

Research on elaboration of policies to encourage *Pinus merkusii* forest planting in contribution to the project of planting new 5 million hectares of forest

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I. Introduction

Forest planting with *Pinus merkusii* can not only solve the problem of environment but also socio-economic problems because besides its capability of good growth and development in poor site conditions, harsh climate, *P. merkusii* also supplies two valuable products: turpentine and pine wood. At present however activities of forest planting with *P. merkusii* do not really attract the people's participation. Investment capital for forest planting mainly relies on the budget source and is managed by State forest enterprises system. Potentiality and strong position of *P. merkusii* together with the role of the people and the economic sectors in this production and management pattern have not been brought into full play. To achieve the target of planting tens of thousand hectares of protection and production forests, there must be a mechanism and policies encouraging various economic sectors to participate in these activities. This constitutes an important base for the research subjects: "Research on elaboration of policies to encourage *Pinus merkusii* forest planting in contribution to the project of planting new 5 million hectares of forest, 1998 - 2000".

II. Research methodology

- Synthesis and analysis of available documents and data
- Survey, study and investigation of real situation in the two provinces Quang Ninh and Ha Tinh.
- Applying NPV and IRR methods for calculation and economic efficiency evaluation of *P. merkusii* forest planting.
- Expert method and scientific seminars.

III. Research results

1. Situation of *P. merkusii* forest planting and management in Vietnam

There are in Vietnam over 100,000 ha. Of *P. merkusii* forest mainly concentrated in 7 provinces: Ha Tinh, Nghe An, Quang Binh, Thanh Hoa, Thua Thien Hue, Quang Tri and Quang Ninh. *P. merkusii* plantations in Vietnam have the following common features:

1.1. A large part of *P. merkusii* plantations in Vietnam has been planted in regions of poor sites, on long-standing bare land and denuded hills with hard production conditions. Results of the forest planting show that the planted *P. merkusii* plantations grow and develop well in very poor site conditions and play a remarkable role in environment protection in these areas. Main objective of *P. merkusii* planting after many years is still revegetation of the land. However the existing *P. merkusii* plantations begin proving their economic benefits especially their social effect. For example in the area of Ha Tinh province alone annual forest planting with *P. merkusii* creates employment for 1,700 labourers; forest tending, management and protection create annually employment for 1,200 labourers. Especially the management, protection and resin tapping activities create regular employment for 4,000 labourers with mean income of 2.5 – 3.5 million dongs/ labourers/ year.

All-sided efficiency brought about by *P. merkusii* plantations proves that this is a model that attracts labourers, provides employment in forest production areas suitable for these activities in the mid-land and mountainous regions. This proves at the same time that the intention to expand *P. merkusii* forest planting is utterly correct and agrees to the requirement of the modern forestry development.

1.2. Low forest productivity: In Quang Ninh resin productivity of industrially mature forest is only 550kg resin/ ha/ year. In Ha Tinh although the forests are at the final resin tapping period but mean productivity is also only 1 tone of resin/ ha/ year.

1.3. Production conditions are harsh but income of the labourers is low. Not only the households that receive the forest on contract but also the state forest enterprises are not interested in developing *P. merkusii* forest: according to reports of two forest development branches of Quang Ninh and Ha Tinh income from payment for forest planting and tending in the first three years of households receiving forest on contract in Quang Ninh and Ha Tinh is mean 1.32 million dongs/ ha respectively.

1.4. The production is dispersed and fragmented leading to difficulty in management, protection and sale of the products.

In many places forest owners rush for immediate benefits, the forest is mass exploited at high intensity at very early stage resulting in quick depletion.

1.5. Technical measures are applied without in keeping with any specific procedures.

2. Economic efficiency analysis of *P. merkusii* forest planting and management.

Table1. Results of efficiency calculation of *P. merkusii* forest planting and management.

TT	Indices	IRR (%)	Capital recovery point (year)	NPV at 7%	T/C
	Investment process				
1	Application as regulated	10.03	42.5	3,511.437	1.107
2	Actual investment	7.2	58.2	403,682	1.007

Results of economic efficiency calculation clearly reveal three problems:

- Normal credit loan (3 – 5 years duration, interest 9%/ year) for investing in management of *P. merkusii* forest as production forest is not feasible.
- Borrowing capital from privileged investment credit loan for management of *P. merkusii* also brings about low profit let alone the risk in management.
- It is due to the use of the non- refundable capital from budget source that the State forest enterprises are being able to plant and manage *P. merkusii* forests.

3. General review and analysis of present policy on *P. merkusii*

3.1. Investment policy: A large part of the *P. merkusii* plantations that has been planted was with investment from State budget. In recent years this investment has been implemented through programme 327 now the project for planting new 5 million hectares of forest. Besides there has also been non-refundable financial support from foreign countries or international organizations.

Inadequacy of the investment policy is:

+ Investment from State budget: small investment capital, low rate of investment and benefit received by the participants is small. Thus the participants do not yet really pay attention to the forest quality.

+ As regards the investment from foreign countries for poverty alleviation project the people must wait for a long time to obtain results from production then they are interested only in immediate benefits and not in the sustainable development of the forest.

