



Private forestry based on Paulownia in Sri Lanka:

an appraisal of the outgrower scheme
presented by Paulownia Plantations LTD



By Ivar Jørgensen and K. Vivekanandan



Noragric Report No.12



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By

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**Noragric
Agricultural University of Norway**

in cooperation with
Lanka Environment and Development Services (Pvt) LTD

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Abbreviations

Dbh	Diameter at breast height (measurement for trees)
FD	Forest Department
FRMP	Forest Resource Management Project
FWL	Farmer Woodlot
GoSL	Government of Sri Lanka
NORAD	Norwegian Agency for Development Cooperation
PFP	Participatory Forest Programme
PPL	Paulownia Plantations (PVT) Ltd
R&D	Research and Development
SLR	Sri Lankan rupees (1 USD = 95 SLR)
TOR	Terms of Reference
TWSL	Telemark Wood Sri Lanka AS
UWMP	Upper Watershed Management Project

Executive summary

The appraisal was carried out during one week in October 2002. The team met with the Norwegian Embassy, representatives from the Paulownia Plantations Ltd, forestry and agriculture authorities at central and local level, community members and representatives from other relevant projects. They have assessed the feasibility of the outgrower scheme presented by Paulownia Plantations LTD, in relation to possible donor funding of some of the activities. The team has found that the project would fit well with current policies regarding forest development in Sri Lanka, and that there is a market potential for the final products. The production potential is high compared to many other species used in Sri Lanka. The environmental effects of Paulownia plantation are seen as positive, but more research is needed before national level programmes should be launched.

The outgrower scheme is seen as an innovative approach to private sector development in the forestry sector in Sri Lanka. The programme carries a good potential for economic development in the district where it will be launched. The programme needs further elaboration and detailed planning, and NORAD is recommended to request a new proposal spelling out in more detail certain elements of the programme. The contractual relationship between the company and the farmers will be crucial, as well as the strategy for linking up with existing extension services and community organisations.

Given certain clarifications related to the above, the consultants recommend donor support to the outgrower scheme, including an extension component and an R&D programme. A proposed payback scheme from the farmers at the time of harvesting should be organised as a refund into the community development fund, providing a sustainable option for continuation of the ongoing general community development activities in the concerned villages.

1. Introduction

Paulownia Plantations (Pvt.) Ltd (hereinafter called PPL or *the company*) is a private company registered in Sri Lanka. It is owned by Telemark Wood Sri Lanka AS (TWSL), Walter Lindsam Jones and Grow Fast (Pvt.) Ltd. The dominant owner is TWSL with 60% ownership in PP. TWSL is a fully owned subsidiary of Telemark Wood AS in Norway. L. Jones is a personal owner living in South Africa, and Grow Fast is a local company owned 100% by the Balthazar family in Colombo, owning 17% and 23% respectively. The company is planning for the development of a plantation industry based primarily on Paulownia, a fast growing tree species originating from China. Part of the production base will be developed through an outgrower scheme, where local farmers will be contracted to grow Paulownia trees on their own land with a guaranteed buy-back scheme from PPL. The company has requested financial assistance from NORAD to support the development of the outgrower scheme. The team of consultants were requested to assess the viability of the plans presented, economically, environmentally, socially and in terms of their potential contribution to the developmental aspirations of Sri Lanka. The observations and recommendations of the consultants are presented in this report.

2. Plantation forestry in Sri Lanka

The natural forest cover in Sri Lanka has dwindled to half its size (1.33 million ha) over the past 50 years. To compensate the loss and to provide the essential goods and services to the community, the State has been adopting a two-pronged strategy. Firstly, the scientific management/conservation of remaining natural forests and secondly the development of compensatory forest/tree cover through establishment of forest plantations, farmers' wood lots and promoting tree planting activities in private lands. Exotic species have been used extensively in the creation of plantations /woodlots.

