

# The Effective Role of Dongying Interagency Coordinating Mechanism for Implementing Integrated Coastal Management Program

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## Key Message

- An interagency coordinating mechanism is critical in the course of developing and implementing an integrated coastal management (ICM) program. The mechanism's effectiveness very much depends on its composition, terms of reference, leadership, and interagency participation in addressing the management complexity of coastal areas.

## Abstract

As the marine economy of Dongying City accelerated, the traditional sector and issue-oriented management practices needed improvement. The Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) provided an opportunity to Dongying City to learn and initiate ICM practices. Over the past ten years, the government effectively

established an ICM Committee, an interagency cooperation and collaboration mechanism to address sustainable development concerns of its coastal and marine resources. The committee, comprising 16 departments, prepared coordinated development plans for land and sea and advanced the marine economy by strengthening the administrative capacity of Dongying City in addressing coastal development challenges. Under the structure of the ICM committee, all the stakeholders could raise their management concerns, express their opinions, and forge agreements among themselves. With the help of the ICM Committee, decisionmaking on interdepartmental issues and project implementation were facilitated more efficiently. During the past years, some projects were designed and successfully implemented, such as the Guangli River Pollution Reduction Project, the Integrated Coastal Management Plan of Dongying City and its State of the Coast (SOC) Report.

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## Background

In 2005, Dongying City joined the GEF/UNDP/PEMSEA Project on the Implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) as a parallel site to develop and implement an ICM program with the goal of balancing economic development and environmental conservation as well as sustainable use of marine resources.

Dongying's efforts in the planning and management of its coastal areas and adjacent waters benefitted from the experience and working modality of Xiamen's ICM demonstration project (Hong, 2006). For the purpose of ensuring effectiveness in the implementation of the ICM program, the city government, following the example of Xiamen City, established an interagency coordinating mechanism to facilitate and coordinate the development and implementation of its ICM program.

Like most coastal cities or municipalities, Dongying City was relatively new to integrated planning and management, especially the challenges of interagency coordination of sector policy and agency functions in achieving a common vision. Of special importance was the leadership role of the Ocean and Fishery Bureau (OFB) vis-à-vis several other ocean-related line agencies. Of equal importance was the challenge of involving nongovernment sectors and communities.

Over a span of ten years, Dongying City successfully implemented various ICM-related projects/activities. The coordinating mechanism continued to play a predominant role in guiding the coastal and marine related activities towards sustainable development goals. This case study focuses on the formation of the coordinating mechanism, its key roles, activities undertaken, impacts, and obstacles confronted during the course of ICM program development and implementation in Dongying City, especially on

the leadership role of the lead agency and the coordinating mechanism in addressing challenges. Major lessons are distilled from practical experience.

## Approach and Methodology

The Ocean and Fishery Bureau (OFB) of Dongying City has management responsibility for mineral and oil extractions, as well as other natural resource use activities such as fishery and aquatic farming, which involve a large sector of the coastal communities. OFB plays a key role in ensuring the sustainable use of the coastal and marine natural resources within its administrative boundary (Box 1). Like many coastal cities and municipalities in the country, management challenges in the coastal area include: (a) conflicts arising from multiple uses of the coastal and marine resources; (b) overlapping responsibilities and competing budgetary allocation among several concerned agencies; (c) lack of clear policy direction; (d) coastal management challenges; (e) lack of political will; and (f) lack of capacity to undertake ICM.

Since the major purpose of the ICM project in Dongying City was to verify the ICM working methodology developed in Xiamen, the project received the endorsement of relevant authorities from the central and local governments. One of the important steps in successful ICM program was to ensure the establishment and functioning of an interagency coordinating mechanism. Such mechanism served as the key driver in facilitating strong government commitment in terms of human and financial resources and in promoting interagency collaboration and stakeholders' involvement, especially in minimizing interagency conflicts. Following the working example of Xiamen and PEMSEA's guidelines, OFB facilitated the establishment of a coordinating mechanism by securing the endorsement of concerned agencies and the approval of the local authority.

**Box 1. Key functions of OFB.**

- Formulate and organize the implementation of ocean and fishery economic development plans and policies.
- Monitor and evaluate marine economy and release information.
- Maintain the regulation of marine and inhabited island use as well as the island ecology.
- Protect the marine environment and eco-environment of fisheries area.
- Formulate and organize the implementation of policy measures in promoting fisheries industry.
- Develop marine disaster warning and fishery's disaster prevention and reduction plans.
- Supervise and manage the quality and security of aquatic products.
- Formulate and organize the implementation of the development planning of ocean and fishery science and technology.
- Conduct research on advanced and application technology in ocean and fishery, transfer the achievements, and popularize the technology.
- Formulate and organize the implementation of standards and technical manuals related to ocean and fishery.
- Promote external economic and technological cooperation and exchanges.
- Conduct marine monitoring, fishing boats inspection and supervision of fishery policies and fishing ports.
- Undertake other tasks assigned by the municipal party committee and municipal government.