3.2. Policy on privileged investment credit: The present policy on privileged investment credit by Decision 43/ 1999/ ND – CP (dated 29 June 1999) is not yet applied in keeping with production practice. Main cause is: the policy was worked out without basing on characteristics of the production process, planted tree species, conditions in the forest planting areas, thus:

- Interest rate of the borrowed capital is approximate to inner recovery rate of the management activities thus borrowing the capital for forest planting and management is not profitable.
- The shortest duration for capital construction as being done at present is 15 years but the time for the borrowed capital should not exceed 10 years.
- The amount of capital borrowed is only about 25% of the actual expenditure in production.

3.3. Taxation policy: According to the current policy people who plant production forest must not pay tax in the following cases: planting forest on bare land and denuded hills, exploitation of products from forest plantation, turpentine and colophony resin export. In these cases forest enterprises must only pay revenue tax for their business activities. In spite of this, in Quang Ninh, Tax is still levied on land use in *P. merkusii* forest planting although forest is planted on bare land and denuded hills. In Quang Ninh tax on land use in *P. merkusii* forest planting is levied at the same rate as with perennial industrial trees. In Ha Tinh it is levied at the same rate as with perennial crop harvested once for all.

3.4. Policy on land-use planning.

The promulgated law on forest protection and development (1991) classifies forest land into three categories. Researches on site conditions, physiological and ecological characteristics of *P. merkusii* that had been carried out can serve as a good basis for planning the development of this species. Regrettably that the very planning carried out most recently (Preparation for the project of planting new 5 million hectares of forest) is also very general in nature, not highly feasible. Planning and production plans are not really based on market demand.

3.5. Policy on market and consumption of product.

The State almost has not any specific policy on market and consumption of product. Therefore market policy and product consumption depend subjectively on each locality having the forest causing many adverse effects on the producers. Really the localities all implement the policy of arbitrary decision on grade and

price of the product leading to exclusive right in consumption and processing of the product. This results in production being held back, deprivation of the producers benefits in favour of the people engaging in processing, discouraging the producers. For example in Quang Ninh the price regulated by the province at present is 3,600dong/ kg while the price on the market is 3,900dong/ kg. Also in Ha Tinh the regulated price in 1998 was 2,800dong/ kg while the price on the market was 3,600dong/ kg. The cost ratio spending on seedlings in forest planting tends to increase due to exclusive right in seedlings supply while the unit price by the State in forest planting is low. In Quang Ninh the units engaged in forest planting must spend over 30.36% investment rate for forest planting to buy the seedlings at a predetermined address.

4. Recommendations on perfection of the policy encouraging expansion of *P. merkusii* forest planting,

4.1. Standpoint of policy perfection:

-Firstly: Calculation and comparison of investment efficiency must not be done simply but expansion of *P. merkusii* forest planting must be closely associated with hunger eradication and poverty alleviation, effective land use, increase of forest cover, improvement of ecological environment.

-Secondary: Households constitute the main force, State forest enterprises constitute a mainstay for the activities in the future.

-Thirdly: Development of commodities production reaching the international market to increase the economic efficiency of *P. merkusii* forest planting.

4.2. Recommendations on policy perfection

a. As regards investment policy. The State must have investment policies for expansion of *P. merkusii* forest planting as those applied to rubber tree or tea i.e. using budget capital to invest in planting and tending in the first four years of *P. merkusii* plantation. This investment capital is given to State forest enterprises or development investment companies (Where there is no State forest enterprise). This must be considered as capital source for capital construction of the State, the units must carry out amortization of investment cost from 6 to 10% when the forest is formally exploited to pay to the State budget. The investors must join effort with the households in the region of the approved project for forest planting and management. For other expenditures in production the investors are allowed to borrow money from privileged investment credit sources.

b. Renovation of mechanism in borrowing capital from privileged investment credit source:

Simplification of capital lending procedure. Duration of capital lending must be implemented as planned by the approved capital refund. There must be avoided the fact that at present when the time of capital construction is not yet expired there is already an order to return the borrowed capital. Especially the fact that the bank orders the borrowed capital for forest planting to be returned after only 3 – 5 years is irrational. The capital to be lent must be in keeping with the production process.

c. Improved privilege in tax

Total exemption of land use tax for forest planting and management activities in the early stage irrespective on what type of land the forest is planted. Exemption of revenue tax for forestry businesses creating favourable conditions for them to invest extensively as well as intensively in production. There must be policies of privileges given to land rent in vast land area with thin population to attract investment.

d. Development of support fund against risks for forest planting and management activities.

e. Support to trade activities: to enhance the competitiveness and create a stable market it is utterly necessary to investigate and gain access to the market. The development process must go hand in hand with commercial measures, searching for partners, expanding markets for the products. At present as the production scale of State forest enterprises is still small with weak financial capability, investment can not as yet be made in research on market development and sale of the products. Thus: 1) The State and local authorities should give financial support, coordinate with large State commercial organizations, strong companies in research on market development and sale of products and based on these provide information on market and guidance to households and State forest enterprises to invest in production development in keeping with market demand; 2) Doing away with the policies of arbitrary gradation and fixing prices of the products and inhibition of circulation of the products in various localities. Implementation of liberalization of trade, creating sound competition environment and a prerequisite for the coming into being of the channels for product consumption, ensuring the benefit of people engaging in forest planting.

