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The intensification of agro-forestry in shifting cultivation areas of Chittagong hill tracts, Bangladesh

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Shifting cultivation is now considered a largely unsustainable type of agro-ecosystem because of declines in productivity that come with increasing population pressure, shortening of fallow periods and non-availability of alternative land. Efforts to promote the adoption of agro-forestry to improve shifting cultivation systems have been increasing. Here, we discuss intensification of agro-forestry in shifting cultivation areas of Chittagong hill tracts (CHT), Bangladesh through community participation. Drawing on field data from a collaborative agro-forestry research project implemented in CHT, it describes the use of agro-forestry development, its sustainability, the challenges and opportunities of agro-forestry development. We worked with villagers in three para (hamlets) to develop a participatory approach to the development of agro-forestry options. On the basis of a combination of participants' preferences and expert opinion, crop combinations were selected and agri-horti-silvicultural agro-forestry systems developed. These participants now cultivate agricultural crops continuously year-on-year on slopes formerly subject to shifting systems. The benefit-cost ratio for agricultural crops was 3:1. Seedlings are growing well and average survival rates at more than 70%. More than 80% participants are now interested in agro-forestry and 54% desire to expand agro-forestry to other areas. For the future development and promotion of agro-forestry by tribal communities in the CHT, conclusions are drawn about modes of collaborative working with local partners.

Biography

Tapan Kumar Nath has completed his Bachelor's and Master's in Forestry from University of Chittagong, Bangladesh and obtained PhD in Forest Science from the University of Tokyo, Japan. He was awarded a two-year (2007-2009) JSPS (Japan Society for the Promotion of Science) Post-doctoral fellowship just after his PhD. He joined at Institute of Forestry and Environmental Sciences, University of Chittagong as a Lecturer in 1999 and has been working till date. He was a Visiting Faculty (January - March 2010) at Asian Institute of Technology, Thailand and Visiting Professor (April - October 2013) at the University of Tokyo. He has been teaching several courses related to collaborative natural resources management in Bangladesh, Japan and Thailand. He joined at the University of Nottingham Malaysia Campus in March 2014 as an Associate Professor.

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