An interagency coordinating mechanism is an essential institutional arrangement in the form of a committee or council that should be established in the early phase of setting up an ICM program. Before its establishment, marine-related agencies of Dongying City planned and managed coastal and marine affairs separately. During the implementation of the third phase of the PEMSEA

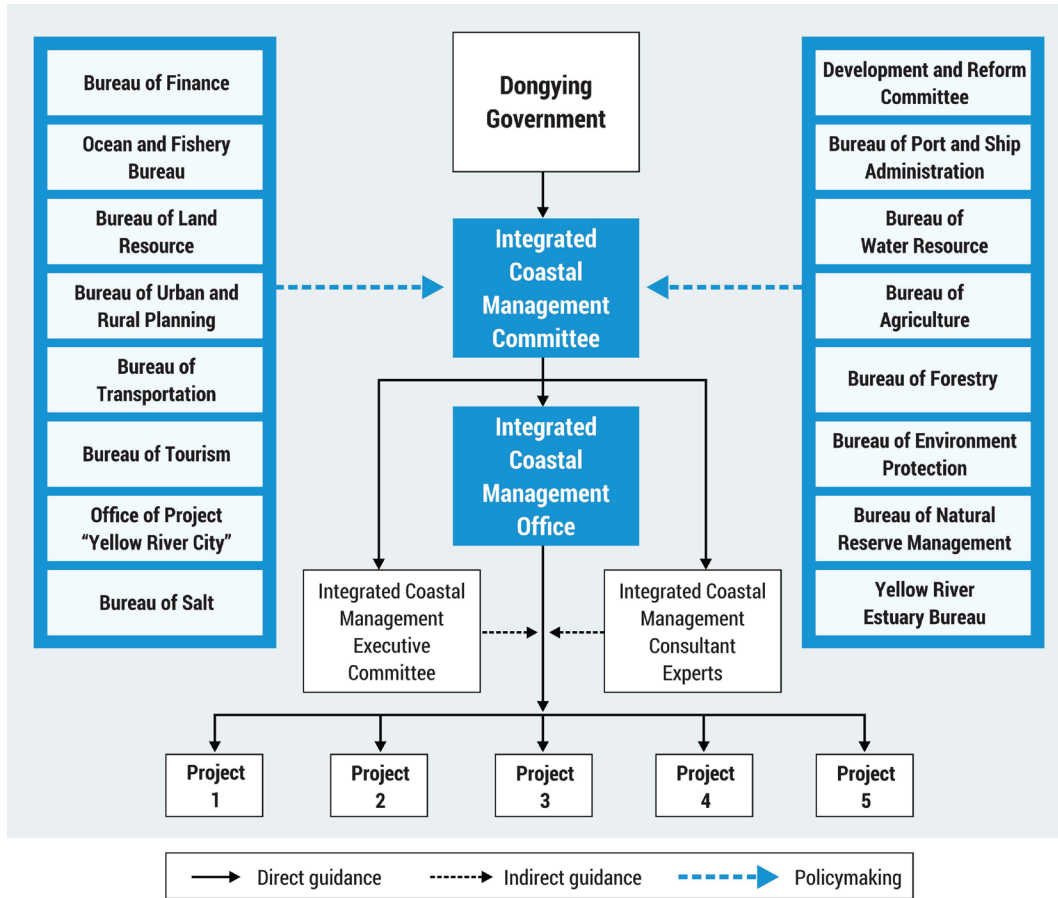
program and with the guidance of the National Task Force (NTF), Dongying City established its interagency coordinating committee in 2010. The ICM Committee was composed of 16 agencies as shown in [Box 2](#).

The vice mayor of Dongying City served as the chair of the ICM Committee, while the directors or deputy/vice directors of concerned agencies served as members, thus ensuring a high-level policy and management decision body to coordinate, direct, support, and review the planning and implementation of various stages of the ICM program. The committee also served as a platform for consultation wherein concerned agencies expressed their views, needs, grievances, and recommendations related to coastal and marine affairs. Such coordinating mechanism was expected to effectively eliminate or reduce interagency or sector conflicts; reduce inefficient use of financial resources; and promote interagency cooperation towards achieving cost-effectiveness.

