6. 参 考 資 料

目 次

（林業総局長官；雑貨工業総局長官；国内商業総局長官，外国貿易総局長官の共同決定）

資料 I

TERMS OF REFERENCE FOR UTILIZATION OF LESSER-KNOWN WOOD SPECIES

I. Background

Based on the findings of researches made in the forests in Indonesia, more than 4,000 species have been recorded. However, only 60 species or ±1.5% have been utilized. The fact that the potential of the lesser-known species still remains intouched is due to the following matters:

- Incomplete information of the technological properties and the various uses of the species.
- Insufficient data on the volume, the species and the distribution of their standing stock.
- No information which may lead to prospective marketing areas and requirements, and consumer likings.

Promtoion of utilization including marketing can be boosted in the appropriate way after these factors have thoroughly been mastered. In this relation participation of foreign investment/aid, financial as well as technical, can be induced in such a way as to benefit all parties concerned.

II. Objective of the Project

a. Long-term objective

The project serves the purpose of acquiring up-to-date and relevant information in the framework of the Government's efforts to stop up utilization and marketing of lesser-known timber species.

b. Short-term objective

The short-term objective is to gather information of:

1. The potential of the natural forest stands in the regions outside Java and its marketing possibilities.
2. The technological properties, the processing and the utilization of the species.
3. Marketing areas and requirements, and consumers' requirements and fancy.
4. The most efficient and effective transport system.

III. Targets

1. Research into the potential of wood in the natural forests outside Java: species, potential, production, forest structure (set-up), exploitation possibilities: .... 2 years (starting 1980)

2. Research into technological (physical, chemical) properties of wood, its processing and uses: .... 2 years (starting 1981)

3. Research into international and domestic marketing (supply and demand, consumption patterns, influences of substitutes, trade channel prices): .... 2 years (starting 1982)

4. Research into transportation systems: .... 2 years (starting 1983)

IV. Work-plan

1. Research into the potential of wood in the natural forests outside Java:

   1.1 6 Provinces (4 in Kalimantan + Riau + Aceh) 1980

   1.2 6 Provinces (Jambi, West Sumatra, South Sumatra, Central Sulawesi, Maluku, Irian Jaya) 1981

2. Research into technological properties of wood:

   2.1 50 species 1981

   2.2 50 species 1982

3. Marketing research:

   3.1 In the country (Java, Outer Regions) 1982

   3.2 Abroad (Europe, the USA, the Middle East, Japan) 1983

4. Transport research:

   4.1 Inter-island (to Java) 1983

   4.2 Overseas transport (Europe, the USA, the Middle East, Japan) 1984

V. Personnel

1. The Government of the Republic of Indonesia:

   - Co-Manager (the Directorate of Forest Product Marketing, the Directorate of Forestry Planning, the Forest Product Research Institute).
   - Full-timer counterparts (15): 5 of the Directorate of Forest Product Marketing, 5 of the Directorate of Forestry Planning, 5 of the Forest Product Research Institute).

2. The Government of Japan:

   - Manager (1)
   - Senior experts (3) in economics/marketing, planning/statistics, and transportation.

VI. Location/Office

1. Jakarta: The Directorate of Forest Product Marketing;

2. Bogor : The Forest Product Research Institute, the Directorate of Forestry Planning.

VII. Activities

1. On the Central level contacts are made with:

   1.1 The Department of Agriculture, the Directorate General of Forestry (the Directorate of Forest Product Marketing, the Directorate of Forestry Planning, the Directorate of Forest Production, the Forest Product Research Institute);

   1.2 The B.P.S.;

   1.3 The Department of Communication;

   1.4 The Department of Trade

   1.5 The National Development Planning Agency.

2. On Provincial level contacts are made with:

   2.1 Provincial Forest Services/The Provincial Administration;

   2.2 Port Authorities.

VIII. Financial outlay

The cost of the research/study can be defrayed by:

- the Government of Japan as a whole;
- the Government of the Republic of Indonesia and Japan on a joint basis.

The total funds required will amount to Rp. 400,000,000 covering:

- Wood potential research Rp. 150,000,000
- Wood property research Rp. 100,000,000
- Marketing research Rp. 100,000,000
- Transportation research Rp. 150,000,000

Code Number : ATA - 269

PROJECT DIGEST: STUDY FOR UTILIZATION OF LESSER-KNOWN WOOD SPECIES

1. Project Title : STUDY FOR UTILIZATION OF LESSER-KNOWN WOOD SPECIES

2. Location : Selected Provinces outside Java

3. Executing Agency : Directorate General of Forestry, Ministry of Agriculture

4. Objectives :
   - to assist and give advice to the Government in developing as standard reference on economic plants concerning the lesser-known species for possible utilization and marketing;
   - to investigate the most possibilities of developing an information centre that is capable in rendering information services on particular groups of plants having potential characters of economic use.

5. Project Description : The proposed study is aimed at providing list of genetic characteristics so as to encourage agriculturists, horticulturists, foresters, pharmaceutists, and relevent scientist to develop the lesser-known species into more economic utilization and possible marketing.

