

***Transfer and training of Seabuckthorn technology to enhance
the sustainable development in the developing countries***

Project summarize

1. Background of project

Seabuckthorn (*Hippophae rhamnoides*) is a pioneer plant growing on poor sandy soils fixing nitrogen, which has been known and used by humans for centuries. The major benefits of the plant lie in the richness of bioactive compounds, its potential for pharmaceutical applications and the chance for additional income in remote rural areas. During the last twenty years, a big achievement of development of Seabuckthorn has been attained in the world. A lot of experts from more than 20 countries have been involved in international seabuckthorn research and cooperation. Many Seabuckthorn products with high quality have been manufactured and put into the market. Hundreds of companies in the world have been paying attention to the new field. In China, a benign environment protection circle has been established by planting Seabuckthorn. Farmers earn money by planting Seabuckthorn and selling the fruits and leaves of Seabuckthorn, and enterprises get benefit by manufacturing and selling the raw materials and products of Seabuckthorn. In order to guarantee the uninterrupted materials, they will inversely invest more in planting seabuckthron. Farmers will protect the Seabuckthorn forestry voluntarily for more benefit. It realizes the integration of environmental, economic and social benefit. In 1995, at the advocacy of participants of the workshop, *International Center for Research and Training on Seabuckthorn* was established. And in 1999 the ICC meeting decided to found *International Seabuckthorn Association* a new body with the formal approval of the Constitution in India in 2001. As the secretariats of these two organizations, we had hold many international activities, including website establishment for exchanging information, one international workshop every two years, reception of foreign visitors. Many researchers and managers have gotten benefit from these activities.

Although we have attained a big achievement on the development of Seabuckthorn, there are some limited conditions. Many other countries, such as Nepal, Pakistan and India, have very good condition of soil and weather for Seabuckthron growth, and local farmers are also very interested in this plant; but they are shortage of techniques of cultivation, breeding and utilization, so they can't get benefit from it. These existing questions are following:

- 1) Lack of systemic technique materials. Since 1995, we have carried out many international activities, and have accumulated many research achievement, technique of breeding, cultivation and utilization, but we have no enough fund to compile and translate these materials that can be learned by many interested persons.
- 2) Lack of access of other developing countries to the advanced knowledge of seabuckthorn. A lot of researchers and managers of developing countries, such as Nepal, Inner Mongolia, India and other countries of East Europe, are very interested in this plant which can help farmers get benefits and ameliorate local environment. These counties have a suitable condition for Seabuckthorn growth, but they can't afford to take part in these international activities and have no chance to get training.
- 3) Further development of global communication and cooperation. Although we have created a exchange platform and hold many activities, but with rapid development of Seabuckthorn research, more opportunities are necessary to promote the technical communication and cooperation.
- 4) Lack of effective demonstration capacity. The lack of modern visual demonstration know-how, limits the efficiency, and effectiveness of demonstration of new models associated with plantation technology.

2. Result of project

1) Compile training books

Experts who are working in different fields in Seabuckthorn compile the training books.

We compile 5 training books (Chinese Version and English Version) including:

- i) Seabuckthorn cultivation and harvesting technologies*
- ii) Product development from Seabuckthorn*
- iv) Quality and safety Management of Seabuckthorn and Seabuckthorn products*
- iv) Seabuckthorn processing*
- v) Marketing and commercialization of seabuckthorn*

2) We invite 5 experts who come from Germany, Russia to carry out the training courses in Beijing, 7-10, August, 2007. 20 researchers and managers from developing countries (China, Nepal, India, Mongolia, Bolivia, Finland, Romania, etc.) are trained.

This training including 5 subjects.

i) Seabuckthorn cultivation and harvesting

Teacher: Professor- Natalia Demidova

NOTHERN RESEARCH INSTITUTE OF FORESTRY of RUSSIA



ii) Seabuckthorn processing

Teacher: Professor-Gerhard Gimmler

NIG NAHRUNGS-INGENIEURTECHNIK GmbH (Germany)



iv) Product development with Seabuckthorn

Teacher: Dr-Maria Hermoso and Dr-Anja Noke

TTZ-BREMERHAVEN (Germany)



iv) Quality and management of Seabuckthorn and products

Teacher: Professor-Thomeas Mörsel

Berlin technology University (Germany)



v) Marketing and commercialization of Seabuckthorn

Teacher: Doc-Regina Brucksch

NIG NAHRUNGS-INGENIEURTECHNIK GmbH (Germany)

