CHAPTER VI
CONCLUSION AND RECOMMENDATIONS

According to the prediction of the future sea level rise, it was found that the increase sea level possibly affects the areas and the locals in Bang Khun sai sub-district. As a result, this research mainly focuses on the valuation of the willingness to pay of the locals in Bang Khun sai sub-district in order to decrease the impacts of a sea level rise in many aspects, i.e., the diminution of the loss of income from various jobs, the reduction of the frequency and the duration of flooding, and the decrease of the loss of the mangrove forests and the mudflat areas, by applying the choice experiment method. The choice experiment method was conducted by using the questionnaires to interview 380 locals in Bang Khun sai sub-district. Including the in-depth interviews and the thematic analysis to collect all possible means to handle a sea level rise situation for Bang Khun sai areas, based on the information obtained from 9 relevant stakeholders. The conclusions of this research and the recommendations can be displayed as follows:

6.1 Conclusion

In conclusion, the locals at Bang Khun Sai sub-district are willing to pay for minimizing impacts from a sea level rise at 830 Baht/person/year or 5,790,910 Baht/year. It is mostly emphasized in minimizing impacts in the loss of the mangrove forests and mudflat areas, followed by minimizing impacts in the loss income from pedal board clams, loss income from aquaculture, and decreasing the frequency and the duration of flooding, respectively. Furthermore, it found that people living in the upland area, highly educated people, and understand problems of sea level rise and potential impacts, either gave value or emphasized in natural resource and housing protection from a sea level rise more than people living in the lowland area, lower educational level, and did not understand about the problems.

The findings of this research, that the locals at Bang Khun Sai sub-district are willing to pay in order to reduce the impacts from a sea level rise at 830 Baht/person/year, show the potential to establish an operational fund in the future to deal with the impacts of sea level rise in Bang Khun Sai sub-district. The financial budget may ask from local people at Bang Khun Sai sub-district, or apply a concept of cooperation between local people and the Thai government. Partial fund may receive from the local people, and others parts are subsidy from the government. Nevertheless, at the beginning, it might be difficult to establish the fund, combined with the natural resource at Bang Khun Sai sub-district is common goods. Therefore, government agencies, who are responsible for natural resource and environmental management, both national and local level, as well as the local government should allocate the budget for coping with a sea level rise at Bang Khun Sai sub-district which is not less than 5,790,910 Baht per year.

Regarding guidelines for coping with a sea level rise situation in Bang Khun Sai sub-district are reinforcing the saltwater levee, as well as protecting and maintaining the natural mangrove forest. However, it is necessary to consider about solving problems on land subsidence. Because the land subsidence will continually increase severity of the impacts from a sea level rise at Bang Khun Sai sub-district.

6.2 Recommendations

From the findings of this research, there are several recommendations which should be benefit to related governmental sectors in terms of environmental planning and management and future research as follows:

6.2.1 Policy recommendations

(1) The financial budget from Thai government, or the fund from an operational fund in the future to deal with the impacts of sea level rise in Bang Khun Sai sub-district, should support a development plan relating protection of invasion mangrove forest, and reinforcing the saltwater levee. Therefore, it is necessary to study the suitability of each guideline in detail before using with any areas.

(2) The Thai government and related organizations should support the Thai people to be educated. Also, disseminating information about sea level rise situation and potential impacts for the local government, which can also be assisted by an environmental network such as the Bang Khun Sai Subdistrict Marine Resource Conservation Group in order to deliver the information and knowledge from the local government to local people.

6.2.2 Further research recommendations

(1) Data collection of this research in valuation the willingness to pay was limited. Although this research applied stratified random sampling based on physical characteristics of the study area, but the probability principle was not used for sample selection. Therefore, it is recommended for future research to apply the probability principle for sample selection such as simple random sampling or systematic random sampling.

(2) There should be more research on determining the optimal method for reducing the impacts of a sea level rise as in procedure and the operational expenditure. After that, the cost-benefit analysis should be conducted to figure out the economic optimum for operating such method.

(3) There should be more research about the valuation of the willingness to accept (WTA) from losing the benefit in a case that the government authorities do not act on decreasing the impacts of a sea level rise. By conducting this valuation of WTA, the value of compensation for people who lose their benefit due to a sea level rise situation can be determined.

(4) In cases that the value of this research will be used to valuate the impacts of a sea level rise in other areas; there should be a prior study about the propriety of the attributes specifically in each different area due to the different locations usually have different characteristics. For instances, an area with coastal erosion should add the attribute that relate to minimize impacts from coastal erosion, when creating research tool.