   There are more than 4,000 species recorded in Indonesia. However, only 60 species or 1.5% have been utilized and most of them are of lesser-known and remains untouched due to the following reasons:

   - lack of data and information concerning the technological progress and possible uses of such species,
   - insufficient coordination of managing surveys of possible economic species and the marketing aspects,
   - inedequate experience on developing such species.

6. Scope of Assistance

Requested	:	
a. expert services	:	48 m.m. = US $ 325,000
b. fellowship	:	24 m.m. = US $ 60,000
c. equipment	:	= US $ 115,000
		Total Cost= US $ 500,000

7. Related to Project Aid : ---------------------------------

資料 II

To : DR. SOEDJARWO
Director General of Forestry

Interim Report
on
Utilization of Lesser-Known Wood Species
by
Japanese Preliminary Survey Team

Takashi ENDO
(Team Leader)

We the member of Preliminary Survey for Utilization of Lesser-known Wood Species have had field survey on distribution of standing stock and their utilizing conditions of lesser-known species in the area of South Sumatera, East Kalimantan and South Kalimantan, starting from 8th to 17th February.

We are much pleased with kind cooperation and assistance from KEHUTANAN in each place.

With these kind cooperation, we were able to complete field survey successfully even in the limited time without any accidents.

Now, results of field survey are not yet discussed among the team, however, I'd like to give several comments and impressions on this occasion.

First, by the name of lesser-known species, we could find a large variety of them on wood species, wood size class and distribution of stock depending on each region. Therefore, it will be much better if we can differenciate those lesser-known wood species by each region.

Secondly, we found many sinkers among lesser-known woods which require high cost of transportation. And also their distribution of standing stock per hectar is small in volume. Therefore, it seems difficult to have constant supply with constant volume. Including above mentioned, there lies a lot of problems to utilize lesser-known wood as commercial woods.

With these recognitions, we think that we should have a new understanding of the importance of utilization of lesser-known wood species. It is also significant and benificial to solve those problems with the cooperation between Indonesia and Japan.

Now, the results of survey are not yet fully summarized, however, we would like to present our views on Term of Reference in the following papers. Therefore, we are very much gratefull if you give us views and opinions concerning with this Interim Report.

I hope we will be able to promote cooperation and deepen our mutual understanding between your country and ours.

Thank you very much.

Views of Preliminary Survey Team on Terms of Reference

Now, We would like to present our views on "Terms of Reference, at the same time, views on "Requests" given by Directorate of Planning and Forest Product Research Institute.

We would like to refer by following the order of four items which are written in terms of reference as target and work-plan. These are our results of field survey and discussions among members.

Item No. 1. Research into the potential of wood into natural forest outside Java.

On this item, We understand the targets is to totaly grasp the distribution of standing stock of lesser-known wood species depending on each region and to make use of those basic data for the effective utilization.

Therefore We, first of all, think this research should be under taken by statistical method on wood species, standing stock and distribution utilizing existing materials and data such as "Green Book", working plan of logger and so forth.

And as a supplemental approach, we also consider the remote sensing method such as existing aero photo data by satelite, at the same time, field survey and research on species logged and unlogged will be much effective.

However, request presented by Directorate of planning such as research by aero photo in the area of 30 million hectar might be beyond the development survey and as far as total financial limit concerns, stastistically significant data will not be available within limited period of two years.

We feel much difficulty to reply on the requests of Directorate of Planning.

Item 2. Research into technological properties of wood.

We understand target of this item is to require practical experiment on processing which is deeply related with marketing research rather than too much going on the scientific data on fundamental wood quality.

Therefore, we think the selection of wood species and their experimental method should be as follows.

1. Selection of wood species for the experiment.

The T/R explains that in the first stage in 1981 properties of 50 species should be researched and 50 species in second stage in 1982 excluding 120 species which had been already done in the Forest Research Institute.

However, we feel much necessity of practical experiment of processing on all species including 120 species which were already scientificaly analysed.

Besides, 100 species which were requested in the T/R are mostly rare species, so that it will be mere significant as far as scientific analysis concerns however it will not be directly conected with market development.

Therefore we should select wood species with priority of high potencial with the consideration of its quality & distribution of standing stock by making use of the results of analysis by F.R. Institute or data from green book.

2. Experimental method

Main experiment will be manufacturing properties of Plywood and wood processing.

If necessary, basic experiment should be done. We think those experiment should be done in Japan as far as limit of development survey system considered.

Item 3. Marketing Research

Implementation of Marketing Research is quite possible such as consumption patterns and its future prospective in Japan as well as developed countries by using Japanese consultants.

However we think it will be difficult to research in the middle East and other developing countires.

So, further we would like to discuss on this issue, as for the research on domestic market, Japan will be able to dispatch a few experts or consultants, so cooperation with counterpart is inevitable.

We would like to discuss detail contents later on, while, it will be much helpfull, if we receive your opinion on their research.

Item 4. Transport research

It is emphasized in the T/R as transport research on inter-island (to Java) & overseas transport.

However, when it comes to the promotion of utilization of lesser-known wood species, it is also necessary to include the transport from logging site to each port of shipment.

It is also necessary to research appropriate wood processing site with the consideration of wood properties, and depending upon the market such as local, domestic or international.

