Abstract

This study aims to explore the contexts and the situations of rice seed production, to study the impacts and find out patterns of climate change adaptation, and to develop a model community for climate change adaptation among the farmer group of rice seed production. This study collected the data from the community context forum, the farmer interview, and the knowledge sharing forum.

The results showed that in the research area, there were 200 farmers continuously producing rice seed for sale since 1992. The farmers produced glutinous rice of San-pahtawng1, RD6 and RD10 , and non-glutinous rice of Phitsanulok2 and KDML105, according to the quotas allocated by Phrae Rice Seed Distribution Center. The main reason of rice seed production was the rice seed price higher than the paddy price in general. The findings also showed that farmers were ready to learn for managing with the future climate changes. The results of farmer interview stated that the majority of the farmers were affected by the climate changes. 79 percent adapted themselves to changes with 4 adaptation methods, that is, changes in farm management, changes in rice varieties, changes in cultivation period, and doing extra work in the non-agricultural season. According to the result, the farmers changed their farm management by applying plants or materials for soil improvement, applying sufficient agriculture techniques, applying crop rotation techniques, reducing rice stubble burning, applying organic fertilizer, applying bioextract, reducing use of chemical fertilizer, adopting biological way of life, and building in-farm irrigation system. According to the econometric analysis by binary logit model, the factors reinforcing opportunities for farmers' adaptation with statistical significance were the socio-economic factors, i.e., support from Land Development Department, the community's strong point in soil conservation, and the natural and climate factors, i.e., flat farmland, using water from canals and irrigation system, climate change perception, and rapidity of climate warning system. The community forum results stated that farmers cooperated in finding out the suitable adaptation, that is, changes in farm management by applying plants or materials for soil improvement, applying sufficient agriculture techniques, and applying crop rotation techniques. This research cooperated in creating a participatory learning process with community, finding out adaptation patterns and guidelines for community model development resulting in promoting farmers' self-reliance, and strengthening the community economy in the context of future climate changes.

(Keyword) Adaptation, Model Community, Climate Changes, Rice Seed Production, Binary logit model, Phrae Province