

# Country status on forest genetic resources conservation and management in Vietnam

## APFORGEN National Coordinators (SEA) Meeting

Kuala Lumpur, 29-30 November 2004

Nguyen Hoang Nghia  
Forest Science Institute of Vietnam

### ***Introduction***

Conservation of genetic resources in general and conservation of forest genetic resources in particular has obtained large attention from the Government, institutions as well as society in Vietnam since long ago. Recognizing the importance of native species and varieties in development, the Ministry of Science, Technology and Environment (MOSTE at that time, now is Ministry of Science and Technology - MOST) issued in 1987 the first Regulation on Management and Conservation of Plant, Animal and Micro-organism Genetic Resources. After 10 years, the second, official regulation on that matter has been issued in 1997 that guides the content and the ways of the work relating to conservation and management of genetic resources. The Regulation emphasized the priority in conserving native, precious and rare genetic resources that can be assessed and used in future for serving economic development of the country. Since 1989, continuous funding has been given for research projects relating to genetic resources C&M for agricultural crops, FGR, animal and microorganisms.

The Forest Science Institute of Vietnam (FSIV) has been appointed by MOST and Ministry of Agriculture and Rural Development (MARD) as focal point for research on FGR C&M in Vietnam. FSIV has given many advices and efforts in FGR C&M and also help National Parks and other Nature Reserves to work on FGR C&M.

### ***National Capacity in FGR Conservation and Management***

#### **Organizations**

There are two kind of organizations involved in FGR C&M: management and research organizations. Their tasks and functions are different.

#### **Management organizations**

Relating to FGR C&M, the main management organizations are departments mainly from the two ministries namely MOST and MARD.

- ***Science and Technology Department***, Ministry of Science and Technology (MOST): provide funding and manage the research projects on FGR conservation through MARD.
- ***Science and Technology Department***, Ministry of Agriculture and Rural Development (MARD): provide funding and manage the research projects on FGR conservation.
- ***Forest Protection Department, MARD***: manage the system of Nature Reserves, to give guidelines for protecting the forest and forest ecosystems against over-logging, illegal logging, wildlife trade, forest fire.
- ***Forestry Department, MARD***: manage the forestry sector and the project on Reforestation of Five Million ha by 2010. They require information from different research institutions for important species, especially main species for reforestation project, which can supply timber for wood processing and wood products export.

## Research Organizations

**Forest Science Institute of Vietnam (FSIV):** is the lead institute (focal point) for FGR C&M research in Vietnam.

On-going projects:

- + State – level research project titled “Conservation of FGR in Vietnam” supported by the MOST since 1990,
- + “Species diversity and *ex situ* conservation of some bamboos in Vietnam” supported by IPGRI, 2004 - 2005
- + “Conservation of some threatened tree species in Vietnam” supported by TROPENBOS INTERNATIONAL (the Netherlands), 2003 - 2005

Research facilities:

- + Field testing area over the whole country
- + Greenhouses and nurseries
- + Molecular markers Lab (for Isoenzyme analysis)
- + Two bambusetata and some arboreta
- + Ex situ conservation stands, seed stands and seed orchards

Capacity building needs:

- + Training of staff (Master, Ph.D and special courses)
- + Information exchange (database, equipment, software)

### **Central Forest Seed Company:**

On-going projects:

- + DANIDA Indochina forest tree seed project, 2000 - 2004

Research facilities:

- + Nurseries
- + Some ex situ conservation stands, seed stands and seed orchards

**Forestry University:** They work mostly on education.

Research facilities:

- + Nurseries
- + Arboretum

**Forest Inventory and Planning Institute (FIPI):** they work mostly on baseline inventory for forest cover change  
Thanh Tri, Hanoi

**Biotechnology Institute,** Science and Technology Academy of Vietnam: they work mostly on biotechnology, but two researchers are working in collaboration with FSIV on using molecular markers for assessing genetic diversity of some native forest tree species.

Research facilities:

- + Greenhouses
- + Molecular markers Lab (Isoenzyme, RAPD, cp DNA)

***Institute for Ecology and Biological Resources***, Science and Technology Academy of Vietnam: They do mostly some taxonomy work of Vietnam Flora and Fauna.

***National Parks*** (Cuc Phuong, Ba Vi, Tam Dao, Ben En and Bach Ma): they also carry out some work on FGR conservation that are supported by MARD

***Other Universities***: They can do some work relating to FGR such as taxonomy of Flora, assessment of biological diversity.

