

CHAPTER VIII

CONCLUSION AND RECOMMEDATIONS

8.1 Conclusion

This study has produced useful quantitative information and representative sample of villages and households in the lower Songkhram River Basin. Which are the landscapes in the wetlands are diverse and provide a number of livelihood options such as agriculture, fishing and livestock keeping. In the study area, the majority of households (62%) was found that an average household size were 4-6 members persons. Most of household head (70%) had primary grade4 school. Farming was the major work of the household in this area. In the case of Dong San village, it can be stated that wetlands products form the core of local based livelihoods, providing subsistence and incomes for all of households throughout the year. Villagers generally are engaged in multi component livelihoods, which vary by season. As most households still practice subsistence crop farming with little agricultural surplus each year. The study focused on both cash and non-cash income, used market price method for estimated the direct use value of agro-biodiversity products. Moreover, this study investigated and discussed a survey of farmers in seasonally flooded forest where increased local participation in wetland agro-biodiversity management is proposed as an alternative to present and past management strategies. A poisson regression analysis showed under which conditions people are most likely to increase

their participation. In the study area, coping with rice shortages and other shocks is an important long standing feature of many livelihood strategies. Significantly, while aquatic resources provide the basis for well-established coping strategies during periods of rice shortage, there are no such coping strategies for periods of aquatic resource shortage. Any degradation of aquatic resources is therefore likely to have dramatic impacts on local livelihoods, particularly for the poor and vulnerable. Equally, securing the productivity of wild aquatic resources represents an important opportunity for sustaining these livelihoods. Economic stratification and landlessness often as a result of distress sale and debt can lead to growing reliance on common property resources. However, these common property resources are themselves very much under threat from land conversion and encroachment, particularly from large-scale commercial agriculture and land concessions. The main findings from the study can be summarized as follows.

- The wetlands contribute most to both total family consumption needs and total cash income from agriculture. About 83% of respondents in village earned more cash income from wetland products than rice production and wages from off-farm activities. On contrast, it was found that agriculture investment was the main expenditure (21%) included many items such as fertilizer, fuel, rice and seed and average agriculture investment was about 15,701 Baht per year per household.

- Dong San village traditional farming is a location specific environment adaptive system. The farming system comprises crop, livestock and forest as interconnected production sub-systems. Livestock sub-system in turn provides draught power and manure required for sustenance of crop sub-system. Flooded

forests supply fodder, manure and a variety of other direct and indirect benefits needed for sustainable livelihood.

- Value of agro-biodiversity products was calculated from seasonally flooded forest both for household consumption and sale as a result of this study (Table 6-2). The average direct use values were about 79,715 Baht per year per household which wetland products contributed around 63 % for livelihood of Dong San villagers, 10.2% from rice cultivation and 13.6% from off-farm income.

- Dried earthworms shared highest value of cash income which contributed total values about 667,280 Baht and average total value per household were about 11,288 Baht per year.

- Most people living in the village are still heavily dependent on the natural resources from the seasonally flooded forest and agro-biodiversity products, as well as fishing activities that play an important economic role in people's livelihoods. The total volume of fishery which collected from seasonal floodplain area of Dong San village is 54,585 kilogram per year. The value of these fisheries was about 52,080 Baht per year per household, the amount of household consumption. Fishing not only provides and ensures food security for the community as the most important single source of animal protein, but also offers important sources of cash income which the amount of household sell were 7,092 Baht per year per household.

- As the well being of the people in Dong San village is directly affected by the management of these agro-biodiversity resources, villagers have been setup local initiative on agro-biodiversity and aquatic resources conservation and utilization with various activities were fish sanctuary project, wildlife conservation, spiritual forests protection and annual tree planting on special occasions.

- Socio-economic conditions that affected farmers' participated in wetland agro-biodiversity management and conservation by applied poisson regression presented the variables: total cultivated land ownership, rice yield, cash income from from agro-biodiversity products, non-cash income from surrogated price of agro-biodiversity products, attitude towards conservation, membership in local organization were significant at the 0.05 level and ability to cultivate wet season rice were significant at the 0.01 level.

8.2 Recommendations

The objective of this research is to observe the livelihood strategies and socio-economic conditions in village where participatory agro-biodiversity management has taken and is taking place. Also, a feedback from the people about the processes of conservation is sought. Following is a basic background on the projects observed as well as personal observations, reflections, and information gleaned from the villagers. Throughout the research, the reasons for sustaining agro-biodiversity have become clear. Through the previous studied, attacking the problem of declining agro-biodiversity from different level has also become a primary focus. These observations have led to this overarching conclusion: If agro-biodiversity management is to be successful, there must be some incentive to the people responsible, for example farmers in Dong San village. It is useless to preserve the nature without first saving the people whom the nature is being preserved for. Without the participation of these people, the continued drive and flourishing of

agricultural biodiversity is doomed, so provisions must be made to benefit both parties: nature and humans.

Thus, in addition to the practices already in place, a few suggestions can be made for continued success as given below.

- From a policy perspective, the results of this study provide further insights into socio-economic conditions of participants in conservation activities. This information would assist in designing policies to enhance programs in particular and other government sponsored programs in general. Consequently, to enhance participation in conservation programs, different strategies could be designed to target specific groups of farmers based on their socio-economic conditions.

- For further research, this study was done exclusively on only agro-biodiversity products from seasonally flooded forest and the total of direct use value of fishery for this study was not included value of commercial fishing from bidding of community's swamp. Therefore, further research should be investigated the commercial value of fishery and other benefits of seasonally flooded forest. Finally, more study should be conducted in various area of Songkhram river basin to examine local economic alternatives in floodplain area that will have both a development impact and serve as incentives to conservation. These sources of income combined with traditional economic activities may help to promote and increase local community involvement in agro-biodiversity management of small farmers along wetland area of Songkhram River.