As for the research on transport system, it is quite difficult since it has different function depend on the region, transporting place, wood species, wood processing conditions.

Therefore, concrete planning on 12 provines will be difficult. It will be only general summary.

We think analysis by the case study on certain area will be also significant & helpfull for the tranport research.

JOINT DECREE OF THE DIRECTOR GENERAL OF FORESTRY, THE DIRECTOR GENERAL OF MULTIFARIOUS INDUSTRY, THE DIRECTOR GENERAL OF DOMESTIC TRADE AND THE DIRECTOR GENERAL OF FOREIGN TRADE

NO. 78/Kpts/DJ/I/1981
NO. 054/DJAI/SK/IV/1981
NO. 051/DAGRI/KP/IV/81
NO. 07/DAGLU-33/KP/IV/81

REGARDING

THE PROMOTION OF INTEGRATED INDUSTRY PRINCIPALLY PLYWOOD INDUSTRY, DEVELOPMENT OF FOREST EXPLOITATION AND FIXATION OF THE EXPORT OF ROUND LOGS.

THE DIRECTOR GENERAL OF FORESTRY, THE DIRECTOR GENERAL OF MULTIFARIOUS INDUSTRY, THE DIRECTOR GENERAL OF DOMESTIC TRADE AND THE DIRECTOR GENERAL OF FOREIGN TRADE.

Having Considered: a. That by virtue of the Joint Decree of the Minister of Agriculture, the Minister of Trade and Cooperatives and the Minister of Industry
No. 317/Kpts/Um/5/1980
No. 196/Kpb/V/1980
No. 182/M/SK/5/1980
has been sanctioned the regulation on the obligation to supply logs for domestic need connected with round logs export;

b. That to promote and to accelerate the development of integrated industry principally plywood industry, it is deemed necessary to issue a Joint Decree of the Director General of Forestry, the Director General of Multifarious Industry, the Director General of Domestic Trade and the Director General of Foreign Trade regarding the promotion of integrated industry principally plywood industry, development of forest exploitation and fixation of the export of round logs.

With a view to : 1. Presidential Decree No. 44 Year 1974 and No. 45 Year 1974 juncto Presidential Decree No. 47 Year 1979;

2. Joint Decree of the Minister of Agriculture, the Minister

of Trade and Cooperatives and the Minister of Industry:

No. 317/Kpts/Um/5/1980

No. 196/Kpb/V/1980

No. 182/M/SK/5/1980

3. Joint Decree of the Director General of Forestry, the Director General of Domestic Trade and the Director General of Multifarious Industry:

No. 092/Kpts/DJ/I/1980

No. 152/DAGRI/KP/V/1980

No. 066/DJAI/SK/V/1980

With due attention to : 1. Guidance of the President of the Republic of Indonesia in the Limited Cabinet Session in the sector of EKUIN (ECONOMIC, MONETARY and INDUSTRY) on April 1st, 1981;

2. Conclussion of the Meeting of the Minister of Agriculture Minister of Trade and Cooperatives and the Minister of Industry on April 18th, 1981.

HAS DECIDED:

To lay down : A JOINT DECREE OF THE DIRECTOR GENERAL OF FORESTRY, THE DIRECTOR GENERAL OF MULTIFARIOUS INDUSTRY, THE DIRECTOR GENERAL OF DOMESTIC TRADE AND THE DIRECTOR GENERAL OF FOREIGN TRADE REGARDING THE PROMOTION OF INTEGRATED INDUSTRY PRINCIPAL-LY PLYWOOD INDUSTRY, DEVELOPMENT OF FOREST EXPLOITATION AND FIXATION OF THE EXPORT OF ROUND LOGS.

FIRSTLY : 1. For the promotion and acceleration of the development of integrated industry principally plywood industry an export allocation of round logs will be granted.-

2. Export allocation of round logs will be granted to HPH Holder at the stage of establishment of integrated wood industry principally plywood industry and to same already at the stage of production.-

3. HPH Holder having obtained export allocation of round logs as referred to in paragraph (2) of this dictum, may execute his export after being recognized as Approved Exporter of Round Logs by the Director General of Foreign Trade and in possession of a Licence for Realization of

Export of Round Logs (SPREK/B).-

SECONDLY : In this Joint Decree meant by:

a. Integrated Wood Industry shall be wood industry consisting of more than one kind of industry principally plywood industry, hereinafter referred to as industry.

b. Industry considered still at the stage of development if it fulfils the three following criteria:

b.1 In possession of a Permanent Licence (SPT) for those using BKPM facilities, or a Provisional Licence (SPS)/undertaking permit from the Department of Industry for those not using BKPM facilities.

b.2 Completion of the physical development in the form of establishment of factory building.

b.3 Plywood main processing machinery (Knife/peeler, dryer or hotpress) for the greater part has arrived at the site.

c. Industry considered at the stage of production, if it has converted raw material into semi finished goods or finished goods continuously realizing production more than 10% of the designed capacity and has marketed its production.

THIRDLY : 1. Promotion of saw mill industry of integrated industry principally plywood industry will be granted export allocation of round logs insofar it meets the requirements as mentioned in dictum SECONDLY (b).

2. Plywood industry increasing its capacity to more than 40,000 m^3 processing wood will not be granted additional export allocation of round logs.