Teak was one of the first exotic species to be planted on a plantation scale mainly in the dry zone. Later Mahogany (*swietenia macrophylla*) was planted in the intermediate zone. In the highlands Eucalypts, Acacias and Cypresses constituted the early introductions. Relatively recent introductions are *Pinus caribaea* in the highlands and low country wet zone. Acacias and Kaya (*Khaya Senegalensis*) have been successful in the dry zone and the latter holds great promise for future tree planting programmes. To date (2002) 100,000 ha of plantations have been established comprising mainly of teak, upcountry eucalypts, mahogany and pines.

According to the Forestry Sector Master Plan it is envisaged that nearly 30,000 ha of plantations and small wood lots will be established during the next five years under several donor-assisted forestry projects with the participation of the state and private sectors and farmers. According to the forest authorities of Sri Lanka, plantations of Paulownia will be a welcome contribution in this respect.

3. Experiences with *Paulownia* sp. as a plantation tree

Paulownia is indigenous to China and is represented by seven fast growing tree species. Some species are found in the USA, Korea, Japan, Laos, Taiwan and Vietnam. China has been in the forefront in raising *Paulownia* under its social/farm forestry programmes and as shelterbelts. It is estimated that more than one million hectares of farmland have been intercropped with *Paulownia* in the central and eastern plains of China. There have been no attempts to establish large-scale plantations in other countries. In recent years, however, a few countries like Australia, Pakistan and Sri Lanka have planted *Paulownia* on an experimental scale. Information regarding growth, yield and wood properties of the different species of *Paulownia* is scanty in the Asian region other than China.

In Sri Lanka *P.fortunei* (Anlong provenance) was first tried in Agaratenne in the Badulla district in the intermediate zone (mean annual rainfall 1500mm; 1100m altitude; red-yellow podzolic soil) in 1987. The trees performed well during the first few years after which there was stagnation in both height and diameter growth. After 15 years trees have attained a mean height of 10 m and dbh of 15 cm. The wood properties have not been tested yet. This stand has not been actively thinned, tended and fertilized; underscoring the need for active management to reach the potential high production rates reported from e.g. China.

4. Policy and regulations governing private forestry in Sri Lanka

Forest conservation and development, timber harvesting and marketing have been a state monopoly until recently. The Forest Department and the State Timber Corporation were the two key state institutions undertaking these activities. In 1995 the Forest Policy was amended to provide the necessary policy and legal framework for the private sector to participate in forest plantation development. The programme is now operational and a number of private entrepreneurs are participating in the programme mainly in the dry zone. There have been tremendous interests evinced by the private sector to participate in this programme.

In addition to above under both the Participatory Forestry Project (PFP) and Forest Resources Management Project (FRMP) there is a Farmer's Wood Lot (FWL) component where small blocks of state land is given on a 25- year period lease to the local farmers to plant both forest trees and cash crops. The Farmers enjoy both land and tree tenures during the lease period. The Forest Department provides incentives such as free seedlings, fertilizers and technical guidance on establishment and management of the wood lots. The programme has been quite successful in many areas and to date around 2,500 ha FWL have been established under PFP and it is envisaged that under FRMP 8,500 ha of agroforestry plots will be established from 2002 to 2007 on the lines of the FWL component. The proposed *Paulownia* outgrower scheme will fit well into these policies and programmes supported by the official policy and regulations in the country.

5. General assessment of the outgrower concept presented

The written material presented to the consultants was very vague and not well developed as a project proposal. The development potential of the programme on the part of the local farmers is barely touched upon, and no objectives, outputs or logical framework was presented. The company is clearly inexperienced in dealing with development policies and project planning methodology.

However, the concept presented during meetings and field visits represent a clear focus on development of tree growing as a business for local farmers, supported by a commercial and competent company ensuring the availability of *capital, know-how* and *market access*. The concept represents a pioneer activity responding to current policies both of the GoSL and of NORAD.