**Box 2. Agencies of the Dongying ICM Committee.**

1. Bureau of Agriculture
2. Bureau of Environment Protection
3. Bureau of Finance
4. Bureau of Forestry
5. Bureau of Land Resource
6. Bureau of Natural Reserve Management
7. Bureau of Port and Ship Administration
8. Bureau of Salt
9. Bureau of Tourism
10. Bureau of Transportation
11. Bureau of Urban and Rural Planning
12. Bureau of Water Resource
13. Development and Reform Committee
14. Management Office of Project "Yellow River City" (recovery and protection of Guangli River)
15. Ocean and Fishery Bureau
16. Yellow River Estuary Bureau of Yellow River Conservancy Commission (YRCC).

Figure 1. The ICM Committee of Dongying City.



The structure of the ICM Committee is shown in Figure 1. The local government established the ICM Committee with members from concerned agencies, representatives from the State Ocean Administration (SOA), and PEMSEA to provide advisory support during the early phase of implementation. The OFB served as the lead agency for the ICM program and hosted the ICM Office.

The day-to-day operation was the function of the ICM Office, which executed decisions of the ICM Committee. An ICM Executive Subcommittee was also established to provide implementation guidance to the ICM Office with an ICM experts group providing technical advice. The Executive Subcommittee, chaired by OFB, provided guidance

and direction on the implementation of the ICM program, while the ICM experts group, composed of selected multidisciplinary senior experts, provided the needed scientific advice for the development of management measures.

The ICM Committee held periodic meetings to discuss and decide on the establishment of a common vision and mission, development of strategies and action plans as well as policy and budgetary concerns. The committee also addressed issues emanating from concerned member agencies. When a special meeting was needed, the Executive Subcommittee would request the municipal government to organize an ICM Committee meeting.

## Results

### Major achievements

1. **The ICM plan.** Through the efforts of the ICM Office, a long-term city government-funded ICM Plan (2010–2020) was finally developed and adopted by the ICM Committee. The plan served as a guide for Dongying City for the sustainable management of its coastal and marine areas, by ensuring sustainable use of coastal and marine resources, promoting sustainable industrial and agricultural development, and protecting the functional integrity of the ecosystems. A common vision for the sustainable development of the coastal and marine areas was agreed upon as a guide for strategic planning.

All the relevant agencies were able to participate in the preparation of the plans, which took into consideration their concerns and proposals. Before the plans were developed, a comprehensive analysis of the state of the coastal and marine areas in Dongying City was undertaken to identify socioeconomic and environmental concerns, policy and management deficiencies, information gaps, and the design of holistic action plans (Dongying Government, 2003; OFD, 2004; OFB, 2007a-f; EPB, 2010b).

The management plans focused on the following:

- a. **Capacity building.** The committee placed much importance on building the necessary improved local institutional ICM capacity for the implementation of coastal strategy and action plans, and the capacity of the ICM coordinating mechanism, and strengthening laws and regulations and their enforcement.
- b. **Disaster management.** The committee secured government approval and support in establishing the necessary infrastructure for disaster prevention and reduction: a coastal disaster forecast system, a coastal disaster emergency response system, and an oil spills preparedness and response system (Dongying Government, 2009; OFB, 2014).
- c. **Environment management.** The committee supervised the review, evaluation and updating of the environmental situation: evaluation of the impacts of the coastal industry; prevention and control of pollution from land; recovery of environmentally degraded coastal areas; and establishment of an environment monitoring and management system (OFB, 2007b; EPB, 2010a).
- d. **Natural resource management.** The committee coordinated the conservation and restoration of important habitats including biodiversity and the development of sustainable fishery and aquaculture (EPB, 1994; OFB, 1997; LRB, 2012).
- e. **Technological and scientific support.** The committee supported the establishment of a coastal monitoring network and initiatives in carrying capacity assessment of coastal areas; assessment of ICM effectiveness; and establishment of a GIS for coastal areas (STB, 2007).
- f. **International cooperation and exchanges.** The committee endorsed and promoted international cooperation and information exchange to share experiences and lessons with other ICM initiatives in the country and abroad.
- g. **Public awareness and education.** The committee promoted public environmental

awareness, encouraged activities involving volunteers for environmental protection, and strengthened environmental education for school students.