3. Veneer industry is not included in the meaning of plywood industry. This industry could only be classified into industry at the stage of development, if it has fulfilled the requirements as mentioned in dictum SECONDLY (b).

FOURTHLY : The Director General of Forestry and the Director General of Multifarious Industry regulate:

a. The granting of export allocation of round logs for industry at the stage of development for a period of ultimately 2 (two) years.-

b. The appraisal of realization of the development of industry at the stage of development.

FIFTHLY : Expect allocation of round logs will be fixed as follows:

a. For industry at the stage of production will be granted an export allocation of round logs for Domestic and Export at the rate of 4 (four) to 1 (one).-

b. For industry at the stage of development will be granted an export allocation of round logs for Domestic and Export at the rate of 1 (one) to 2 (two).

Maximum export allocation of round logs shall be his industry designed capacity.

SIXTHLY : 1. HPH Holder who individually is unable to establish plywood industry may join/group in the following way:

a. Several HPH Holder jointly establish industry.
b. Several HPH Holder purchase stocks from the existing Non-HPH industry.
c. HPH Holder cooperating with third party either Private National/Foreign or State's Own Enterprise (Persero-Inhutani).-

2. Execution of grouping will be further regulated by the Director General of Forestry.

SEVENTHLY : SPREK/B issued up to April 30th, 1981, will be valid for a period of 3 (three) months as from the date of its issuance.-

EIGHTLY : This Joint Decree is not valid for the region of the Province of Irian Jaya.

NINTHLY : Matters not regulated as yet in this Joint Decree will be regulated by the respective Director General concerned in conformity with their field activities and competency.-

TENTHLY : This Joint Decree is valid as from May 1st, 1981.-

Sanctioned in : Jakarta
Dated : April 22nd, 1981

THE DIRECTOR GENERAL OF DOMESTIC TRAD	THE DIRECTOR GENERAL OF FORESTY
W/S	W/S
KARDJONO WIRIOPRAWIRO	SOEDJARWO
THE DIRECTOR GENERAL OF FOREIGN TRADE	THE DIRECTOR GENERAL OF MULTIFARIOUS INDUSTRY
W/S	W/S
SUHADI MANGKUSUWONDO	K. HADINOTO

資料Ⅳ

インドネシアの新林業政策

（ビジネス・ニュース1981年5月20日，22日号）

— 合板を中核とする総合木材工業の推進，森林開発の方向，
及び丸太輸出に関する規定の制定について —

林業総局長官，雑貨工業総局長官，国内商業総局長官，
外国貿易総局長官の共同決定　　1981年4月22日付

決　定

第1－1．合板を中核とする総合木材工業の開発を促進するために，丸太輸出を割当許可制とする。

2．丸太輸出割当は，合板を中核とする総合木材工業の開発段階にある森林伐採権保持者または既に生産段階にある森林伐採権保持者に対して許可することができる。

3．この告示第2（節）の規定による丸太輸出割当を許可された森林伐採権保持者は，外国貿易総局長官から登録丸太輸出業者であることの認証を受け，かつ，輸出実施許可証（SPEAK／B）を手に入れたのちに，輸出を実行することができる。

第2－1．この決定における用語の意味は，次のとおりである。

a．総合木材工業とは，合板を中核とする1タイプ以上の生産設備から成り立つ木材工業をいい，以下木材工業と呼ぶ。

b．開発段階にある木材工業とは，次の3つの基準を満たすものをいう。

b1．資本投資調整局（BKPM）の施設を利用中のものは，その常時利用許可証（SPT）を有すること，BKPMの施設によらずに施行中のものは工業省の事業免許の仮許可証（SPS）を有すること。

b2．工場建設が眼に見える開発形態を現わしていること。

b3．主要加工機械（ピーラー，ドライヤーまたはホットプレス設備）の大部分が現地地に到着済みであること。

c．木材工業で生産段階にあるとみなされるものは，その主原料を半製品または完成品に加工して設備能力の10％以上の生産を維持しており，かつ，その生産物が市場に出廻っているものをいう。