The contractual relationship between the company and the farmers are crucial for the success of the programme, seen from a development perspective. This relationship is only vaguely outlined and needs some fundamental clarifications before the consultants can recommend the scheme as a balanced undertaking to the benefit of both farmers and the investor. This reservation will be elaborated further in section 11 and in Annex 5.

Other needs that should be addressed are strategies for interacting with the relevant public authorities (e.g. extension agents in agriculture and forestry) and with community organisations. A targeted extension programme is necessary. In addition the consultants see a strong need for research follow up, as Paulownia is a new genus to Sri Lanka with major knowledge gaps linked to silviculture, choice of provenances and planting sites, environmental effects, wood properties etc. The concept of organising farm forestry through outgrower schemes is also new, and should be followed by R&D efforts.

6. Appropriateness of the proposed site, propagation methods and management system for *Paulownia*

The proposed site is located in Parakaduwa in the Ratnapura district in a private rubber estate (Lower Hemingford Estate) and its vicinity covering two Grama Sevaka divisions. There are 800 farmer families living in the proposed site and are engaged in various farming activities for their livelihood.

The site is located in the wet zone receiving adequate rainfall (ca. 2500mm) during the southwest monsoon and also during inter-monsoon periods. The soil is mainly red yellow podzolic and reddish brown latosolic soils and is acidic. The site supports the satisfactory growth of tea, rubber, forest species such as mahogany, and fruit trees such as Rambuttan, Durian and Mango. The land owned by the families in the proposed site mimic the so-called “Kandyan home garden” with a mixture of economically important species and do not pose any ecological hazards to the environment.

The PPL has established the necessary infrastructure consisting of a well-organised nursery with low cost seed germination beds, potting sheds, hardening area to produce the planting materials. Since the year 2000, several small plots have been established in and around the project site to assess the performance of different species/provenances and have been well maintained. A competent site manager and a nursery supervisor have been employed to oversee the work both in the nursery and field. The PPL employs local labour, mainly women, from the local minority Tamil community, at SLRs 200/day on a casual basis, to attend to nursery work. This is commendable as these often have no other regular source of income and many of them are land less with few income alternatives.

From a forestry and social point of view the site is suitable to plant the species either as a mixed crop with existing vegetation in vacant spaces or on the boundaries of large blocks of lands that are now planted tea, rubber and other cash crops. Management of the trees requires the cooperation of the farmer/land owner and technical guidance from the PPL. As the venture is purely pilot in nature and is in compliance with state policy of encouraging private forestry no serious obstacles are foreseen. It is, however, prudent for PPL to incorporate an R&D component in the programme to look into some important production oriented, environmental and socio-economic issues which are outlined in Section 12.

7. Assessment of the market for *Paulownia* products

Paulownia was for the first time introduced into Sri Lanka by the Forest Department in 1987 and there is hardly any information on the wood properties and market for the wood locally. There is a market for the wood in Japan and the annual import is around 150,000 cubic m mainly from China. The Japanese market is very clear about quality and require logs over 35 cm diameter with consistent growth rings. It is surmised that such logs can only be obtained from trees over 20 years of age and slow grown at wider spacing. Presently the Chinese production far exceeds the Japanese requirement and the surplus is consumed domestically. Further market analysis is therefore recommended for PPL, and for certain market segments requiring large logs, the envisaged rotation age of down to 8 years may be too optimistic.

It is very likely that with time the *Paulownia* wood could replace some of imported hardwoods like Meranti (*Shorea* spp) from e.g. Malaysia, Indonesia and the Philippines, in countries such as Australia. Another potential market is as an alternative to Balsa wood.

8. Assessment of the economic viability of the scheme

8.1 Viability for the company (PPL)

The consultants have not studied the business plan for the company as such, but have concentrated on the outgrower scheme. Clearly the viability of the outgrower scheme depends on the company having a nucleus of production capacity on their own land or on leased land. The farm level production should be an addition. If this condition is fulfilled, the consultants believe that additional production from the farm contracts can represent a valuable contribution, with a potential for a considerable additional

income. The commercial value of the tree seems acceptably documented. If tea estates become convinced that Paulownia would provide soft shading for tea better than currently used species, a vast new production capacity could be made available, and PPL would have a strong competitive advantage through its know-how and production capacity for seedlings.

