

Recommendations for Policy Development for the Tree Seed Sector, based on Findings of Project Activities

1. Project Implementation

The Tree Seed Policy Formulation Project was established to provide policy recommendations for the tree seed sub-sector based on analyses of the reforestation, forest gene conservation, forest rehabilitation and ongoing and planned biodiversity conservation activities in Cambodia. It was intended to provide support to the forestry policy development process within the National Forest Programme (NFP).

The concept of NFPs stems from international discussions following the adoption of Agenda 21 (in particular, Chapter 11 “Combating Deforestation”, and the Forest Principles), during the UN Conference on Environment and Development (1992). A national forest programme is a “country-specific political process aimed at conservation, management and sustainable development of a country’s forests ... integrated within a country’s sustainable development strategy and incorporates international and regional forest-related agreements” (Liss, 2002, p2). It is guided by a series of principles intended to aid successful implementation that include an inter-sectoral approach, participation, and partnerships (www.fao.org/forestry).

The Royal Government of Cambodia adopted the NFP concept through its signing of the statement on national forest sector policy (2002), and has submitted mandatory reports to the UN Forum on Forests (UNFF). It was within the context of the NFP that the Tree Seed Policy Formulation Project was conceived, and its implementation has, wherever possible, adopted its principles. It complements the activities of the Danida supported Cambodia Tree Seed Project (CTSP).

A major element in the development of the NFP was the Independent Forest Sector Review (IFSR), which was conducted simultaneously to this project. In relation to the tree seed sub-sector, the IFSR concluded that it was ‘hard to make a case for replanting forests’ (especially by the government). However, this statement can hardly be justified by the findings from its supportive studies that indicate an increasing demand for forest products. Whilst commercial wood production plantations may be well suited to private sector investment, the State has an obligatory role in tree planting for long-term environmental and social benefits (eg. watershed protection, gene conservation), for community/village based tree planting (eg. fruit, fodder, medicine, fuel wood, poles, and other NTFPs) to contribute to poverty alleviation, and for small-scale private plantings (eg. fuel wood lots, poles) to support livelihood improvements.

The Royal Government of Cambodia has, in fact, stated an intention to increase tree planting activities, through the Forestry Law, and the conservation of seed sources is, therefore, of critical significance for success, and ultimately for sustainable forest management. However, in many parts of the country, forest resources are heavily degraded or have been lost entirely, due to a number of forces, and within this process, the gene pool is narrowing and genetic resources of many economically indigenous species are disappearing, and the potential for establishing good seed sources for tree planting programmes is deteriorating.

The tree seed sub-sector, therefore, focuses on forest gene conservation to improve the quality of seed available for use in tree planting programmes. As such, it can contribute to global initiatives

such as the Convention on Biodiversity, and Climate Change Convention, both ratified by Cambodia. It is hoped that recommendations regarding enabling environments can begin to allow potential forestry sector contributions to poverty reduction to be addressed, whilst also working towards the sustainable management of local forest resources.

Project activities have been conducted through consultative processes, including interviews, surveys, workshops and meetings, which have aimed towards the maximisation of stakeholder participation. The main findings are listed below, along with their implications for policy development.

The further development of recommendations for tree seed sub-sector policy will continue to fully embrace the principles of national forest programmes.

2. Findings of Project Activities and their Implications for Policy Development

A. Forest Gene Conservation/Seed Source Management

- A.1. A *Forest Gene Conservation Strategy* was developed through fully consultative processes and adopted by the Forestry Administration through its launch in 2003

◆ **the Forest Gene Conservation Strategy should guide forest genetic conservation in Cambodia**

- A.2. The *priority tree species list for conservation* was determined by an inter-sectoral working group but at a practical level it cannot always include species of importance to all people

◆ **the Priority Tree Species List for Conservation should be used flexibly in order to accommodate social values, and be subject to updates to reflect the dynamics of forest conditions and market demand forecasts**

- A.3. The *forest resources continue to be under heavy pressure* leading to their rapid degradation and erosion of gene pools of endangered tree species

◆ **the value of forest gene conservation for sustainable forest management should be fully recognised and integrated into development programmes**

◆ **for each priority species, seed sources should be established and managed in each ecological zone, and where this is not viable, they should be established ex-situ**

- A.4. *Tree seed improvements* can significantly increase the economic returns of planting native tree species

◆ **improvement trials should be undertaken for indigenous species**

- A.5. Experiences of *seed source management* suggest that different roles could be assumed by the Forestry Administration, communities, supporting organisations, and the private sector, to allow a broad distribution of costs/risks and benefits

