

# **Assessing biomass recovery in swidden cultivation fallows in semi-evergreen forests of Mt. Victoria, Southern Chin State, Myanmar**

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Place of fieldwork: Myanmar

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## **Research background**

In Myanmar, swidden agriculture is an example of traditional land-use. For my pre-doctoral thesis, I studied above-ground biomass recovery of the swidden cultivation fallows in deciduous forest. I observed that the above-ground biomass increased with the fallow age, and a greater contribution of bamboo biomass was observed in the fallows than in nearby old forests. To date, few studies have been performed on biomass recovery in swidden cultivation fallows in different forest types. Therefore, I would like to assess biomass recovery in swidden cultivation fallows in a different forest type of Myanmar.

## **Research purpose and aim**

The overall objective of my research was to assess biomass recovery in swidden cultivation fallows in a semi-evergreen forest. My specific objectives were: 1) to establish site-specific allometric equations for biomass estimation in the study area; 2) to emphasize that biomass regrowth is related to fallow age; and 3) to contribute to the possible future agreement (REDD+).

## **Results and achievements**

For this study, I visited two villages of two different clans of the same ethnic group in southern Chin State. To assess biomass accumulation, I established 33 sample plots of different fallow age by using a chronosequence approach. For establishing site-specific allometries, 101 trees were destructively harvested to measure the fresh weights of each tree components \_ trunk, branch and leaf. The swidden cultivation system of the two clans is different from that of the other ethnic groups that I had studied previously such as Karen and Khmu. The two clans collectively used their swidden field on a yearly rotation basis. I, therefore, would like to compare biomass recovery of the fallow forests between the different swidden cultivation systems.

## **Implications and impacts on future research**

I learnt a lot about different swidden cultivation practices by two different clans under the same ethnic group. The recovery of biomass in the fallow forest needs to be analyzed. In this study, swidden cultivation is on short-rotation basis with intensive cultivation. To understand how swidden

cultivation work, I may need to explore the socio-economic condition and traditional environmental knowledge of the ethnic group in greater detail.



**Firewood collection**



**Field survey for biomass recovery**



**Socio-economic survey**



**Weaving traditional cloth**



**Overview of swidden cultivation landscape**