



Promotion of Lesser Known Timber Species in Vietnam

During the last decade the Vietnamese economy developed exponentially. A lot of this economic development is owed to the low labor costs and the good manual skills of the Vietnamese workers meaning that Vietnam is able to produce in large scale for the global market. This is also true for many timber based products, especially outdoor furniture. In 2008 Vietnam exported wooden products worth 2.8 billion US-dollars, a number making Vietnam the second largest exporter in south-east Asia.

More than 80 % of the raw material for Vietnamese wood processing sector is imported and the economic growth in the forest sector can not be sustained with sought after species like Teak, Keruing and Balau from regional sources.

The heavy exploitation of few commercially valuable species also led to a shift in species composition in natural forest stands in Vietnam, inferior qualities of the timber used due to smaller diameters of logs and to the inclusion of so far very little used timber species.

Therefore there is the need to improve the management of natural forests, using a wider range of species – Lesser Known Timber Species (LKTS)

Participating organizations

The German Technical Cooperation (GTZ) and the World Wide Fund for Nature (WWF) are together with the Department of Forestry of the Vietnamese Ministry for Agriculture and Rural Development (MARD) involved in the development of the Vietnamese forest sector and the subsequent processing industry.

Within the “Vietnamese-German Forestry Program” (GTZ) and the “Global Forest and Trade Network” (WWF) they intend to improve trade, management and marketing of sustainable managed forest resources in the Greater Mekong region, in particular in Vietnam.

Both organizations have different approaches to achieve their set goals which however complement and in parts overlap each other. A short description of the regarding projects will introduce the different approaches.

GTZ: “Vietnamese-German Forestry Program”

The program comprises three components

1. Sustainable management of Natural Resources
2. Trade and marketing of Important Forest Products
3. Forestry Policy.

The GTZ is working together with private enterprises, State Forest Companies (SFC), communes and with Vietnamese timber associations such as the Handicraft and Wood Industry Association (HAWA) and the Vietnam Timber and Forest Product Association (VIFORES) and of course the Global Forest and Trade Network Vietnam (GFTN-Vietnam), implemented by WWF (see further down). Implementation takes place in the pilot provinces Dak Lak, Kon Tum, Ninh Thuan, Binh Din and Quang Binh.

In component one the GTZ gave advice to Vietnamese SFC's regarding sustainable forest management and is now helping with the implementation of approved sustainable forest management plans into the practice.

The second component (covered by GFA-consulting group) comprises capacity building, value chain promotion, marketing and the establishment of market user groups. The Forest Policy component has to ensure the legal framework for the above mentioned issues and give advice on new policies for the forestry sector.

WWF: “Global Forest and Trade Network”

The Global Trade and Forest Network (GFTN) is WWF's initiative to eliminate illegal logging and improve the management of valuable and threatened forests. By facilitating trade links between companies committed to achieving and supporting responsible forestry, the GFTN creates market conditions that help conserve the world's forests while providing economic and social benefits for the businesses and people that depend on them.

Currently, GFTN-Vietnam supports seven of Vietnam's largest furniture manufacturers to implement responsible purchasing strategies, and is working with SFC's in Gia Lai province and a group of small plantation owners in Quang Tri province towards FSC certification. The GFTN-Vietnam is to grow regionally and will soon include forest managers and manufacturers in Lao PDR.

Lesser Known Timber Species

Most of the SFC's in Vietnam are comprised of relatively small forest areas that contain hundreds of tree species. Of these only a small percentage is utilized for timber and is mostly overexploited already. Therefore these forests have little economic value – value that would otherwise justify the overcoming of difficulties related to sustainable forest management and certification, both connected to higher management costs.

The exploitation of a broad range of different species including LKTS is an important element of sustainable forests management. The use of LKTS, in combination with higher value processing, certification and access to high value export markets, can make sustainable forest management happen.