The outgrower scheme could be seen as a kind of joint venture between the farmers and the company. The farmer supplies land and labour, and the company supplies seedlings, fertilizer, technical advice and guaranteed market access. At the end of each rotation, the company will offer a buy back scheme. The major risk of the company is that alternative buyers are ready at the time of harvesting, skimming off the best logs. Even if the contract prescribes a compulsory refund for farmers choosing to sell to other buyers, the money and time spent to legally enforce this might make such an exercise futile. Therefore the company has a good case for requesting donor funds to cover parts of the cost of engaging in the outgrower scheme. This will mitigate the risk of the investment, and ensure that farmers are not indebted to the company. The donor funds should in principle cover the establishment cost and the necessary extension work. When it comes to convincing the farmers to sell the logs through the company, the only guarantee for the company is that *they have the best offer*. This does not only rely on price. The company should develop and nurture its competitive advantages (see box).

One option for engaging community interest in selling through the company would be to arrange for a contractual payback of establishment costs at the time of harvesting. If this cost in reality was covered by NORAD, the money could be channelled directly into a community development fund. The fund could be used to continue the development efforts undertaken in the NORAD funded village development project in the same communities. This would provide for a sustainable continuation of these seemingly successful undertakings, beyond the period of donor inputs. The company and suitable community organisations could manage the funds jointly, with a gradual devolvement of full management powers to the community.

What are the selling points of the company that would engage farmers to join the scheme, and to choose to sell through the company at the time of maturity?

- A buy back guarantee, covering all the trees, not just the best trunks
- A guaranteed minimum price per tree
- Availability of planting material
- Access to necessary capital – both in the form of commercial venture capital and in the form of donor funds that are only available because of the presence of the company
- Access to the export market – that would ensure a correct pricing
- Ability to ensure that certification requirements are fulfilled
- Ability to purchase large volumes
- Relationships built through long term cooperation for community development
- Social pressure through build-up of community fund from prescribed payback

8.2 Viability for the farmers

From the farmers' point of view, the scheme offered will be of interest if this kind of land use is more profitable than other alternatives. If they can get SLR 6000 per tree, and 200 mature trees per hectare, the income for say 10 years would be SLR 1.2 mill. This income is more than many crops grown in these districts today, although intensively managed agriculture or horticulture in many cases will be more profitable if there is a good market for the products. A simple IRR and NPV exercise shows that Paulownia has an internal rate of return of 28%, the same as for intensively cultivated horticulture, and considerably better than tea (see Table 1.1-1.3 below). Therefore the Paulownia scheme should be seen as an attractive diversification option for farmers, not as a crop to use instead of agricultural or horticultural crops. The species is said to be very suitable for agroforestry, i.e. growing of agricultural crops in between the trees. This will further increase the profitability of the Paulownia alternative.

The scheme may however only be available to those segments of the population who are able to set aside some pieces of land for the purpose, and who can afford to delay the income related to this land. As such, the scheme would not directly target the poorest segments of the population. However, most farmers in the concerned community are poor, and most have small plots of land not effectively utilised today, according to the local agricultural extension officer. It will be of importance for the poverty profile of the project not to exclude from the scheme farmers only able to take on a small number of trees.

The major risk on the part of the farmer is that the company loses interest or is closed down before the first harvest. There might not be an easily available domestic market for Paulownia until a certain level of production has been reached. If there is a domestic market at the time of the first harvest, this will probably have a positive effect on the price offered by the company to the farmers. The other risk taken by the farmers is linked to the limited knowledge about the provenances, cultivation methods, quality and price of the product. This underscores the need for R&D efforts linked to the project.