第3－1．製材工業は，第2（節）(b)の要件を満たす場合には，合板を中核とする総合工業への発展のために，丸太輸出割当を受けることができる。

2．合板工場が，その能力を加工用材40,000㎥以上に拡張するときは，丸太輸出割当の追加を受けることはできない。

3．単板工業は，合板工業とはみなさない。単板工業は，第2（節）(b)の要件を満たす場合において 開発段階にあるものとして取り扱うことができる。

第4－　林業総局長官と雑貨工業総局長官とは，次のとおり定める。

a．開発段階にある工業に対する輸出割当の許可は，最高2年間とすること。

b．開発段階にある工業の進捗度合を評価すること。

第5－　丸太輸出割当については，次の規定によるものとする。

a．既に生産段階にある工業には，丸太輸出割当を国内使用量4に対し輸出量1の割合で許可することができる。

b．開発段階にある工業には，丸太輸出割当を国内使用量1に対し輸出量2の割合で許可することができる。

丸太輸出割当量の最高限は，当該木材工業の設備能力で定めることができる。

第6－1．森林伐採権保持者が，単独で合板工業を設立することができないときは，次の方法でグループを組むことを認めることができる。

a）伐採権保持者数人の共同による工業の設立。

b）伐採権保持者数人による伐採権のない既存の工業の株式の買収。

c）伐採権保持者の第三団体との協同，国内または外国の私企業であると国営企業（Inhutani 国営林業公社）であるとを問わない。

2．グループ化の実施の細部については，林業総局長官が定める。

第7－　1981年4月30日以前に発行された輸出割当許可証は，発行の日から3か月間有効とする。

第8－　この共同決定は，イリヤン・ジャヤの the first level province には適用しない。

第9－　この共同決定に定のない事項については，その所掌と権限の属する各局長官が定める。

第10－ この共同決定は，1981年5月1日から有効とする。

1981年4月22日 ジャカルタにおいて制定

関係4局長官 署名

解 説

1981年4月22日付の4総局長官共同決定の発布に関連して，必要と思われる説明を以下に述べる。

1. 政策の背景

森林のような天然資源の経営については，国が最大の繁栄を達成できるように計画する。

この目的を達成するための策政枠組のなかで，第一段階では，現在森林の利用によって，丸太の生産と輸出に力を入れて来たが，それが次第に減少し弱体化して，半製品の輸出へ向かうことになったものであり，そのため，この道を進みつつあるわけである。

a) 木材加工業の成長は，雇用を拡大し，輸出される加工材一荷ごとに付加価値が得られるので，これを奨励するものとする。

b) 木材の国内需要については，適正価格で充足させるものとする。

c) 丸太輸出量は，輸出丸太一荷ごとの価格が最高水準になるように調整するものとする。

上記のような政府の政策の精神は，1980年5月8日付の3省共同省令（SKBTM）に含まれるものであり，1980年5月15日以降，丸太輸出を国内加工用丸太の供給にリンクさせることによって実施して来ている。

3省共同省令による政策の実行は，最近の国内工業の成長増大という好結果を現わして来た。1981年になって，政府は，一歩を進めて丸太輸出をさらに制限する方法をとることが必要だと考えている。近い将来には，丸太はすべて国内で加工されることに落ちつくであろう。国内の木材工業が丸太生産量を消費し尽すようになるまでは，一部丸太の輸出が続けられることになる。丸太輸出の機会を設けることは，森林伐採権保持者が，合板を中核とする総合木材工業を開発し，設立することに対する助成策として利用することになる。

木材工業開発の現段階では，合板を中核とする木材工業をさらに発展させ躍進させるための助成を許可することになる。

林業部門における新政策は，1981年4月1日の経済，財政及び工業関係閣僚会議と1981年4月18日の通商・協同企業相，工業相及び農業相の会合で方針が立てられ，その後4総局長官共同決定（SKB4DJ）として公文化されて1981年5月1日から効力を生ずることになった。

2. 説　明

4総局長官共同決定にいう総合木材工業とは，合板を中核とする1以上の木材工業設備から成る木材工業の結合体を指すものである。

森林伐採権保持者で，木材工業の開発段階ないし，その木材工業が既に上記のような生産の過程にあるものは，丸太輸出割当を受ける資格を有する。

1以上の生産設備から成る木材工業であっても，合板を中核としないものは，丸太輸出割当を受ける資格を有しない。

製材工業は，合板を中核とする総合木材工業に発展させて，4総局長官共同決定第2（節）(b)にいう要件を満たすようにならない限り，もはや丸太輸出割当の許可を受けられなくなった。

工業省の事業免許の仮許可証（SPS）とは，工業省が発給する工業の仮の事業免許をいう。

3. 森林伐採権の集団化

主原料の加工を効率的にし，製品市場で競争ができるようにするためには，合板を中核とする総合木材工業は，その基礎として年伐量25万㎥以上の事業区域を必要としている。

年伐量25万㎥以上の森林伐採権保持者と外資系の森林伐採権保持者とは，強大な森林伐採権保持者の部類にはいるので，それらは，自分で総合工業を建設しなくてはならない。

年伐量10万ないし25万㎥の区域をもつ森林伐採権保持者は，合併し，グループを作って，合板を中核とする総合木材工業を設立するものとする。

年伐量10万㎥未満の区域をもつ森林伐採権者の合併，集団化に関する取扱については，林業総局長官が別に定めるところによる。

合板を中核とする総合木材工業の設立について，森林伐採権者と他の団体（森林伐採権のない工業，国内・国外の会社または国営企業）とが協同する場合の協同の形及び資本の所有構成並びに協同に関するその他の事項については，林業総局長官が別に定めるところによる。

4. 丸太輸出割当

丸太の割当は，合板を中核とする総合木材工業が生産にはいっている森林伐採権保持者及び合板を中核とする総合木材工業を開発中である森林伐採権保持者に対する奨励の用をなすものである。

丸太輸出割当量は，当該合板工業の設備能力または開発段階によって決定される。

設備能力とは，1981年5月1日以前に資本投資調整局から発行された常時利用許可証に示された能力をいう。1981年5月1日以降に発行された常時利用許可証によるものは，合板設備能力の加工用材4万㎥を最高限として丸太輸出割当を制限する。