◆ **wherever feasible, community based management approaches should be encouraged and assisted, building on the experiences gained and through the development of partnerships**

◆ **relevant levels of forestry officials need to have their managerial skills upgraded in forest gene conservation, and participatory approaches**

B. Transport, Distribution and Marketing

B.1. The *Forestry Administration distributes seedlings* to pagodas and communities, but often not of the desired species or in sufficient quantities

- ◆ **there should be maximum cooperation between the FA and rural people in planning for seedling production and distribution**
- ◆ **privatisation should be considered, whenever feasible, as an appropriate alternative for seedling distribution**

B.2. Currently available *seed is generally recognised as of low quality*

- ◆ **the quality of seed within the market could be improved greatly through certification/enforcement of origin**
- ◆ **imports, exports and transfer of seed should be strictly regulated according to the Forestry Law**

B.3. *Inappropriate storage* of seed *and transport* of seedlings results in reduced quality or loss

- ◆ **seed handling and storage should be in line with the recommendations provided in the Technical Guideline for Tree Planting**
- ◆ **seedling transportation should follow the Technical Guidelines for Tree Planting**

B.4. *Sources of market failure* include product non-transparency, lack of marketplace, short viability, imperfect information about the benefits of improved seed, high transaction costs, uncertainty about future benefits, and the presence of environmental ‘externalities’ and ‘public goods’

- ◆ **awareness and demonstrations of the future benefits of purchasing high quality seed need to be increased**
- ◆ **ongoing market research should be conducted to identify changes in the demands of future markets**

The *degree of market failure* is affected by proximity to markets and the level of government support required – options include: provision of information and training to strengthen markets, issuance of trading permits and subsidies to create markets, replacement of markets for non-use values by state ownership

C. Seed-Source Matching and Utilisation

C.1. *Tree plantings have often failed*, in part due to the lack of attention to species-site matching, inappropriate species selection, planting methods or maintenance, or the exclusion of local people

- ◆ **the gene ecological zoning model provides an excellent tool to match seed source conditions to planting conditions, and should be used in planning seed procurement**
- ◆ **in the case of forest rehabilitation, due consideration should be given to key and framework species**
- ◆ **where people live in or near the degraded forest, consideration should be given to their needs and aspirations to provide a starting point for species selection**

C.2. *Seed users did not always plan well* for tree planting activities

- ◆ **the State should ensure that its annual budget allocations are distributed in good time for seed procurement and nursery establishment**
- ◆ **privatisation should be considered as an appropriate alternative**

C.3. To date, *planting material has been sourced informally*, and often from poor sources, reducing greatly the potential for success and economic returns

- ◆ **regulations should be developed and enforced to ensure the use of good quality seed, especially in large scale plantings**
- ◆ **a database should be established to hold and disseminate information of good quality seed and appropriate indigenous species for tree planting**
- ◆ **plantations must only be established using source-identified genetic material, and preference should be given to indigenous species wherever feasible and practical**
- ◆ **research should be conducted into promising indigenous species and genetic improvement to establish their potential as plantation species for high quality timber production, agro-forestry systems and environmental protection**

D. Planning Tree Planting Programmes

D.1. *Forest development* currently occurs on an ad hoc basis, through non-transparent, undisclosed processes

- ◆ national criteria and indicators should be determined for sustainable management in forest plantations and rehabilitated forests
- ◆ a holistic and multi-sectoral approach to planning must be adopted, which allows for the participation of all stakeholders towards the development of partnerships
- ◆ priorities need to be set for tree planting, such as fuel deficit areas, degraded areas, or the focus of commercial plantations within areas of low potential for other agricultural uses
- ◆ the Site Selection Guidelines should be used
as a planning tool for forest rehabilitation and establishment, including an assessment of land availability for tree planting
for appropriate site selection within broader land use planning processes that address issues of land security and use rights
as an aid to assist in the selection of appropriate management options and funding mechanisms
- ◆ plans for tree planting must be able to effectively demonstrate a real contribution to poverty alleviation

D.2. Forestry is a long-term activity, but a major constraint to ensuring the future supply of good quality seed of desired species is the *lack of long-term planning* for tree planting

- a. seed users should be encouraged to plan and budget tree planting activities based on desired end products, so that seed can be made available from appropriate sites

D.3. The full and proper *value of forest resources is rarely recognised* outside the commercial timber value. 'Natural resource accounting' is an important tool to determine the value of the forest resource with respect to other land uses, and could be used to increase its competitiveness