Table 1: Comparative financial analysis of Paulownia, Tea and Horticulture

Table 1.1

Financial Analysis – Paulownia

	Net Benefits
IRR	28,34 %
B/C Ratio	3,28
NPV	462 721

B/C Ratio and NPV Discount Rate 7.5%

Table 1.2

Financial Analysis - Tea Project

	Net Benefits
IRR	18,10 %
B/C Ratio	1,33
NPV	205 108

B/C Ratio and NPV Discount Rate 7.5%

Table 1.3
Financial Analysis - Horticulture
Project

	Net Benefits
IRR	28,34 %
B/C Ratio	3.28
NPV	462 721

B/C Ratio and NPV Discount Rate 7.5%

(IRR = Internal Rate of Return, BC ratio= Benefit-Cost Ratio, NPV= Net Present Value)

9. Assessment of the environmental aspects of Paulownia production in Sri Lanka

Consulted persons and documents provide no indications that environmental problems are related to growing of *Paulownia*. The knowledge of possible environmental effects of *Paulownia* is limited, and further studies and research are recommended as a part of the pilot phase. Until more knowledge is available, a full-fledged national programme on *Paulownia* should not be implemented. The potential increase in forest area due to new plantations being established, is seen as an environmental benefit in itself, and is strongly encouraged in national policies.

In general, exotic species carry a potential for environmental debates, based on experiences from other widely used exotic species as e.g. Eucalyptus sp. and Pinus sp. These have been accused of drawing heavily on the ground water reserves and of increasing soil acidity, respectively. As far as *Paulownia* is concerned, the problem of drawing on the ground water reserves could potentially be valid in some sites, as all fast growing species need a lot of water. The effect will depend on the total availability of water, the soil structure, the level of the ground water table and the additional land use perceived. The root system of *Paulownia* is reported from China to be deep, and to draw water and nutrients from layers of soil not available to most agricultural crops that are frequently grown in combination with *Paulownia*. The foliage of *Paulownia* is reported to contribute to increased soil fertility. It is also suitable for fodder; thereby giving an indirect contribution to the availability of manure. The planned farm level production of *Paulownia* is envisaged as a mixed cropping system, along borders and in small blocks, thus not representing any large monocultures or limitations to the biological diversity.

Another environmental risk is the potential of foreign species becoming invasive. Reports from China and other countries do not indicate this to be a problem for *Paulownia*, among other things because the seeds need open soil to germinate, and show low germination rates unless specific treatment is given. In existing *Paulownia* plots in Sri Lanka (e.g. Badulla, planted in 1987) the trees have not shown signs of uncontrolled spreading.

10. Conclusions

The consultants have arrived at the following conclusions:

- The proposed scheme has a good potential for supporting economic development in the project area
- The potentials of the *Paulownia* trees may be overestimated by some, but the tree is believed to have a considerable commercial value. Research is necessary to establish more exact knowledge
- The outgrower scheme represents an innovative way of supporting private sector development in a partnership between farmers and a commercial company
- Environmental effects are seen as generally positive, but more research needs to be done
- The company has established a good dialogue with the communities in the project area, and the interest for joining the outgrower programme seems good. The community development activities funded separately by NORAD is an important reason for this, and represents a good entry point for further work with the communities
- The company has technically and strategically very competent personnel and owners, and will, in the view of the consultants, be able to manage a programme of considerable complexity – including development components
- The company has not yet established a dialogue with the local level extension service or community organisations
- The written presentation of the outgrower programme is weak, and does not do justice to the plans as outlined though direct contact
- The contractual relationship between the company and the farmers is only vaguely developed, and needs further consideration

11. Recommendations regarding the outgrower scheme

NORAD should request a formal proposal from the company, giving more detailed plans and budgets for the activities related to the outgrower scheme. The consultants recommend donor support to the project provided the following elements are included in the proposal:

- A logical project structure including objectives, outputs and inputs, risks and risk mitigation measures, indicators of achievement and means of verification
- A budget for each project element
- A balanced draft contract between the farmers and the company
- A plan for integrating the activities with ongoing efforts in the public extension system at the local level
- A plan for extension and technical assistance
- Criteria for selecting farmers eligible to join the programme
- A plan for R&D efforts in cooperation with competent research institutions
- A scheme for payback from farmers at the time of harvesting, covering the establishment costs and a certain amount stipulated for technical follow up. The refund should be channelled to e.g. a community development fund

- A possible provision for up-front payment to farmers who can not afford to wait until the first harvest
- A plan for integrating existing or new community level organisations in the project. This should aim at organising the tree growers for increased focus on trees as a cash crop, and at involving community development organisations (e.g. rural development societies) in the overall development programme for the village. This should include a plan for gradual handover of management powers for the community development fund.

The NORAD grant should cover e.g. the following elements of the project costs:

- The cost of seedlings and fertilizer used in the farm programme, stipulated e.g. as a fixed price per tree established
- The cost of an extension programme, including an information leaflet etc. This should be carried out jointly between the company and the extension service. The figure for extension should be considerably higher than indicated in the preliminary project documentation
- The cost of an R&D programme. Funds for these activities should be managed separately from the rest of the project funds, maybe by a joint committee involving the company, the Forest Department and competent research entities.

The cost of day to day follow up from the company towards the farmer should not be covered by the donor funds, but could be seen as the investment of the company for which they will be rewarded if they make sure the products are marketed successfully and that company-community relations remain good.

12. Recommendations regarding R&D follow up

Paulownia is a new introduction to Sri Lanka and several issues need to be addressed before venturing out to large scale planting programmes. The following are considered as priorities:

1. Species and provenances evaluation in the different climatic zones and soil types
2. Growth and yield studies
3. Propagation methods (refined methods and tissue culture)
4. Control of pests and diseases
5. Performance as an agroforestry component
6. Impact on the environment (hydrology, soil fertility)
7. Wood properties
8. Socio-economic studies, potentials and challenges of outgrower schemes

It is suggested that PPL work closely with the Forest Department, Research Institutes and the Universities. Research funds are recommended as a part of the grant from NORAD. This part of the grant could be managed jointly by the company, FD and the research institutions.

Annexes

1. TOR of the consultants
2. Itinerary of the team
3. Persons met
4. Documents consulted
5. Potential elements in a contract between PP and the farmers

Annex 1. TOR of the consultants

FEASIBILITY STUDY: OUTGROWER FORESTRY IN SRI LANKA

On behalf of the Royal Norwegian Embassy in Colombo, NORAD would like to request a feasibility study on outgrower forestry in Sri Lanka. The following terms of reference will guide the study.

1. Background

Paulownia Plantations Ltd in Sri Lanka is a joint venture between Norwegian and Sri Lankan investors. The project involves production of Royal Paulownia trees on about 100 hectares in the Ratnapura District of Sri Lanka. The tree has commercial value for construction and furniture making and its leaves may be used as fodder.

Part of the joint venture will be devoted to tree production by local farmers in their own gardens and agroforestry systems. Paulownia Plantations Ltd will develop contracts with the participating farmers involving technical assistance, supply of seedlings and fertiliser and a guaranteed buy-back scheme at agreed prices. The company has applied for assistance from NORAD for covering management and promotional costs and for establishing a revolving fund for providing loans to farmers for the cost of seedlings and fertiliser.

2. Tasks of the consultant

The consultant will take contact with the Norwegian Embassy at the start of the assignment. The consultant will review the existing project documentation, relevant rules and legislation governing forestry and contract production of trees and relevant plans and policies of importance for the success of the project. Through discussions with representatives from the company, relevant authorities and local communities as well as field visits, the consultant will assess the feasibility of the project in the proposed pilot area, including availability of land, labour and necessary inputs to the production of trees. The potential benefits and risks of the contract farmers will be reviewed, as well as the business plan for the company itself. The proposed mode of management of the revolving fund will also be assessed. Potential environmental risks or benefits will be discussed as well as potential for poverty alleviation.