### **Capacity building methods**

- Organize national workshop for formulating national strategy for FGR C&M.
- Training of researchers who work in FGR C&M for biodiversity assessment and monitoring methods, conservation of genetic resources, legal framework for conservation, methods of conservation etc.
- Organize small workshops for managers at different level (central, provincial, National Parks) about FGR C&M, priority setting, priority species list for conservation.
- Master and Ph.D training overseas.
- Establishment of network on FGR C&M which includes researchers and managers from different agencies.
- Promote regional collaboration.

### **Public awareness**

In general the rural/urban people aware of the issue by radio, TV and newspapers. We have TV programme on Science and Education so that we can bring our ideas to that programme. However, they mostly talk about general problems of environment or forest destruction but not so deeply on FGR and conservation. We suggest:

- More programmes for University students, school pupils and TV
- Produce leaflets for people

### ***Institutional and political setting for FGR conservation and management***

#### **National policies**

The Ministry of Science, Technology and Environment (MOSTE at that time, now is Ministry of Science and Technology - MOST) issued in 1987 the first and in 1997 the official Regulation on Management and Conservation of Plant, Animal and Micro-organism Genetic Resources. The Regulation says that GR is the national property and promote to conserve local, native species and varieties for future development. Priority should be paid to native, precious and rare genetic resources as well as others which can be used for genetic improvement.

### **National FGR task force**

No national task force for FGR C&M. There is a Scientific Council of the MARD which contains a Forest Committee which also deal with FGR. The MARD is responsible for FGR-related decision making.

### ***FGR conservation strategies and practices***

National strategies for FGR C&M - Still no strategy for FGR C&M in Vietnam

National budget for FGR Activities - About 60,000 USD has been distributed for FSIV and other National Parks for doing research on FGR C&M each year.

### **Challenges in FGR C&M**

- Against strong efforts from the Government to protect the forest, Illegal logging still going on in some areas
- Threatened and conservation-dependent species are mostly precious and rare so that they can easily be cut at any time
- National Parks and Nature Reserves pay attention on nature conservation but not on genetic resources
- High requirement for funding and technical support

### **FGR management in the community level**

We can find some species that were used for planting for some hundred years where local people keep the best varieties or trees for planting

- *Illicium verum*: is a very valuable tree species that provides fruits for export. Local people in Lang Son province planted local trees in their forest and harvest after 10 years. They used to plant for themselves and also their children
- *Cinnamomum cassia*: Local people in Yen Bai plant trees when they have new child or when children grown up and get married. They think that the plantation can be a good property for their children in future. They also keep the local variety for planting.
- *Aquilaria crassna*: Local people in Ha Tinh province brought seedlings from natural forest to their gardens and keep them for many years and use them as seed sources for seedling production.

### ***Regional collaboration on FGR C&M***

- Information exchange
- Exchange of experts in some research field like taxonomy
- Training on assessment methods, species identification, conservation methods
- Study tours to see in situ and ex situ conservation of FGR examples in the region

## **References**

- Anonymous. 2003. Strategy for Management of Nature Reserve System in Vietnam. Hanoi, March 2003, 123 pp.
- Central Board for Forest Statistic. 2001. Results on Statistics of Forest Area by 1999 and Decision No. 03/201/QD-Ttg dated January 5, 2001. Hanoi.
- MARD (Ministry of Agriculture and Rural Development), 2001. Forestry Development Strategy, period 2001 – 2010. MARD, Hanoi.
- MOSTE (Ministry of Science, Technology and Environment) 1995. National Biodiversity Action Plan. Hanoi.
- Nguyen Hoang Nghia. 1997. Conservation of Forest Plant Genetic Resources. Agriculture Publishing House, Hanoi.
- Nguyen Hoang Nghia. 2000a. Integrated Strategies and Conservation of Forest Genetic Resources in Vietnam. In: L.Schmidt and N.X.Lieu (eds), Proceedings of National Seminar on Priority Tree Species, Hanoi, 7-8 September 2000, 58-65.
- Nguyen Hoang Nghia. 2000b. Some Threatened Tree Species of Vietnam. Agriculture Publishing House, Hanoi.
- Nguyen Xuan Lieu. 2000. Summary and Key Findings of Regional Priority Workshops. In: L.Schmidt and N.X.Lieu (eds), Proceedings of National Seminar on Priority Tree Species, Hanoi, 7-8 September 2000, 26-39.
- Schmidt, L. and N.X.Lieu (eds), Proceedings of National Seminar on Priority Tree Species, Hanoi, 7-8 September 2000, 96 pp.