	Hari Christijanto	MMAF
2	Dasminto	MOE
A.2	MMAF	
3	Tri Danny Anggoro	Head of Program Cooperation Sub-division, DG of Marine, Coastal and Small Islands Affairs
4	Syofyan Hasan	Head of Integrated Coastal and Marine Management Evaluation Section, DG of Marine, Coastal and Small Islands Affairs
5	Indah Setya Murtiharti	Staff of Data Division, DG of Marine, Coastal and Small Islands Affairs
6	Bustamin	Staff of Program Cooperation Sub-division, DG 'of Marine, Coastal and Small Islands Affairs
7	Zarochman	Staff of Program Cooperation Sub-division, DG 'of Marine, Coastal and Small Islands Affairs
A.3	MOE	
8	Agus Rusli	MOE
A.4	North Sumatera Province	
9	Wilson Simanjuntak	DKP North Utara
10	Doi Suterca Tarigan	Bapedalda North Sumatera Province
11	Hervian Tahier	KADINDA North Sumatera Province
12	Fahmi	NGO Representative
13	Seno	HNSI SUMUT
A.5	NAD Province	
14	Abdul Syakur	<b>DKP NAD</b>
15	Safrida Afriana	BAPPEDALDA NAD
16	Miftachuddin	Panglima Laot
17	Edwarsyah	Head of Center for Marine Studies, Tengku Umara University. Meulaboh Aceh Barat
18	Iskandar	HNSI NAD
A.6	Riau Province	
19	Makruf Siregar	DKP Riau
A.7	West Sumatera Province	
20	Novrial	Secretary of Marine and Fisheries Agency

	Country/Name	Institution
B	Thailand	
21	Orasa Petsalapsri	91 M.7 Natouy, Thaymuang, Phang-nga, 82120, Thailand
22	Tanu Nabnien	2/80 Sakdidej Rd. Taladneau Tumbol. Maung Phuket
23	Sakanan Plathong	Department of Biology Prince of Songkla University, Songkla
24		
C	Malaysia	
25	Evelyn The Lay Hoon	Maritime Institute Malaysia (MIMA), B 06-08 Megan
26	Kuperan Viswanathan	UUM Malaysia
27	Zubaidah Binti Anwar	
D	Myanmar	
28	Myint Shwe	Department of Fisheries Bayint Naunt Avenue Road, West Gyogone, Insein. Yangon MYANMAR
29	Ye Mon Soe	Yangon Myanmar
30	Bo ni	Yangon Myanmar
31		
	Resources Person	
32	Rudolf Hermes	FAO - BOBLME
33	Tridojo Kusumastanto	CCMRS IPB
34	Suseno Sukoyono	MMAF
35	Rokhmin Dahuri	CCMRS
36	Maeve Nightingale	Regional Coordinator, Regional Coastal & Marine Programme (RCMP), IUCN
37	Jayampathy Samarakoon	ICM Consultant, Sri Lanka
	Facilitator	
38	Ruddy Suwandi	
39	Luky Adrianto	
40	Am Azbas Taurusman	
	Co- Facilitator	
41	Isdahartati	
42	Sinta Hasriningtyas	
43	Andy Afandy	
44	Solihin	
	Workshop Organizer	
45	Arief Trihandoyo	
46	Agus Soleh	
47	Ramdani	

## Appendix VIII: Acronyms

ADB	Asia Development Bank
AECEN	Asian Environmental Compliance and Enforcement Network
AMDAL/EIA	Environmental Impact Assessment
ASEAN	Association of Southeast Asian Nations
AusAID	Australia Agency for International Development
BANCA	Biodiversity and Nature Conservation Society
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BNP	<i>Bunaken</i> National Park
BOBLME	Bay of Bengal Large Marine Ecosystem
BOBP	Bay of Bengal Programme
BOB	Bay of Bengal
CBD	Convention of Biological Diversity
CCEEP/PEMP	Coastal Community Economic Empowerment Program
CCMRS	Center for Coastal and Marine Resources
CCRF	Code of Conduct for Responsible Fisheries
CECU	Coastal Engineering Control Unit
CEPI	Canadian Environmental Project in Indonesia
CEMP	Coastal Environmental Management Project
CIDA	Canadian International Development Agency
CITIES	Convention in International Trade in Endangered Species
COBSEA	Coordinating Body on the Seas of East Asia
COREMAP	Coral Reef Rehabilitation and Management Project
CRM Indo	Coastal Resources Project Indonesia
CRITC	Coral Reef Information and Training Center
EEZ	Exclusive Economic Zones
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GEF	Global Environment Facility
GESAMP	Group of Experts on the Scientific Aspects of Marine Environmental Protection
CRMP	Coastal Resources Management Project
ICM	Integrated Coastal Management
ICZM	Integrated Coastal Zone Management
ICZPM	Integrated Coastal Zone Planning Management
ICRI	International Coral Reef Initiative
ICSF	International Collective in Support of Fishworkers
IOC	Intergovernmental Oceanographic Commission
IOGOOS	Indian Ocean Global Ocean Observing System
IOSEA	Indian Ocean - South-East Asian
IOTC	Indian Ocean Tuna Commission
IRCOM	Integrated River Basin Coastal and Ocean Management
IUCN	International Union for Conservation of Nature
ITTO	International Tropical Timber Organization
JIGMER	Joint Indonesia-Germany Marine Ecosystem and Resource
KINMP	Komodo Island National Marine Park
KOICA	Korea's International Cooperation Agency
MCRMP	Marine Coastal Resources Management Project
MFF	Myanmar Fisheries Federation

MFF	Mangrove for the Future
MPAs	Marine Protected Area
MMAF	Ministry of Marine Affairs and Fisheries
MREP	Marine Resources Evaluation and Planning
MSY	Maximum Sustainable Yield
NACA	National Advisory Committee for Aeronautics
NCEA	National Commission for Environmental Affairs
NCECC	National Coastal Erosion Control Council
NGOs	Non Government Organization
NPDA	National Planning and Development Agency
NRMP	Natural Resources Management Project
NSDI	National Spatial Data Infrastructure
OTEC	Ocean Thermal Energy Conversion
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PSC	Project Steering Committee
RCU	Regional Coordination Unit
SAARC	South Asian Association For Regional Cooperation
SACEP	South Asia Co-operative Environment Programme
SAP	Strategic Action Plan
SEAFDEC	Southeast Asian Fishery Development Centre
SIDA	Swedish International Development Cooperation Agency
TAC	Total Allowable Catch
TAO	<i>Tumbol</i> Administrative Organization
TDA	Transboundary Diagnostic Analysis
TNC	the Nature Conservancy
UNDP	United Nation Development Programme
UNEP	United Nation Environmental Program
UNFCCC	United Nation Framework Convention on Climate Change
USAID	United State Agency for International Development
WB	World Bank
WCS	Wildlife Conservation Society
WWF	World Wild Fund

## Appendix IX: Photo Documentation









Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka and Thailand are working together through the Bay of Bengal Large Marine Ecosystem (BOBLME) Project and to lay the foundations for 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.

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](http://www.boblme.org)



Sida



Norad

