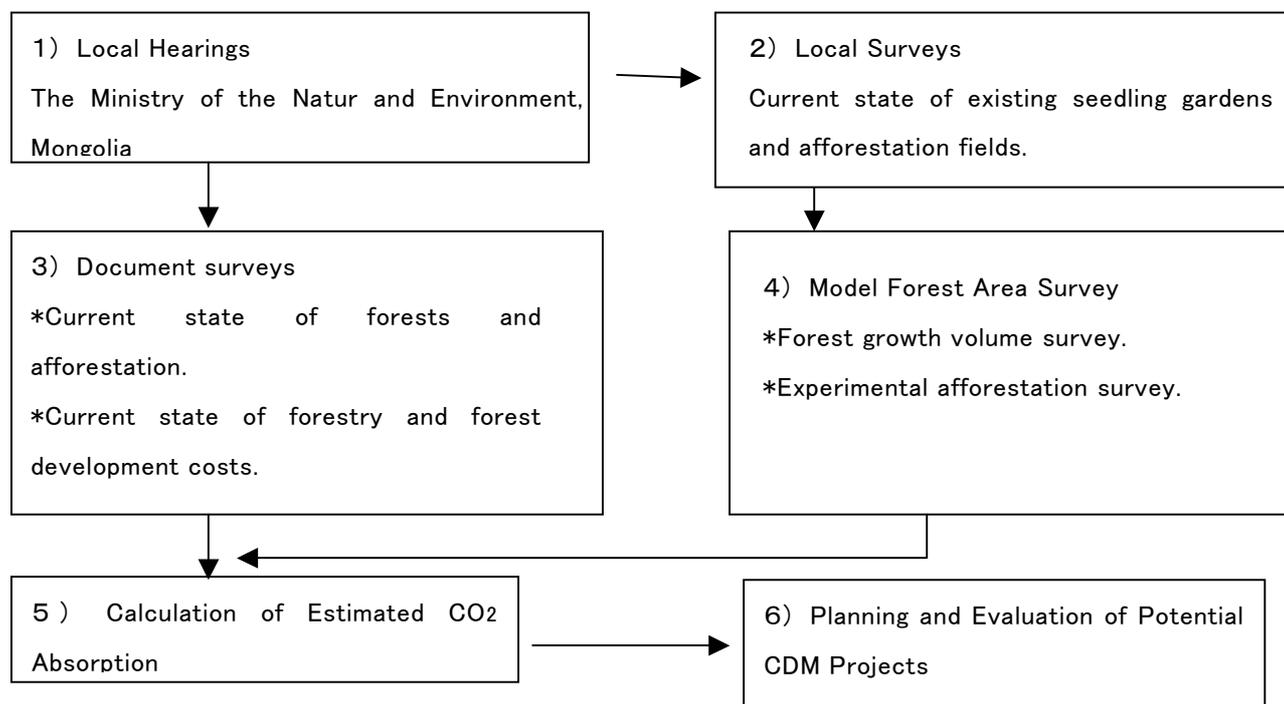


Survey for supporting a reforestation project plan in Mongolia

(Hyogo Environmental Advancement Association)

§ Outline

- 1) In 1996, a forest fire devastated natural forests in Mongolia. In early 1999, the Ministry of the Nature and Environment, Mongolia requested for the cooperation of for the reforestation project against Hyogo Prefectural Government. It was surveyed in 1999 and 2000 with joining up with private enterprises in Hyogo and related organizations, to research effective ways to promote afforestation and Clean Development Mechanism (CDM) projects in Mongolia .
- 2) The Mongolian counterpart in this survey was the Ministry of the Nature and, which is responsible for promoting the afforestation project.
- 3) Along with organizing local public hearings, document surveys, flora surveys, forest growth volume surveys, and afforestation surveys, assessed future prospects as well. For example, we calculated the estimated CO₂ absorption effect, and planned and evaluated potential CDM projects. Below is the activity flowchart.



§ Findings

- 1) Current Condition of Mongolian Forests

Forested areas in Mongolia now total 16.41 million ha, with primeval forests of Larch and Siberian Pine ranging throughout the northern part of the country. A total area of 4.34

million ha of forest was lost to fires in the 23 years from 1973 to 1995. This translates into 189,000 ha or 1.2% of Mongolia's total forest was lost per year, and it is reported that the most common cause of these fires was human actions.

The natural conditions in Mongolia are harsh: The mountainous areas receive only about 400 mm of annual precipitation, while the temperatures changes are great (the average temperature in the capital Ulan Bator is 15 degrees C in August, and -21 degrees C in January). Mongolia has a relatively short history of experience in systematic afforestation, which was only begun in 1968, and consequently the methods of seedling production are considerably different from that of Japan. Nonetheless, afforested areas are making sound progress even under the harsh climatic conditions, and there are ample opportunities for afforestation.

2) Present State of Mongolian Forest Management

In regard to Mongolia's forestry management-related legislation, the land act, forest act, regulations for contractual loan of forest ownership rights, regulations for preventing forest and grassland fires, etc., are maintained under the constitution. The bureau responsible for enforcing policies related to the management of wildlife and forest resources is the Natural Resources Department, which operates under the Ministry of the Nature and Environment. Actual management is undertaken by an auxiliary organization, the Forest and Wildlife Management Center, which has eight offices across the country.

Although raw timber exports temporarily increased when Mongolia shifted to a market economy after the collapse of the USSR, the trade is now banned in accordance with the aforementioned laws and regulations. Consequently, all forest resources are owned by the state, and no deforestation for commercial purposes is allowed without a license. As mentioned, Mongolia's systematic afforestation started in 1968, and 51,990 ha of land were afforested in the 20 years between 1975 and 1997. Furthermore, the pace of afforestation has accelerated in recent years, to between 5,000 and 6,000 ha per year. The Mongolian government is calling for another 100,000 ha to be afforested immediately, and seeks to raise its annual afforestation area to 8,000 ha.

3) CDM Project Results and Evaluation

① After researching and investigating the three model areas recommended by the Mongolian government, we selected Tuijin Nars (located in Altanbulag county, Selengeas state) as a possible site for the CDM Project. The project is scheduled to afforest 5,000 ha of land with European Red Pine over three years. Funds will be raised through a low-rate

loan, with a repayment period of 30 years (the total project term). The project assessment term is 12 years, from 2001 to 2012.

② By looking at the total volume of stored CO₂ over the period from 2001 to 2012, combined with the total investment during that time, the Hyogo it was estimated cost performance at 9,844yen/t of CO₂. The estimated cost performance of the stored CO₂ gas during the total, 30-year project term is estimated at 5,504yen/t of CO₂. This is about 1/37 of the cost performance in afforestation projects in Japan.

③ Mongolia has a well-organized afforestation project promotion system. Therefore, it's clear that the actualization of the CDM project in the subject area is highly possible.

④ One relevant issue to consider is that trees grow slowly in a cold climate like Mongolia's. It takes 10 to 15 years for the volume of stored CO₂ gas to upsurge, which means that a 12-year, short-term assessment is insufficient for estimating the true effect. A method for evaluating 30 years of stored CO₂ gas volume is essential.

⑤ In order to carry out future CDM projects, it's necessary to establish an educational system to raise forestry engineers, as well as a supply system for large volumes of high-quality seedlings.