合板設備を中核としない総合木材工業には，丸太輸出割当は許可しない。

1981年5月1日以降は，丸太輸出割当は，合板を中核とする木材工業を開発中ないしは既に生産にはいっている森林伐採権保持者にのみ許可される。

工業が開発段階にある森林伐採権保持者には，既に生産にはいっている者よりも助成の大き

い許可が与えられる。これは，工業の発展を奨励し躍進させる政策枠組のもとで，資金の準備を助ける意味である。

第5（節）(a)にいう国内使用量とは，丸太輸出割当量の算定基礎に用いられるものであって，合板設備で加工する丸太量をいう。従って，丸太輸出割当量は，合板設備による加工実績量の4分の1の量について許可される。

5. 輸出の実施及び国内木材供給のための書類と手続

丸太輸出の実施並びに国内木材供給のための必要書類と手続は，なお現行規定（1980年5月8日付の3省共同省令及び全現行施行規則）によるものである。

6. 経過措置

a. 1981年4月30日以前に発行された輸出実施許可証（SPEAK／B）は，発行の日から3か月間有効である。

b. この措置により，輸出実施許可証の文面上の有効期間45日は，発行の日から3か月間として実施される。

c. 伐採権保持者で，合板を中核とする木材工業に対する丸太供給者に今度なった者には，合板を中核とする木材工業の株主としての立場に変わることについて，4総局長官共同決定が実施されてから1か年の経過期間が認められる。

この経過期間中は，1980年から1981年にかけて合併済みの者（林業総局長官からの証明書により集団化が明白なもの）は，その総合工業の開発段階に応じて丸太輸出割当を許可される。

1981年5月4日付，ジャカルタ。

林業総局長官　スジャーロウ

（丸太輸出に関連する木材の国内供給に関する調整チームの長として）

―― 合板を中核とする総合木材工業の開発の進捗度合と
その評価について ――

林業総局長官及び雑貨工業総局長官の共同決定

決　定

第1. 合板を中核とする総合木材工業を開発中及び既に生産段階にはいっている森林伐採権保持者に丸太輸出割当を許可すること。

第2. 合板を中核とする総合木材工業を開発中の森林伐採権保持者には，最初の丸太輸出割当を許可してから最大24か月間丸太輸出割当を許可すること。

第3. 開発段階にある総合木材工業というのは，4総局長官共同決定第2（節）(b)に示すとおりである。

第4－1. “開発段階にある工業”から“生産段階にある工業”への進捗度合については，次のとおり定める。

a. 最初の輸出割当の許可から数えて6か月末の時点での進度

a1. 主要建物の50％が建設済みであること。

a2. 主要機械の60％が工場予定地に到着済みであること。

b. 最初の輸出割当の許可から数えて2度目の6か月末の時点での進度。

b1. 主要建物の75％が建設済みであること。

b2. 主要機械の30％が設置済みであること。

c. 最初の輸出割当の許可から数えて3度目の6か月末の時点での進度。

c1. 全主要建物が100％完成していること。

c2. 全主要機械が100％工場予定地に到着済みであり，かつ，その60％が設置済みであること。

d. 最初の輸出割当の許可から数えて4度目の6か月末の時点での進度。

そのときは，工業が既に生産段階にはいっていること。

2. 単板工業は，合板工業用の常時利用許可証（SPT）を所持する場合には，開発段階にある工業の部類に入れることができる。この場合には，丸太輸出割当は，最初の輸出割当の許可日付から最大12か月間許可することができる。

3. 生産段階にある工業というのは，4総局長官共同決定第2（節）(c)に定めるとおりであ

る。

第5. “開発段階にある工業”が，上記第4に定める進度形態に合わないときは，丸太輸出割当の許可は，6か月延期する。

第6－1. 開発段階の進度の評価は，the first level regionsの州林業局長及び地方工業事務所長が指揮する“木材の国内供給に関する調整チーム地域作業班”が6か月ごとに行うものとする。

2. 地域作業班は，その評価結果を，“丸太輸出に関連する木材の国内供給に関する調整チーム”の長である林業総局長官と雑貨工業総局長官とに報告するものとする。

3. 評価の報告は，工業を推進させる前進的手段を決定する材料として用いることになる。

4. 林業総局長官と雑貨工業総局長官とは，現地調査を指揮するための評価チームの割当をする権限をもつものとする。

第7. この共同決定は，制定の日から効力を生ずる。

1981年5月4日　ジャカルタにおいて制定

林業総局長官　スジャーロウ

雑貨工業総局長官　クスジアルソ・ハジノト

―― 合板を中核とする総合木材工業開発の政策枠組内での
森林伐採権保持者の集団化に関する指示 ――

（林業総局長官決定）

決　定

第1. 合板を中核とする総合木材工業開発の政策枠組内での森林伐採権保持者の集団化に関する規定は，この決定の付則に定める。

第2. この決定に定のない事項については，別に定めるところによる。

第3. この決定は，制定の日から有効である。

1981年5月5日

林業総局長官　名

付　則

1. 年伐量が10万m³未満の伐採権保持者で，単独で総合木材工業を設立することができない者は，他の伐採権保持者と共同してグループを形成することにより，合板を中核とする総合木材工業を建設できるようにするものとする。

