

### **3-3. Outlook for the Alleviation of Issues and Risks Faced by the Poor in the Mekong River Delta: A Case Study of Ben Tre Province**

#### **Introduction**

The Mekong River Delta, located in southern Vietnam, has led Vietnam's agricultural and economic development. In recent years, however, the daily lives of the people who live in the Mekong Delta have been threatened as never before. One of the reasons for this is the rise in sea level brought about by climate change.

A 2007 World Bank report (Dasgupta et al. 2007) states that Vietnam is one of the countries of the world that will be most affected by climate change. A one-meter rise in sea level is predicted to have impacts on roughly 10% of the population. In 2009, Vietnam's Ministry of Natural Resources and Environment prepared a report entitled *Climate Change, Sea Level Rise Scenarios for Vietnam* (Bo Tai Nguyen va Moi Truong 2009) and the various ministries have now begun to take specific countermeasures based on the scenarios, such as constructing dikes. According to the latest scenarios published in 2012, the impacts of climate change are classified into three levels. The impact of the median scenario, a one-meter rise in sea level, would result in 39% of the delta area being inundated by the sea. The worst-case scenario of a two-meter rise in sea level would result in more than 92% of the delta being immersed (Nguoi Lao Dong 2012).

It is also said that the water volume flow rate of the Mekong River as it flows through the delta could be reduced by 20 to 30% (VTV 2013). If the flow rate of the Mekong River decreases, seawater will inevitably flow inland from the river mouth, expanding the problems of salt damage. This article describes the issues currently faced by the poor who reside in the Mekong Delta and the outlook for the future. It is based on the results of an interview survey conducted recently at a rural development project implemented by the author in Binh Dai District, Ben Tre Province, as a case study of problems experienced in the midst of this changing environment.

#### **Prawn Culture Blues**

Ben Tre Province, located roughly 80 km southwest of Ho Chi Minh City, has a population of approximately 1.25 million people. Being surrounded by estuaries of the Mekong River, Ben Tre is said to be one of the provinces of Vietnam that will be most severely affected by sea level rise. Binh Dai District lies about 50 km east of the provincial capital of Ben Tre, and consists of 20 towns and villages with a total population of approximately 140,000 people. Facing the East China Sea, the people who live along the coastline make a living from salt farms and harvesting natural fish and shellfish. Those living inland mainly practice wet rice farming and coconut cultivation. Since the early 2000s, there has been an increasing shift toward high cash-value fruit and prawn aquaculture, and the cultivation of rice for export.

In Thanh Phuoc Commune (population 10,005) on the coast of Binh Dai District, many of the commune's residents formerly made a living from salt farms, harvesting natural prawns and fish, and wet rice cultivation. When the prawn aquaculture boom began in the beginning of the 2000s, large numbers of residents converted their wet rice fields and salt farms into aquaculture ponds. Profits were

made from prawn farming for only a few years, however, after which the prawns released in the ponds died from pollution of water sources due to excessive use of cash inputs such as industrial feed and pharmaceutical chemicals, leaving the commune residents burdened with debt.

Faced with this situation, some of the residents have turned to extensive prawn cultivation, utilizing the rise and fall of the tide in the dry season, and in the wet season they cultivate traditional rice varieties that grow even in salty areas, releasing ducks into the rice fields so that the ducks and rice grow together. A resident, Mr. A, who shoulders a debt from prawn culture says, “I can get income at the market every day by selling crabs and prawns that come in from the water channels. Growing rice and raising ducks simultaneously gives us an abundant dinner table. I’m not going to do any more of that intensive prawn culture”<sup>1</sup>.

## Rice Culture Blues

Chau Hung Commune (population 5,643), located roughly 25 km inland from the coast, suffered severe salt damage for the first time in 2013. Mr. B, a resident of this commune, makes a living by raising livestock on approximately 0.2 hectares of land. In 2011, hoping to expand the scale of his pig-raising business, Mr. B borrowed money from the government-operated Agribank, but the price of pork plummeted due to the outbreak of an infectious disease known as “blue-ear pig disease”<sup>2</sup>, leaving Mr. B’s business in the red. In 2012, he attempted to raise around 1,000 ducks, but 500 of them died due to the effect of agricultural chemicals. The price plunged again when he marketed the remaining 500 birds, increasing Mr. B’s debt burden. At the end of 2012, in an attempt to resolve his deepening debt, Mr. B rented 2.7 hectares of farmland to grow rice, but suffered salt damage and the harvest was almost totally wiped out. Only the partially withered rice plants remained in the fields.



Rice plants that have withered due to salt damage.

Mr. B is now working on raising ducks as he participates in the Seed to Table activities<sup>3</sup>, of which the author is the representative. He has successfully raised 200 ducks from an original 25 birds he was able to borrow. Mr. B says, “I will continue to grow rice because I still have to pay off the remaining debt and the rent on the wet rice fields. As well as going to work in Ho Chi Minh City, I’ll try to succeed raising ducks and somehow earn some cash.”

In February 2013, nearly two months earlier than in average years, seawater began to seep into Chau Hung Commune’s water channels. This affected one third of the wet rice field area and had a serious impact on the local people, who rely on the water channels for domestic water. In Binh Dai District, not only Chau Hung Commune, but many communes such as Phu Thanh and Thoi Lai Communes also suffered salt damage, with approximately 300 hectares becoming unusable. In Ben Tre Province, similar problems have also been seen in Ba Tri, Giong Trom, Thanh Phu, and other districts, and it is expected that the damage will continue to increase in the future<sup>4</sup>.

## Outlook for the Future

Based on “Scenarios” by the Ministry of Natural Resources and Environment, Ben Tre Province has already begun to construct dikes along its sea coast to prevent erosion of the coastline and floodgates to stem the intrusion of seawater inland. These projects have only just begun, however, and they may take a considerable amount of time to complete. In the meantime, the flow rate of the Mekong River will decline, the sea level will continue to rise, and salt damage will worsen, forcing the burden of early countermeasures on farmers.



Small-scale farmers carrying out duck farming and extensive prawn cultivation in Thanh Phuoc Commune.

It will be necessary for farmers living in areas which have previously had no experience with salt damage, such as Chau Hung Commune, to protect their livelihoods by reducing the number of rice harvests per year, planting hardy salt-tolerant crops during the dry season, practicing mixed farming such as integrated duck and rice farming, and devising methods to produce diverse agricultural commodities using methods that give high yields even on small areas of land. In communes located on the coast, such as Thanh Phuoc Commune, it may be necessary to implement low-risk agricultural methods that take advantage of local conditions, such as Mr. A’s combination of extensive prawn culture and integrated duck and rice farming. In the meantime, the people of Binh Dai District, Ben Tre Province continue their trial-and-error adaptation to climate change.

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1. Based on an interview survey conducted in Thanh Phuoc Commune in March 2013
  2. Porcine reproductive and respiratory syndrome virus (PRRSV)
  3. For more information on Seed to Table, visit: <http://seed-to-table.org/activities.html>
  4. Based on an interview survey conducted in Chau Hung Commune in March 2013 and VTC14 News on March 30, 2013