Feasibility study on afforestation in South Shan State, Myanmar *(KARAMOSIA)*

I SUMMARY AND OBJECTIVES

Union of Myanmar has been well recognized for its vast forest resources since colonial time. Today, 50% of total land mass is covered by forest, and forestry accounts for 30% of total export earnings. Population increase and illegal logging put pressures on forest areas. The Myanmar Government has adopted various measures to pursue sustainable management of the forest, but it has not been effective to date.

In the international community, Clean Development Mechanism (CDM) has been discussed as one of viable attempts to respond to the global warming process. This survey was conducted to assess the feasibility and expected effect should the CDM project be undertaken in Southern Shan State of Myanmar.

In Southern Shan State, KARAMOSIA is undertaking symbiotic and circulative agro-forestry development project, and it is well perceived both by the local population and by the government. This survey was conducted in cooperation with the Ministry of Forestry, which already has working relationship with KARAMOSIA.

II SURVEY COMPONENT

Following components were investigated in order to identify the feasibleness of the CDM project:

1) Literature research and interviews
Overall and systematic understanding of forest conditions, forestry-related policies and economics of forestry sector

2) Understanding the survey area using computer technology
By using Remote Sensing (RS) and Geographical Information System (GIS), land use map, vegetation map, and degree of environmental degradation were disclosed.

3) Pilot reforestation
Reforestation activities were undertaken in three villages selected from the survey area. Experiences gained from the reforestation were applied to foresee socio-economic impacts and to calculate the costs of future CDM project. Data gathered on transportation, maintenance, labor and overall costs were particularly useful to formulate the recommendation.

4) Test calculation of carbon absorption
With limited time and data available in Myanmar, the test calculation of carbon absorption was difficult. Some data of similar climates in nearby countries were also incorporated to consolidate the calculation.

III SURVEY RESULT

Test calculation was conducted based on the assumption that a reforestation activity will be undertaken in 30,000 hectares over 12 years, followed by 13 years of maintenance. Upon calculation, 10,000 hectare was considered as one unit. In order to increase or decrease the hectare coverage, the figure gained by 10,000-hectare calculation can be applied in relation to the actual coverage.

The test calculation showed that over the period of 25 years, the amount of carbon absorption is 1.84 million tons. The cost necessary for CDM project is approximately 4.4 billion yen. Thus the cost per 1 ton of CO_2 was 2,402 yen.

IV RECCOMMENDATIONS

More detailed baseline survey, long-term data collection on carbon absorption, and socio-economic analysis are needed to further strengthen the calculation. The survey area is considered to be culturally and socially important area for reforestation by the Myanmar Government, and realization of this project would significantly benefit local ecological, social and economic situations.