年伐量が10万m³以上25万m³未満の伐採権保持者で，まだ総合木材工業を設立していない者も，単独か，または，年伐量10万m³未満の他の伐採権保持者もしくは10万m³以上25万m³未満の他の伐採権保持者と共同して，合板を中核とする総合木材工業を建設することができる。

2.1 集団化の実行にあたっては，開発地帯（WP）の規定に従って，工業が，できるだけ原木供給源地域の近くか，その流域内に位置するようにするものとする。

2.2 開発地帯区分は，次のとおりである。

開発地帯 Ⅰ アチェー特別区と北スマトラ

Ⅱ 西スマトラとリァウ

Ⅲ ジャンビ，南スマトラ及びベンクル

Ⅳ ランポン，ジャカルタ特別区，西ジャワ，中央ジャワ及びジョクジャカルタ特別区

Ⅴ 東ジャワ及びバリ

Ⅵ 西カリマンタン

Ⅶ　中央カリマンタン，南カリマンタン及び東カリマンタン

Ⅷ　西ヌサテンガラ，東ヌサテンガラ，南スラウェシ及び南東スラウェシ

Ⅸ　中央スラウェシ及び北スラウェシ

Ⅹ　マルク及びイリヤン・ジャヤ

2.3　伐採権保持者で，この決定発布前に，上記以外の地で合板を中核とする総合木材工業を建設済みの者は，そのまま操業を続けることができる。

3.　伐採権保持者で，年伐量10万m³未満の者は，次の方法でグループを形成することができる。

3.1　同一集団化地帯内の伐採権保持者が，合併して年伐量が25万m³程度になるようにして一つの合板を中核とする総合木材工業を設立し，その資本を伐採権保持者間で分け合うことにする。

3.2　同一集団化地帯内の伐採権保持者が，他の伐採権保持者で既に合板を中核とする総合木材工業を所有している者の株式を買収する。買収する株式は，最少限20％に達しなくてはならない。

3.3　同一集団化地帯内の伐採権保持者が，伐採権をもたないが合板を中核とする総合木材工業を所有している者の株式を買収する。この場合は，伐採権保持者が買収すべき株式は，最少限20％に達しなくてはならず，かつ，10年以内に漸次株式の多数（最少限51％以上）を占めるようにしなくてはならない。

3.4　同一集団化地帯内の伐採権保持者が，林業部門の国営企業（Inhutani 林業公社）と共同して，合板を中核とする総合木材工業を設立する。

4.　伐採権保持者で，合板を中核とする総合木材工業に原料を供給して来た者は，この決定から1年以内から1年以内に，原料供給者としての立場からその工業の株主に転換する機会を与える。伐採権保持者で，1980年から1981年にかけて実際に合併した者（林業総局長官の証明書により集団化が明らかなもの）は，この経過期間中に，総合木材工業の開発段階にあるものとして，丸太輸出割当を受ける資格をもつ。

5.　株式所有については，国立銀行への払込済書類を付した株式譲度の公正証書と公認会計士の証明する期首資産在高による。

6.1　伐採権保持者が外国系資本による者である場合は，直接投資によるものも，合併企業であるものも，自力で総合木材工業を設立するものとする。それらの工業が，丸太輸出という助成に与ろうとすれば，合板設備をもたなくてはならない。

6.2　外資系の会社は，その株式を国内系資本の会社または民族系の個人会社に売り渡すことが

許される。

6.3　外資系の会社は，国内系資本の会社または民族系の個人会社の株式を買収してはならない。

6.4　外資系の会社で，国内系資本の会社または民族系の個人会社が所有する合板を中核とする総合木材工業に丸太を供給して来たものは，自分で合板を中核とする総合木材工業を設立するか，そうでなければ，その全株式を合板を中核とする総合木材工業を所有する国内系資本の会社もしくは民族系の個人会社をもつ伐採権保持者に売り渡さなくてはならない。

年伐量が２５万m^3以上の伐採権保持者は，自分で総合木材工業を設立しなくてはならない。その工業が，丸太輸出の助成に与ろうとすれば，合板を中核とする工業にしなくてはならない。

１９８１年５月５日

林業総局長官名

REPUBLIC OF INDONESIA
DEPARTMENT OF AGRICULTURE
DIRECTORATE GENERAL OF FORESTRY

FORESTRY NATIONAL PLAN
1975 - 2000
(INDICATIVE)

1975

CONTENTS

FORESTRY NATIONAL PLAN

1975 - 2000

I. GENERAL REVIEW

1. Physical condition

a. Location

Indonesia is geographically situated within the latitude 6°N. to 11°S. and the longitudes 95° to 114°S., hemmed in by two continents, Asia in the north and Australia in the south and, surrounded by the Indonesian and the Pacific Oceans and the South China Sea.

b. Archipelago

About 4,000 islands, sprawling from the west to the east, constitute an equatorial belt of emeralds with the large islands of Kalimantan, Irian Jaya, Sumatra and Java, added up with the will-know Maluku and Nusatenggara island groups.

c. Mountains and mountain ranges

A circle of mountain ranges, stretches in the west from the northern tip of Sumatra to the south (the Bukit Barisan). It extends into a series of mountain ranges along the southern length of Java and continues as far as the eastern tip of Nusatenggara.
The northern frontier is, as it were, closed with a mountain range, which strats from west Kalimantan and forms a natural border with East Malaysia.
The mountain range stretches to Sulawesi, Maluku and Irian Jaya.
Each island can boast of its soaring mountains, such as Mt. Kerinci, Mt. Mertaus, Mt. Slamet, Mt. Batur, just to mention but a few.

d. Topography

The mountains and mountain ranges are market with heavy topographic conditions, sloping downwards to the coastal areas, forming dry and marshy areas.

