CASE STUDY 2-5
Implementing Adaptation Measures

Integrated Coastal Management Programme (ICMP) in Mekong Delta, Vietnam

Outline

Background
The Mekong Delta is located in the south-western part of Vietnam, which is home to around 17 million people. It is Vietnam's most important agricultural region, contributing around 52% of the country's rice production. The Mekong Delta is also a biological hotspot, with many endemic species.

According to official studies, 38% of the Mekong Delta is at risk of being underwater by 2100, with some parts of the coast being eroded at a pace of 30 meters a year. Furthermore, the protective mangrove forests are in considerable decline, and the intrusion of saltwater into ground water is becoming a problem, because it affects fertile soils negatively.

In addition, human activities in the region, such as clearing coastal forests, altering natural waterways, and adopting intensive agriculture and aquaculture practices are threatening the ability to provide essential ecosystem services in the Mekong Delta.

In response, the government of Vietnam launched the Integrated Coastal Management Programme (ICMP) in 2011 in cooperation with Germany and Australia.

Objectives
Overall goal:
* To build the capacity to make the Mekong Delta region more resilient to climate change

Sub-goals:
* To achieve higher resilience through the following activities:
  1. Protecting the coast using the ecosystem
  2. Supporting farmers in agriculture and aquaculture
  3. Promoting cooperation among provincial governments

Activities
The project consists of two phases, and the second phase of the project aims at scaling up the activities described below.

Using the ecosystem to protect the coast:
* In response to coastal erosion, the ICMP has developed cost-effective and eco-friendly solutions to protect the coastline using T-shaped breakwater fences. The coastal protection measures have actually succeeded in reclaiming 180 meters of land in two years (See Figure 2-5-1).

Supporting farmers in adapting to climate change:
* The ICMP applies new techniques that enable farmers to better cope with climate change impacts. The new techniques include Alternative Wetting and Drying (AWD), which can reduce the use of water and pesticides by 30% and increase farmers' income by up to 40%. Improving mangrove aquaculture techniques also contributes to raising their profits by 27%.
Promoting cooperation across borders:
* In the Mekong Delta, there are various provinces with different conditions. The ICMP aims at promoting cooperation among provinces and the national government so that it can address inter-provincial issues effectively.

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**Institutional arrangements**

The Ministry of Agriculture and Rural Development (MARD) is the main government agency in implementing the ICMP: At a local level, its subsidiary bodies, called the Department of Agricultural and Rural Development (DARD) and the Provincial People’s Committee (PPC), play decisive roles in implementing sustainable and climate-resilient practices such as newly implemented techniques for coastal protection, agriculture, and aquaculture. Southwest Steering Committee coordinates the five provinces.

Figure 2-5-2 shows project focus area of the ICMP. It includes five provinces (Soc Trang, Bac Lieu, Ca Mau, Kien Gian, and An Giang) in the Mekong Delta.
Impacts of both climate change and human development activities in the Mekong Delta region threaten the capability to provide the ecosystem services that communities depend upon. The challenges and problems are closely interlinked among sectoral issues in the coastal region. For example, mangrove rehabilitation towards coastal protection; enhanced livelihood by implementing new technologies in agricultural and aquaculture.

In the 1st phase (2011–2014), project activities were conducted at national and local levels, including five provinces. In the 2nd phase (2015–2017), the ICMP is working to scale up its project activities so that it can ensure that the projects are widely implemented in the region (See Figure 2-5-4).

To make the Mekong Delta more resilient, the ICMP provides the following core elements: 1) coast protection, 2) supporting farmers, and 3) promoting cooperation across borders.

The following activities have been implemented in the ICMP (See Figure 2-5-5).
- Implementing breakwater fences
- Conducting mangrove rehabilitation
- Introducing rice production techniques, Alternate Wetting Drying (AWD)
- Providing aquaculture value chain assessment

The following scheme has been set up for continuously monitoring the planted mangrove forest (See Figure 2-5-6).

**Monitoring and Evaluation (M&E)**

The following scheme has been set up for continuously monitoring the planted mangrove forest (See Figure 2-5-6).

**Figure 2-5-4 History of Policy Framework of ICMP**

**Figure 2-5-5 Technical Assistance Activities in ICMP [1]**

**Figure 2-5-6 Monitoring Framework for ICMP [5]**
Lessons Learned and Policy Recommendations

Inter-provincial cooperation for effective regional coastal management

At a regional level, inter-provincial cooperation among local governments is crucial for effectively implementing projects such as coastal management. The ICMP was established to solve multiple region-wide issues, including coastal protection, water resources management, agriculture, and aquaculture, which had been addressed separately in each province. Through the ICMP, relevant stakeholders at national and provincial levels share common issues of the provinces in the Mekong Delta region and have an opportunity to find comprehensive solutions and to implement them effectively.

Proper techniques regarding mangrove rehabilitation, agriculture, and aquaculture could be identified separately through on-site research activities at an individual province level. Applying the solutions obtained from ICMP in other provinces could contribute to the effective implementation of sustainable development at a regional level.

Institutionalized vertical and horizontal (inter-provincial) cooperation by establishing a regional committee, which could act as a bridge between local and the national governments and promote mutual communications among them, is essential for successfully implementing the solutions obtained from ICMP.

Enhance institutionalization for scale up of ICMP

A key to successfully expanding good practices of ICMP throughout the Mekong Delta region will be to develop an effective institutional framework under which relevant stakeholders (e.g. government officials, farmers, and researchers) at national and provincial levels can cooperate.

Specific manuals and guidelines for implementing technologies would also be good references for relevant stakeholders to understand how to implement technologies and to learn about their effects. It would be useful for the national government, such as MARD, to provide such information as national guidelines.

CONTACT INFORMATION

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SOURCES

[8] Interview with Mr. Benjamin Hodick, Senior Technical Advisor, GIZ (August 31, 2015)
[9] Interview with Mr. Phan Van Hoang, Project Coordinator, Sustainable Management of Coastal Forest Ecosystems in Bac Lieu Province, GIZ (August 31, 2015)
[10] Interview with Mr. Nguyen Van Son, Director of ICMP Programme, Ministry of Agriculture and Rural Development (MARD), (September 3, 2015)