Recently, some of the LKTS have seen increased use by wood processing companies, mainly due to better availability, their low prices, good workability and nice finished appearance resulting in their acceptance on local markets. However the selection of timber species often depends on tradition and the dictate of customers. Very little effort has been made by wood processing companies to consult existing literature or to convince potential customers of the amenities of different timbers. Also the potential of some LKTS is simply unknown.

Hence, WWF and GTZ are working together in exploring the potential of LKTS for high end-value products, and to promote them on high value markets through LKTS datasheets for different product groups.

The work plan on LKTS includes the following steps:

1. Selection of potential species

A study of eight furniture workshops of the central highland provinces Kon Tum, Dak Lak and Gia Lai was made to determine which LKTS are used for what and what are the reasons behind that choice. According to the study these species were chosen because they were available, cheap, preferred by customers, had nice finished appearance and could easily be worked with the available technology.

Forest inventories in cooperating SFC's were carried out and harvestable volumes of interesting LKTS were calculated. Wood samples were used to assess visual properties. A thorough literature study was conducted to gather existing information on technical and machining properties of the considered species.

Finally the following promising LKTS were selected for further physical and mechanical tests:

- Mít nài (*Artocarpus asperulus*)
- Cồng tía (*Calophyllum saigonense*)
- Trám trắng (*Canarium album*)
- Trám ba canh (*Canarium bengalensis*)
- Cóc đá (*Dacryodes dungii*)
- Vạng trứng (*Endospermum chinense*)
- Sang máu (*Horsfieldia amygdalina*)
- Kơ nia (*Irvingia malayana*)

- Săng lê (*Lagerstroemia tomentosa*)
- Dẻ đỏ (*Lithocarpus ducampii*)
- Bời lời vàng (*Litsea pierrei*)
- Hoàng linh (*Peltophorum dasyrachis*)
- Thông nạng (*Podocarpus imbricatus*)
- Sồi bộp (*Quercus poilanei*)
- Chò xót (*Schima crenata*)
- Chò chai (*Shorea guiso*)
- Kháo (*Symplocos ferruginea*)
- Trâm mốc (*Syzygium cuminii*)

2. Testing of technical properties

Samples of the chosen species will be collected in different regions in the Central Highlands and transported to Xuan Mai University, to be tested for properties such as strength, hardness and shrinkage. The five to six most promising LKTS for high end value products of the 18 tested species will then be included in machining trials.

3. Questionnaire of timber processors in Vietnam

Parallel to the investigation of physical and mechanical properties a questionnaire will take place at the VIFA 2009 in Ho Chi Minh City. It will focus on the interest of enterprises on the species mentioned above.

4. Machining trials

The investigation of the most important machining properties (sawing, planing, moulding, sanding, drilling) as well as kiln drying schedule and gluing properties will take place in Training and Development Center (TDC) in Dak Lak supported by Truong Thanh Cooperation and the GTZ and at the Xuan Mai University. The techniques used in these trials are similar to the techniques that can be expected in average timber processing companies throughout Vietnam. Much of the timber used in these tests will come from the trial harvest of the cooperating SFC's in Kon Tum and Dak Lak.

The results of these machining tests will give a clear picture about the suitability of the tested LKTS for processing in general and will indicate the best machining parameters (rotation/min, feeding speed, etc) and the most appropriate types of tools.

5. Product ranges

For each of the five to six remaining species, suitable product groups will be identified, and their potential for substitution of scarce commercial timber species will be assessed.

6. Establishment on the market

All the data collected will be published in datasheets and be available for all enterprises interested. However special focus in knowledge distribution will be on the GFTN members in Vietnam, who will also receive help in finding niches for their new products and marketing assistance.

Activities like the establishment of a training network, technology transfer, advise on timber grading, drying and quality control during management, strengthening and support to wood processing associates and the compilation of a Vietnamese-English glossary of technical terms in wood processing will support the LKTS project.

Short term goal is to introduce one or two LKTS to high value markets, thereby

- Increasing the volume traded of controlled LKTS wood from natural forests,
- Increasing the transactions between pilot enterprises and their customers,
- Diversifying products and clients of forest enterprises and wood processing enterprises and
- Improving the income of the rural population.