## 2. Guangli River Pollution Reduction Project.

The Guangli River Project was one of the success stories of Dongying City. Guangli River originates from the northern Kenli district, passing southeast through the central part of Dongying City. Before 2010, the river received most of the domestic sewage of the city, which heavily polluted the river. The river water was foul, stank, and certainly not suitable for aquatic wildlife. The city government included Guangli River improvement as a priority project of the ICM program. Through its implementation, the sources of key pollutants were identified by experts with the support of various agencies. The project also set the water quality target and then developed a comprehensive action plan for pollutant

reduction. Funding was made available through the central and local governments. The key project activities included:

- a. Infrastructure development for pollutant treatment – sewage interception and collection, expansion of sewage treatment and related supporting facilities, channel cleanup and improvement of source water.
- b. Pollutant emission reduction – control of pollutants from industries and nonpoint sources.
- c. Ecological restoration, management and landscaping – restoration of wetlands, greening and landscape improvement.

Over the last ten years, the water quality of Guangli River gradually improved and was able to meet the approved water quality standards. Fish and bird populations in the river have reportedly increased (Figure 2; EPB, 2005; EPB, 2010a; Sina, 2013; Dazhong, 2015). There were

**Figure 2.** Guangli River after the Pollution Reduction Project.

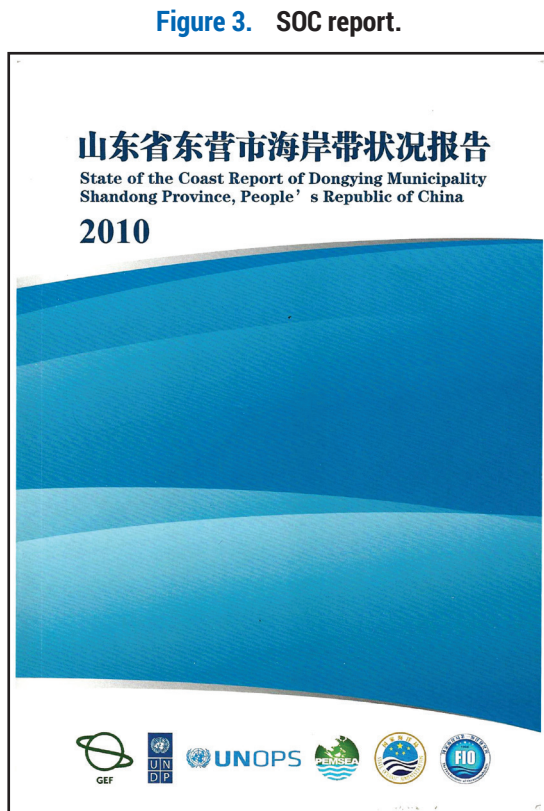


more recreational parks being created for the local residents because of the greening and landscaping.

3. **SOC Report.** The SOC is a comprehensive reporting system (Figure 3) which identifies the changes in socioeconomic and environmental conditions arising from policy and management interventions in a given coastal area (generally within the administrative boundary of the local government). It is based on a series of performance indicators. The SOC is meant to take stock of the outputs and outcomes against inputs arising from the implementation of the ICM program and to identify weaknesses, gaps, and deficiencies for improvement. It also helps to enable policymakers and managers to assess the effectiveness and impacts of their investments.

Upon the recommendation of the ICM Committee, the city government decided to prepare and release the SOC report to measure its performance on the self-funded ICM program.

A working group for the SOC report was established under the supervision and guidance of the ICM Committee. Using PEMSEA's SOC Guidebook, the working group collected data and information with the cooperation and support from line agencies and technical advice from the Technical Experts Group. Most performance indicators in the guidebook were followed except a few which were modified in consideration of the specific prevailing conditions.



Many oil wells and production plants are located in Dongying City. As such, the petroleum industry plays a significant role for both national and local economy. Thus, a new indicator, "Oil pollution ratio of coastal area" was added to the indicator system. A total of 32 performance indicators were selected to identify the trends from 2005 to 2010, of which 13 were related to coastal governance and another 20 related to sustainable development aspects such as natural disaster prevention and management, ecosystem and biodiversity conservation and management, pollution, fisheries and aquaculture, etc. (Liu, 2012).

