COLLECTIVE RISK ADAPTATION TO SALINE INTRUSION: A CASE IN THE VIETNAMESE MEKONG DELTA

Dissertation

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Abstract

Saline intrusion causes serious risks for agriculture and social life in the Vietnamese Mekong Delta. Maintaining and improving coastal livelihoods under the challenging condition of scarcity of fresh-water places greater pressures for rural societies. This dissertation explores saline water intrusion status, its trend and its impact on the livelihoods of coastal farmers in order to address issues of forms and roles of collective risk adaptation for strengthening group adaptive capacity to sustain development. Based on collective action theory and institutional analysis development framework, the model study of this study had been built to understand the collective adaptation, its forms, outcome, and factors related to both internal and external ones affecting this process. By adapting the social-ecological approach, this research was conducted in Tra Vinh and Kien Giang provinces, the two main coastal areas adversely affected by the saline intrusion in recent years. Stratified sampling and mixed methods using in-depth interviews, focus group discussions, case study and household surveys were used.

The results suggested persistent exposure to saline intrusion in the two coastal zones. Farmers' perceptions are different in the two areas, due to different scales of impacts, occurring more in the West than the East. The trend is also estimated to continue its growth in future time. In addition, increased impacts of salinity and high demands of shrimp in the market enabled farmers to shift from rice cultivation to shrimp cultivation in both sides of the Delta, extensive system in the West and intensive system in the East. This adaptation brought better income for some but created social impacts on those having less adaptive capacity to meet this challenge. Regarding social impacts, social change happens more in the West to solve difficulties of shifting process. In terms of community adaptive capacities had been found to be different between the West and the East that structure various forms of collective adaptation named social groups and formal organizations. It acts in different roles in the West and the East to reduce social impacts. Both social and ecological factors contribute to form and maintain collective adaptation. Physical conditions (water scarcity, the status of irrigation system), social and economic factors (economic status, group size, market demand) and institutional system (rules in use, head of the group) are those factors shaping collective adaptation in facing saline intrusion.

For the future, in view of rising sea levels brought about by global warming, dealing with the reality of saline intrusion will become more serious; collective adaptation should be kept and developed as so to enhance community adaptive capacities, and social entrepreneurship and partnership should be adopted into agricultural fields for coastal farmers to organize and optimize resources to create better living conditions. The results of this research also contribute empirical knowledge of how the enhancement of farmers' awareness of the effects of the impacts saline intrusion can contribute to collective risk adaptation.

Key words: Collective adaptation, Intensive shrimp system, Saline intrusion, Shrimp-rice system, Social and ecological approach, the Mekong Delta