- b. the true value of NTFPs to the national economy must be established and recognised in national planning and accounting
- c. non-consumptive direct use, as well as indirect and non-use values must be determined for use in cost/benefit analyses
- d. the value of conservation of genetic plant resources must be fully recognised and holistic planning must be pursued to ensure their conservation as integral part of development programmes

D.4. Whilst seed use is expected to increase in the coming years, *little is known of markets* for tree products

◆ **studies are needed on the demand for different tree products, their markets, and the amount of plantation necessary to meet these demands**

D.5. *Contributions to immediate poverty reduction are limited* due to a lack of enabling factors

◆ **a number of conditions need to be put into place to enable local people to compete in markets, including the security of rights, devolved responsibilities, removal of barriers to market entry**

3. Integration of National Forest Programme Principles within the Tree Seed Policy Formulation Project

A series of basic principles guide the preparation of national forest programmes, which are considered to be essential for their successful implementation (www.fao.org/forestry). The ways in which these principles apply to the process of formulating policy recommendations for the tree seed sector are outlined below.

A. Sustainability of Forest Development

- Forest gene conservation is essential in increasing the quality and availability of seed for use in tree planting programmes

B. National Sovereignty and Country Leadership

- Consistent with national development goals, considering poverty alleviation, economic development, and biodiversity conservation
- Institutional anchorage within the Forestry Administration encourages the Royal Government of Cambodia to lead the policy formulation process

C. Partnership

- Encouragement of contributions from a range of stakeholders in order to begin to gain their full commitment to implementation
- Opportunities demonstrated for partnerships with the public and private sector, central and decentralised authorities, national and international actors
- Advantages illustrated through CTSP experiences

D. Participation

- Consultative processes encouraged the participation of central and local government, donors, international and non-governmental organisations (representing local communities), the private sector, and research institutions.

E. Holistic and Inter-Sectoral Approach

- Recognition that to meet local, national and global objectives, a range of tree products will be in great demand in the future from high commercial value timber, through the diversity of non-timber forest products, to species of value for environmental stability
- Applicability to all land types which may be suitable for tree planting, and likewise, the emphasis of forest gene conservation in all ecological zones
- Recommendations imply a need to extend into other sectors, and demonstrate the need for a multidisciplinary approach to sustainable forestry development.

F. A Long-Term, Iterative Process

- Recognition that the tree seed sub-sector is dynamic, requiring flexibility in policies and plans to allow adaptability to changing species requirements, forest conditions, market conditions, and social values
- Monitoring is crucial in this issue, and should begin at the onset of the planning phase.

G. Capacity Building

- A central element of establishing and developing the tree seed sub-sector, resulting in a team of national level government staff in a good position to implement the Forest Gene Conservation Strategy
- Capacity building activities have been extended to community groups, NGOs, the armed forces, and the private sector
- Outputs from the project indicate a number of issues that need to be addressed in a wider forum in relation to sustainability of activities upon termination of external assistance, and constraints to the public sector in achieving high standards, and attracting and keeping qualified human resources.

H. Policy and Institutional Reforms

- Significant for forest policy development is that responsibility is divided between MAFF/FA (productive and protected forest) and MoE/DNCP (protected areas)
- A number of sectors with an interest in the tree seed sector have been identified, for example, within the sectors of health, fisheries, and energy, representatives of which have been invited to participate in workshops, meetings, etc
- The importance of site selection for forest gene conservation and tree planting is emphasised within broader land use planning processes.

I. Consistency with the National Planning Framework and Global Initiatives

- Recommendations are fully consistent with national development objectives of poverty alleviation, national economic development and sustainable use and management of natural resources
- They also reflect government plans for decentralisation, with responsibilities clearly applicable to different levels of authority, and between stakeholders, with an implementation focus at the local level
- At the international level, policy development in this sub-sector closely reflects the recommendations of initiatives ratified by RGC, especially the Conventions on Biodiversity, and Climate Change.

J. Awareness Raising

- A great number of activities have been successfully conducted to raise awareness of the importance of forest gene conservation, and the use of good quality seed in tree planting programmes

- Further support is needed to recognise the full economic value of non-commercial forest products and services within the national economy in order to gain higher levels of support for policy development and implementation.

K. National Policy Commitment

- The consultative processes have encouraged many stakeholders to contribute to the development of the policy recommendations
- This approach is expected to increase the potential for ongoing support to further policy development and implementation.

L. International Commitment

- The eventual mix of funding options will depend upon the finalised policy and the forest management decisions taken within that process
- It is apparent that external financing will be necessary, especially in the short term, for the implementation of forest gene conservation programmes, and rehabilitation of degraded forest areas for poverty alleviation/improved livelihoods and environmental stability/biodiversity conservation.

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