3. Team of consultants

A team of one expert from Norway (team leader) and one Sri Lankan expert will implement the assignment. Both consultants must have thorough knowledge of the forestry sector in Sri Lanka including experience from project planning and reviews.

4. Time frame and reporting

The assignment will be implemented during 5 days of fieldwork in Sri Lanka plus an additional 3 days in Norway for preparations and reporting for the team leader. The team will prepare a report to NORAD, not to exceed 8 pages excluding annexes, on the findings of the assignment. The deadline for the report will be November 15th. The team will present its preliminary findings to the Norwegian Embassy in Colombo upon completion of the fieldwork.

Annex 2 Itinerary of the team

14.10.2002-Monday

AM-Consultation/Discussion/Preparation of Itinerary

2.30 PM- Royal Norwegian Embassy-Meeting with Mr.Tor Kubberud-Counsellor and PPL Officials

15.10.2002-Tuesday

9.00AM- Meeting with Mr.Thosapala Hewage-Secretary

9 45 AM- Meeting with Mr.Anura Sathurusinghe-Deputy Conservator of Forests (Social Forestry &Extension)

10.30AM-12.30 PM Meeting with the following:

Mr. Anura Silva –Deputy Project Manager

Dr.Robert Murtland-Team Leader and Integrated Forest Management

Planner Mr. W. Ratnayake-Deputy Team Leader and Public Awareness and Extension Specialist

Dr. Gordon W. Storey-Training Specialist

Mr. Ananda Weerasinghe-Participatory Forestry Specialist

PM- Meeting with Mr. S. Kulatunge-Director-PPL

Major Malcom R. C. Peiris-Plantation Management Consultant-PPL

Mr. Walter Lindsam Jones

Mr. Christian Skugstad, Managing Director, Telemark Wood Company

16.10.2002-Wednesday

AM- Meeting with Mr.D.P.Munaweera-Director, UWMP

Mr. P. H. Jayawardena - Deputy Director, UWMP

2.30 PM- Meeting with the following:

Mr. Sarath Fernando –Conservator General of Forests

Mr. K.P. Ariyadasa-Conservator of Forests (Operations, Research, Education & Extension)

PM- Reference work and Report preparation

17.10.2002-Thursday

Field visit to PPL Nursery and trials at Parakaduwa.

18.10.2002-Friday

Report preparation

20.10.2002-Monday

Meeting with Mr. W. Ratnayake-Deputy Team Leader and Public Awareness and Extension Specialist, FRMp

22.10.2002-Tuesday

Debriefing Mr. Tor Kubberud of Royal Norwegian Embassy

Thursday October 24.

Meeting with Deputy Minister of Plantation Industries, Navin Dissanayake

Annex 3 - Persons met

Royal Norwegian Embassy:

Mr. Tor Kubberud-Counsellor

Ministry of Plantation Industries

MP Navin Dissanayake, Deputy Minister

Ministry of Forestry and Environment

Mr. Thosapala Hewage-Secretary

Forest Department

Mr. Sarath Fernando –Conservator General of Forests

Mr. K.P. Ariyadasa-Conservator of Forests (Operations, Research, Education & Extension)

Mr. Anura Sathurusinghe-Deputy Conservator of Forests (Social Forestry & Extension)

Forest Resources Management Project

Mr. Anura Silva –Deputy Project Manager

Dr. Robert Murtland-Team Leader and Integrated Forest Management Planner

Mr. W. Ratnayake-Deputy Team Leader and Public Awareness and Extension Specialist

