

Session III – Connecting People and the Ecosystems That Support Them
3:20 PM

Using Role-Playing Game for Learning and Mitigating Land Use Conflict Between Herders and Foresters in Upper Nan Watershed, Northern Thailand

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Abstract

In recent years, the Royal Thai Government has decentralized the management of natural resources to local authorities and people. However, land use conflicts between government agencies and village communities still occur as in case of the Doi Tiew, a Hmong highland village. This is due to differences in objectives and perceptions between villagers and government officers including the Nam Khang reforestation unit (NKU) and a national park. Companion modelling (ComMod), which belongs to the family of integrated participatory modelling approaches, is used in this research to (i) understand the interaction among cattle raising, forest regeneration and stakeholders' decision making, and (ii) set up a share representation and learning platform for collective and adaptive forest-farmland management. Relevant results from land use change, socioeconomic, and vegetation biomass studies (conceptualization of a state transition diagram) were synthesized into tools for a participatory gaming and simulation workshop to (i) improve researchers' understanding of vegetation dynamics through sharing different stakeholders' perceptions, (ii) better understand stakeholders' decision-making processes and practices regarding cattle and forest management, and (iii) explore stakeholders' needs for further adaptation of the ComMod process. The main gaming tool was a computer-assisted Role-playing Game (RPG). Its spatial interface was simplified from the 2003 classified satellite image. Roles of herder and forester were played by different farmer types of Doi Tiew villagers and NKU foresters, respectively. Four scenarios were run as 'no reforestation in the landscape', 'reforestation without access rule', 'reforestation without cattle in landscape', and 'reforestation with negotiation of access rules between herders and foresters'. Cattle status (fat, normal, thin) and duration of forest regeneration were indicators for debriefing. Individual interviews were conducted to gather more information in relation to gaming sessions. The results showed that gaming and simulation features and tools were not difficult to understand by players

although it was the first time for them to take part in such activities. The RPG sessions can be used to validate the state transition diagram by stakeholders and are a powerful tool to facilitate learning and exchanging experiences and knowledge among participants. The existing RPG will be further improved by integrating new cattle management techniques, paddocks rotation and Ruzi (*Brachiaria ruziziensis*) pasture establishment, for conducting the next workshop as requested by the players. Moreover, more concerned stakeholders will be involved into this ComMod process, especially government officials in charge of cattle raising, in order to achieve a collective management action plan and to facilitate its implementation.