

Climate Change Mitigation and Adaptation-Overcoming Barriers of Smallholder Forests Carbon Development

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Abstract

Climate change brought by massive greenhouse gas emissions (GHG's) is one of the most pressing environmental concerns the world is facing today. The commitment of every country to undertake measures to reduce these GHG's emissions is considered highly important.

There is an increasing interest in Philippines to help mitigate climate change through carbon forestry projects. Carbon markets present an additional new source of income for smallholder farmers which could encourage them to adopt a wide range of sustainable land management practices while making important contribution to climate change mitigation through both emissions reductions and carbon sequestration. Finding synergies to help mitigate climate change through carbon sequestration while not neglecting other environmental services (e.g. biodiversity conservation), is also a big challenge. In addition, being vulnerable to the impact of global warming, the smallholders are also faced the challenge of undertaking measures to adapt climate variability while securing its food source and livelihood.

Land (forest and agricultural land) area management through agroforestation (tree farming and agroforestry system) have great potential for carbon sequestration and simultaneously buffering farmers against climate variability while providing food source and livelihood.

A research is being undertaken to explore the potential of the smallholder forestry projects in the Philippines as carbon sequestration projects to be viable in markets for carbon emission reduction credits, and to explore in which way smallholder agroforestation projects participation can be facilitated and benefit in such markets. The study aims to identify technological innovations, institutional approaches, and policy reforms necessary for Philippines so as to reduce the barriers associated with smallholder participation.

Keywords: Climate Change, Mitigation and Adaptation, Forest carbon, Clean Development Mechanisms (CDM), agroforestation, Land Management

⁴ *Agroforestation* implies land rehabilitation through the establishment of a tree-based system and intensification of land management through the establishment of small-scale agroforestry systems.