

**Consultancy on
Tree seed source documentation and registration in Vietnam
3 - 15 May 2000, Indochina Tree Seed Programme (ITSP)
Dr. Erik D. Kjær, Danida Forest Seed Centre**

Purpose of consultancy

The purpose of the consultancy was in brief to:

1. Review seed source registration and documentation as undertaken so far in Vietnam including the experience gained during the 327, 450 and 2030 projects, and from the Thanh Hoa pilot study. Comment on the applied registration formats and evaluation techniques, and recommend possible improvements if identified.
2. Discuss different functions of a tree seed documentation system in Vietnam with various stakeholders. Identify key information to be included in such a system (at different levels) and consider institutional aspects based on these discussions,
3. Plan a one day workshop in Hanoi for relevant forestry officials involved in seed source registration
4. Suggest key elements in a strategy for further development and implementation of a seed source register system in Vietnam, including a discussion on the likely role of supportive legislation/incentives.

Achievements

Selected seed sources (planted stands (government owned and privately owned) and natural forests) in the pilot areas of Thanh Hoa province were visited and the experience with registration discussed on site. Seed source registration was discussed with representatives of the Thanh Hoa Provincial office and Thanh Hoa provincial seed enterprise. Also, people's committees were visited in two districts, and aspects of seed sources discussed with the chairmen.

In Hanoi, seed source documentation and registration were discussed with representatives of Central Forest Seed Company, Department for Forest Development, Department for Science Technology and Product Quality, Department for Forest Protection, Department of Agriculture and Forestry Extension, Forest Resources and Environmental Centre (FIPI), Forest Science Institute of Vietnam (FSIV). Also, National Centre for Variety Evaluation and Seed Certification (NCVESC) was visited and experience from agriculture discussed.

The workshop was successfully organised. General findings were presented and discussed.

Comments on registration forms and suggestions for minor modifications were prepared. A small note on the relationship between Vietnamese and international classification system(s) was also prepared to be included in the consultancy report.

General recommendations from the consultant concerning development and implementation of a seed source register system in Vietnam were drafted, and are summarised below.

Main findings and recommendations from the consultant

National database (register) on seed source documentation

Much effort has already been put into identification and registration of seed sources of trees in Vietnam. However, this data is not readily available and not really put into use at present. ITSP has proposed a common registration format for easy exchange and use of this information. The ITSP-format is seen as technically proficient and focusing on relevant information. Experience from the Pilot area has shown that most information can be collected within a fairly short time (less than ½ day per seed source). *Still, some simplifications are recommended* (as suggested by several participants in the workshop) in order to make it easier to use and avoid misunderstandings. *It is also recommended that ITSP produce a small glossary on the Vietnamese seed source classification system* with examples and illustrations clarifying the different types (a Technical in-

put to this work will be included in the consultancy report). Minor changes in the Vietnamese categories are suggested in order to make it easier to use and in order to make it compatible with international standards. The differences between Vietnamese and international classifications are small, but cause some confusion. *Formats and glossary to be completed in co-operation with Department for Forest Development (FDD) in MARD, and should then serve as common format in the future.* Old registrations should be entered in the new format to extend possible.

A system where seed sources are registered at the Provincial level within the framework of provincial seed networks (co-ordinated by provincial DARDs) was discussed at the workshop. This will in general require training of the staff at DARDs in order to ensure fairly uniform registration, and avoid misunderstandings. However, this training can be combined with information on the importance of seed sources, including specific recommendations on choice of seed sources for selected species. If so, it is believed to have the potential of becoming an efficient tool in the progress towards using better seed sources in Vietnam. Obviously, such a strategy must be implemented “step by step” due to the large scale of the work. It is recommended to start in selected provinces.

