



Tropentag, September 18-20, 2019, Kassel

“Filling gaps and removing traps  
for sustainable resource management”

## Constraints of Agricultural Development in the Context of Environmental Conservation for Protected Areas, Vietnam

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### Abstract

The study was conducted in 2018 in Xuan Thuy national park (XTNP), a large wetland ecosystem located in northern Vietnam. The survey identifies existing farming practices and constraints of agricultural development in the context of protecting ecosystem for the 15,100 ha protected area. We used in-depth interviews for 12 staffs of local authorities and semi-structured survey for 234 farmers living adjacent the park. Farmers have been applied diverse culture practices (mono cropping, intensive aquaculture and integrated agro-forestry) but there were excessive and imbalance use of fertilisers compared with local standards. Moreover, farms have been managed with wide range of pesticides, antibiotics and various agrochemicals without carefully record keeping and less concern on environment protection. Even though farmers aim at increasing quantity of products but yields were still lower than those in other areas in Vietnam and gradually decrease recently. We have found various social-economic-environmental-institutional reasons behind sustainable agriculture prospect. Almost of farmers relied on purchased inputs while external input costs have been increasing in particularly hired labour. This leads to the fact that conservation was rank at least important while profitability was most incentive as reported by prevailing cultivators. Most of farm managers lacked of marketing activities and faced price squeeze when selling farm products. Moreover, disease outbreak, un-controlling of exotic snails and water conflicts were environmental problems preventing farmers to tackle alone. Agricultural development is a difficult task and need supports from many authorities (XTNP managers, communal authorities, irrigation branch) but their staffs lacked of capacity and connection with locals in conservation programs. Public sectors have been providing general environmental news and meetings (waste collecting or cleaning rivers) but rarely information and training on environmental friendly farming. Private input dealers played essential role in introducing new techniques but finally their purpose was selling companies' inputs. Thus, it urges on us actions for heightening awareness of farmers, strengthening capacities of staffs in accordance with more communication with farmers. In addition, improving farm productivity simultaneously minimising impairments to the water body should be addressed. Economic sustainability could also be improved through strengthening marketing strategies and forming farmers' market groups.

**Keywords:** Constraints, environment protection, protected areas