**Figure 4. A summary of outcomes of the Dongying SOC report (2010).**

Table 1: Coastal Governance			
Policy and rules	Indicator 1	Local policy and rules	3
	Indicator 2	Law force	3
Strategy and plans	Indicator 3	Regional strategy and plans	3
	Indicator 4	Local strategy and plans	3
Institution and mechanism	Indicator 5	Institution for ICM	3
	Indicator 6	Coordination mechanism for ICM	1
Financial support	Indicator 7	Management fund	3
	Indicator 8	Sustainable financial resource	3
Management capability	Indicator 9	Hardware construction	3
	Indicator 10	Software construction	3
Public participation	Indicator 11	Public awareness	3
	Indicator 12	Participation of stake-holders	3
Table 2: Sustainable Development Aspect			
Social-economy sustainability	Indicator 13	Population and economy density	3
	Indicator 14	Contribution of oceanic industry in GDP	3
	Indicator 15	Livelihood Input	3
	Indicator 16	Environmental monitoring system	3

Environmental support capability	Indicator 17	Pollution load to sea water	1
	Indicator 18	Coastal sea water quality	1
	Indicator 19	Benthic biodiversity	1
	Indicator 20	Environmental management measures for coastal area	3
	Indicator 21	Ratio of incorporation of environmental protection investment over GDP	1
	Indicator 22	Oil pollution ratio of coastal area	3
	Indicator 23	Available sea area	3
	Indicator 24	Available coastline	1
	Indicator 25	Renewable energy	1
	Resource sustainability	Indicator 26	Seafood supply
Indicator 27		Natural wetland area	1
Indicator 28		Management measures for coastal resources	3
Indicator 29		Construction and management of marine protected network	3
Disaster prevention	Indicator 30	Risk management consciousness	1
	Indicator 31	Social economic loss due to disasters	1
	Indicator 32	Disaster prevention capability	3

The summary of outcomes of the SOC report are presented in Figure 4.

The SOC report was evaluated by the Technical Experts Group and PEMSEA, and published in 2012. It was the first time that the city government undertook such a comprehensive assessment of its management measures. The performance indicators allowed it to track the socioeconomic and environmental impacts, trends, and deficiencies to further improve its adaptive management measures. Being one of the ICM sites in East Asia, Dongying's SOC served as a working model for ICM reporting that can be compared to those ICM practices in China and the region at large.

## Lessons Learned

Much was learned from the ICM program during the first five years (2005–2010) of implementation. Considerable achievements were made in terms of improving governance and achieving on-the-

ground changes through the implementation of environmental activities. Throughout the ICM planning and implementation process, the ICM Committee played a key role, particularly, in the following areas:

1. **Forging strong commitment and support of the local government.** The leadership of the Dongying City government gave much needed policy and financial support to enable the implementation of the ICM program, especially when it was locally funded and implemented by local human resources with marginal international technical or financial support. As such, strong political commitment was critical for ensuring smooth implementation of many planned projects especially those requiring substantial financial investments.
2. **Encouraging active involvement and collaboration of the relevant agencies throughout the ICM cycle.** Such endorsement from the ICM Committee, in part, contributed to strengthening interagency cooperation. The

willingness to cooperate was also attributed to the following:

- a. The common vision of the coastal strategy for the development of the ICM program and the agreed collective mission in achieving sustainable development objectives;
- b. The availability of a common platform for resolution of interagency and sectoral conflicts. As such, the concerned agencies benefited from negotiation, clarification and dialogues in case of disputes; and
- c. Visible outputs and outcomes arising from the implementation of the ICM program increased confidence, appreciation, and support from participating agencies, stakeholders and the general public. The ICM initiatives increased public involvement in city building, which was further enhanced by honorary awards bestowed to Dongying City, such as the “National Civilized City,” “National Demonstration City for Environmental Protection,” “National Experimental Area for Sustainable Development,” and “China Excellent Tourism City”.

Over a span of ten years, Dongying City diligently implemented ICM programs and achieved remarkable results. It contributed to the GDP growth of the city. From 2009 to 2014, Dongying’s GDP increased from RMB 205.9 billion to RMB 343.1 billion, with an average growth rate of slightly more than ten percent. Another benefit was the development of management and technical capacities at all levels of governance, especially those involved in the implementation of the ICM programs, through “learning by doing” and available training opportunities and exchange programs. Members of the ICM Committee benefited from increasing knowledge and experience in managing the complexity

of the coastal areas and more importantly, in appreciating the value of working together.

Some major challenges to the sustainability and efficiency of the coordinating mechanism were encountered. But as the experiences of the ICM Committee matured, these were addressed in due course:

1. The changes of leaders and key members of the ICM Committee could influence the coordinating efficiency, performance and stability;
2. The ICM Committee was initially operating as a temporary mechanism with ad hoc meeting schedules based on specific needs. Eventually the committee became a permanent mechanism of local government; and
3. The ICM Committee initially did not clearly define its area of coverage and responsibilities, which caused uneasiness in interagency cooperation, budgetary allocation, etc. Terms of reference and scope and areas of coverage were identified and adopted by the committee members.

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