Dr. Gordon W. Storey-Training Specialist

Mr. Ananda Weerasinghe-Participatory Forestry Specialist

Dr. K. Vivekanandan-Tree Improvement Specialist

Upper Watershed Management Project

Mr. D.P. Munaweera-Project Manager

Mr. P. H. Jayawardena -Deputy Project Manager

Mr. Svein Larsen, Team Leader

Paulownia Plantations (Pvt) Ltd

Mr. S. Kulatunge-Director

Major Malcom R.C. Peiris-Plantation Management Consultant

Mr. Asoka Ellegala-General Manager

Mr. Saman- Nursery & Plantation Supervisor

Mr. Walter Lindsam Jones, investor, PPL

Mr. Christian Skugstad, Chairman, PPL

Others

Mr. K. Perera-Agricultural Extension Officer-Dept of Agriculture

Mr. S. Wijeratne

Mr. T. Samarasinghe

Mr. G.M. Sirisena

Mr. S.N. Somaratne

} Representatives of the Farmers' Organization

Annex 4: Documents consulted

1. **Forest Sector Master Plan of Sri Lanka** (1995), Ministry of Forestry and Environment, Sri Lanka
2. **Forest Policy of 1995**, Ministry of Forestry and Environment, Sri Lanka
3. **Paulownia in China: Cultivation and Utilisation**. (1986)- Chinese Academy of Forestry
4. Mohammad Khan (1993): Propagation of Paulownia – Pakistan Experience. In **Tree Breeding and Propagation News**, Vol.2 No.2. FAO/UNDP Regional Project on Forest Tree Improvement, Philippines,

Annex 5. Potential elements in a contract between PPL and the farmers

Basically, this will be a business relation and must be negotiated between the parties. However, the knowledge and understanding of the potential of the *Paulownia* tree is limited, and this makes the first generation of contracts difficult, but crucial. Therefore some flexibility must be built into the deal. Since the farmer may be the party with the weakest bargaining power at the outset, certain conditions should be set by the donor if donor funds are used to fund parts of the programme. The consultants have not seen any contract of similar nature in Sri Lanka. The forest authorities have contracts governing private timber farms on government land. This will have limited value, since the current project operates on private land. Some ideas might be collected from an ongoing outgrower scheme for sugar cane on private land, despite the fact that trees and sugar cane are very different crops.

Elements that should be included in the contract:

- A description of the purpose of the outgrower scheme
- A description of the anticipated role of the extension services in supporting the farm level programme, to avoid misunderstandings related to responsibilities of the parties (should be cleared with forest authorities)
- A description of the duties of the company
This will include e.g.
 - The supply of seedlings and technical advice
 - Supply of seedlings for beating-up after losses, and for new plots
 - A guaranteed buy-back scheme, and conditions for accepting logs of different size and quality etc. (conditions for trees that are too small, too crooked, damaged etc, based on quality requirements in the international market)
 - A guaranteed minimum price for logs of a defined quality, and a guaranteed (lower) price for other logs. Minimum prices should be renegotiable after each rotation
 - A pledge to negotiate purchasing prices in relation to a possible local market price established by other buyers at the time of maturity
 - A pledge not to interfere if farmers choose to sell to another buyer, provided agreed payback obligations are settled

- A description of the duties of the farmer:
This will include e.g.
 - Soil preparation and digging of planting holes by an agreed date
 - Undertaking the plantation work jointly with PPL representatives
 - Ensure the availability of water, application of fertilizer according to the prescribe programme, application of manure etc.
 - Weeding and protection of the trees during the establishment and growth phases
 - Compulsory payback of establishment costs at the time of harvesting and sale (e.g. into the community fund), whether logs are sold through PPL or not

- Clauses for mode and terms of payment to and from the parties
- Regulations for up-front payment (if this policy is chosen)
- A clause obliging the parties to share all relevant information of importance for the success of the programme
- A clause guaranteeing full farmer ownership to the trees once planted
- A clause for duration of the contract (one rotation?), and conditions for renewal. Renewal negotiations should be finalised minimum (6) months after the first harvest
- A clause for termination of contract, conditions for termination and minimum notice time etc. Routines for handling of liabilities for refund etc. in case of termination
- A clause on liabilities of the parties in case of pest, fire, theft of logs, etc (should be regarded as *force majeure*, and the loss to be covered by each party alone?)
- Clauses for management of potential conflicts (arbitration)



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