A national seed source list

It is recommended to develop and distribute a national list of seed sources in order to:

- ✓ Facilitate use of improved, selected or locally adapted seed sources, and facilitate recommendations to end users on choice of seed sources for specific purposes/planting sites.
- ✓ Increase awareness of using good seed sources,
- ✓ Function as a reference for seed sellers and buyers (seed traded by seed source, not only by species)
- ✓ Identify species and ecological zones where good seed sources are lacking
- ✓ Keep track of the seed sources and thereby gain experience with use of specific seed sources, results from seed transfer between zones, and also be basis for possible certification.
- ✓ Reduce use of random seed sources for species where this considered to be a problem

The seed source list (ring binder or booklet) should be distributed widely, and e.g. be available to extension officers at district level all over Vietnam. It should be updated and redistributed with regular intervals. *A suggestion to information to be included per seed sources (one line per seed source in the list) is included in the consultancy report.*

Priorities

Setting of priorities for future registrations is very important, because not all seed sources can be included. In general terms, it is recommended to start by focussing on *planted* species, where *recommendations* on choice of seed source can be issued. This can be where (i) *information is available from provenance trials* (seed source trials), or (ii) *improved seed sources are already available*, or (iii) it is advisable to *use seed from ecological conditions similar to the given planting site* (i.e. from the same seed zone). Also, priority should be given to species with problems that (may) relate to seed source aspects (i.e. poor health or variable performance). The regional species workshops to be organised by MARD/ITSP this year can be an important input to identification of species, if the end-users (tree planting farmers) are given an important role, and if availability/shortage of seed is discussed for the identified priority species. Within species, it is recommended to focus on registration of seed sources that are expected to be of good genetic quality (recommendable), and/or on seed sources that are widely used at present.

Use of the documentation system and the role of supportive legislation

It is recommended in this initial phase to develop a flexible system where the flow of information is considered to be the most important. The system must be developed “step by step” as mentioned above, where the number of seed sources in the national list gradually increases year by year based on registrations at the provincial level. It is not recommended to enforce the use of

identified seed sources by strict certification and legislation at the present stage. Instead, *it is recommended that*:

- ✓ MARD (in close co-operation with FSIV and other research organisations) develop recommendations to forest managers and end-users (to farmers mainly through local extension officers) on choice of good seed sources for given purposes. Recommendations “in principle” to be specific for each Province (cf. discussion in consultancy report).
- ✓ The regional enterprises (CFSC) and the provincial seed companies in the future document all traded seed and seedlings. Seed collected from unidentified seed sources (seed sources not in the seed source list) should be documented as “unclassified” followed by the year of collection and name of the district in which the seed was collected. Even if the specific collection site is unknown (e.g. because the seed is brought from local farmers) the seed companies should request information on collection district from the collectors. “District” should be classified as “unknown” in cases where the collection district remains uncertain.
- ✓ Forest Development Department (MARD) should integrate use of identified seed sources in management of the large nation wide afforestation activities (5 mill ha programme).

It will probably be valuable to develop a more strict system for seed source certification in the future, but it is recommended to await *more identified seed sources become available* and that the *awareness of the seed source issue is raised at the provincial level as well as among end-users*. Also, gained experience from the present initiatives will be valuable when setting up a future system. Enforcing use of very few seed sources nation wide at the present stage may even have unwanted consequences in relation to use of locally adapted seed sources, and could also influence genetic conservation negatively (cf. more detailed discussion in consultancy report).

Seed application zones

Several systems for ecological zonation have been developed in Vietnam. *It is recommended ITSP to review this available ecological data and develop a system of tree seed application zones be used as key information in the seed source list, and as basis for seed transfer guidelines*. A seed zone system will *not* guarantee that the best seed sources are used at a given location, but will reduce the risk of using non-adapted genetic material, and therefore also the risk of plantation failures.

Clonal propagation

It was suggested by FSIV at the workshop that clonal propagated planting material (cuttings, graftings or tissue culture) also should be covered by the documentation system. For the end user, expensive cutting and cheaper seedlings are alternatives, and he should be able to compare them. A suggestion to a simple registration form for clones will be included in the consultancy report. Large investments in clonal propagation of trees are made in Vietnam these years with the objective of providing better planting material. It will therefore be valuable to analyse strategies for different types of vegetative propagation based on cost-benefit considerations and risk considerations, to ensure that the money is spend in an optimal way. The role of clonal deployment relative to use of seed should also be analysed and simple guides for use of clonal material developed. However, such consideration is outside the present consultancy and has therefore not been pursued further.