f. Doing well the planning of forest planting: the expansion of *P. merkusii* forest planting requires concentrated areas on scale being big enough for mutual assistance in production and creating concentrated raw material volume for processing and consumption of product. The fragmented production on household scale in *P. merkusii* forest planting and management is irrational. Thus proposal is made: 1) The State, provincial and inter- provincial (region) authorities must work out an orientation for expansion of *P. merkusii* forest planting areas: concentrated, on large scale for convenience for processing industry, product export as well as the management and protection. Specially in the time to come expansion of *P. merkusii* forest planting is only concentrated in 3

regions

-North East of North Vietnam, Northern Central Vietnam and coastal region of Central Vietnam; 2) Investment in processing units establishment, services system, technology transfer in production and intensive management of the plantations can only be possible on the base of rational planning of forest planting.

- g. Strengthening the benefits of the households participation. The people now is the main force participating in *P. merkusii* forest planting and management activities but the benefits they get are still very small. The mechanism of allocation of forest and forest land on contract by the State forest enterprises at present creates no encouragement for the people to associate themselves in long-term with the land so that the forest resources are not only rationally exploited but also maintained and upgraded. Proposal is made: The State organizes the research for guiding the state forest enterprises to rationally calculate the payment on contract, raising high the benefits for the households as contract partners; 2) As regards the planting of protection forest there must be policy enhancing the people's benefits especially: The State must invest fully and properly in the first four years on forest planting; allowing the locality and the project to collect not more than 30% the yield obtained by the household in the contract for spending on forest protection and contribution to the local budget.
- h. Policy on science and technology. The planting of *P. merkusii* in poor site conditions exerts no less adverse effect on the planted trees resulting in low efficiency as compared with other planted species. To overcome this situation one of the things to be done is the application of new scientific and technical advances in production aimed at improving and taking advantage of physical condition of the planting site by planting system, producing planting stock adapted well to the conditions in the areas selected for forest planting. Immediate problems must be solved:
- Research on intensive measures in production and technologies serving intensive management.
 - Privilege given to units that produce insecticides and preparations against diseases of *P. merkusii* plantation.
 - Reviewing the experimental models designing, technology transfer, selection of highly effective model in production to popularise among the people.
 - Preparation of training programme, improving the knowledge of production, business undertaking, market economy for the people in the regions planned for expansion of *P. merkusii* forest planting.
- i. Policy on development of resin processing and wood processing industries. Technology and equipment in turpentine processing in our country at present is very backward and the products produced is only classified second class and looked upon as inferior and given low price. Production brings about no profit. Thus there is an ample prospect for development turpentine processing. The State must have many policies for encouragement in research, production and processing, creating favourable conditions for the expansion of forest planting, raising the competitiveness of the commodities on international market, earning foreign currencies for the country. In the early stage however concentrated effort must be made to solution of the following problems (1) Investment in construction of a modern processing factory with large capacity, turning out of finished products according to the planned economic zones of the *P. merkusii* forest planting. Strengthening the policy to draw foreign investment in resin products processing in Vietnam.

J. Strengthening the management by the State of forest production activities. It is necessary to strengthen the management, supervision by the State forest planting activities invested from State budget to ensure effective use of the capital in keeping with the aim in view, supplying full and timely information serving the decisions made in production organization and management.

The State should better establish a system of indices serving the forest management work rather than interferes too deeply in production with concrete regulation nullifying the self-mastery and creativeness of the producers. An environment of fair business undertaking must be created among the economic sectors. Putting an end to irrational policies that run counter to the common interest and the present local policies that restrict the people's benefits. Changing the production organization and management, mechanism concerning benefits and business account of the State forest enterprises to ensure true reflection of actual results of production and benefits of the households as contract partners.

III. Conclusion

P. merkusii is a tree species of important role in the revegetation of bare land and denuded hills in Vietnam. *P. merkusii* forest planting and management activities are not economically highly effective but they do exert good effects on environment protection and bring about employment for the society in rural mountainous areas at the same time create a source of raw material for processing industry development and enhance the export, bringing wealthiness to the country. The results obtained from the expansion of *P. merkusii* forest planting and management in the passing years are highly encouraging. However, reviewing the *P. merkusii* forest planting and management activities as a whole in our country it is found that the development is not yet equal to the potentiality and wishes. Reasons of this situation are many but basically it is due to inadequate understanding of the role and position of *P. merkusii* in the requirement of forestry development linked with socio-economic development of the

forest regions. These result in unsuitable mechanism, policies for development of this type of production and business undertaking and the activities of *P. merkusii* forest planting and management are even neglected, State management is loosened and there is no all-sided planning and designing for development of concentrated *P. merkusii* forest planting areas.

Results of the research subject are only preliminary. Based on results of actual study the research group makes some recommendations aimed at raising high the effectiveness of *P. merkusii* forest planting and management in Vietnam.

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