Thousands of rivers have their springs in the mountains and mountain ranges and grow into large rivers, such as the Indragiri, the Musi, the Citar, the Solo River, the Serayu, the Kapuas, the Barito and the Mamberamo.

e. Climate

The temperature, 25°C, on the average, ranging between 19°C and 33°C., shows little variation throughout the year, while the average rainfall is 2190 mm/year (700 - 3600 mm).

f. Soil

Soil types making up the Indonesian soil are Latosol, Lithosol, Grumosol, Andosol and Podsol with variations according to the local conditions, e.g. Hydromorph in peat soil. Fertilization or other tree treatment is done only in areas that are destined for certain plant species.

2. Vegetation

The western part of Indonesia has an Asia-influenced vegetation, which is in the world of forestry distingished by the dominant wood species of the Dipterocarps, while the vegetation of the eastern part, with Araucariaceae species dominating, is influenced by the Australian continent.

In some areas there are pure formations of certain wood species, such as Pinus merkusii in North Sumatra, Gonystyllus in West Kalimantan, Agathis in Central Kalimantan, Pometia in Irian Jaya.

Extensive sedge cover has replaced forests or bushes which have repeatedly been stricken by fires or incendiariam. Along muddy coastal areas there are sheer formations of mangrove forests dominated by Rhizophora interapersed with Pandan and Nibung (Palm species) forest.

3. Land-use

Based on the present land-use plan ±70 million ha of Indonesia's total land surface 0 ±190 million ha are utilized for agriculture and other uses, and the remaining 120 million ha are forests including vegetated, unvegetated as well as sedge-covered lands.

A permanent and planned land-use patern is still lacking, except for certain areas of which the land-use is designed on the basis of their capacity.

For certain purpose, such as transmigration, resettlement and mining, the lands required are designated according to need, and if necessary, existing designations make way for new, more urgent ones.

4. Socio-economy

According to the 1971 census the population is 120 million with a growth rate of 2,5% year, which means ±225 million in 2000.

About 65% are in Java and this concentration pattern will remain constant in the coming years, except when large-scale resettlements are conducted.

The labour force amounts to ±60% of the total population, with a well-balanced ratio between males and females. About 4% of the force have got secondary-level education.

Most people (±65%) live on agriculture, the rest on trade, industry, transport, mining, services and other unrecorded means of subsistence.

5. Economy

The Indonesian economic situation is generally improving year by year as is shown by the steady surplus foreign trade balance, the increasing GNP, and the fair living standard in society.

Government sawings are increasing owing to economical budgeting, while its rising revenues enable the financing of the various development schemes.

The climate for capital investment is getting better, while the rupiah is enjoying still greater confidence making it a stable currency in the foreign exchange.

The favourable conditions stated above have suppressed the inflation rate or have it under control at least.

Forestry activities, which generally require large capital investments with great risks and long-term returns, demand the existence and maintenance of above-mentiones economic conditions to enable accurate forecasting.

II. FOREST AND FORESTRY

1. Conditions of the Forests

Based on the present land-use plan the forest cover of Indonesia is estimated to extend over 120 million ha distributed over all provinces, the forest areas in proportion to the extent of the extent of the respective islands.

According to the types the forests may be divided into tidal forests, coastal forests, monsoon forests, swamp forests, peat forests and man-made forests (±2 million ha). The last mentioned include teak forests, pine forests, *Agathis* forests, and mixed forests (*Altingia*, etc.).

Generally speaking, virgin forests are located in inaccessible areas only, while outside these areas they are subjected to cutting by local inhabitants for their own use of for trade. The most sericusly affected are those areas that are used for shifting cultivation. As long as they are cut for the timber, the clearings grow into secondary, yet productive forests, but in the case of shifting cultivation the forests are transformed into sedge prairies. As this has been practised for a long time from generation. Nothing is left but destroyed forest, prairies, etc. extending over ±30 million ha, including 16 ha of sedge prairies, barren and other forms of lands in critical conditions.

Other kinds of forest and forestland destruction are hazardous fellings during war time, land usurpation and large scale poachings. All that result in damaged forests and unlawful occupation of forest lands, which has so far been left unsettled and has even worsened.

However, it is encouraging to note that ±65 million ha or 75% of surveyed forests still have enough procuctive potentialities, viz.

±85 cu.m of commercial timber per ha, which brought in not less than US $2,000 million in the period from 1967 to 1975, and which are henceforth expected to yield US $750 million per year on a continuous basis. Yet, a dark shadow looms large in the bright financial prospect derived from the forests: the malfunctioning of protection forests,nature reserve forests, etc. because the forest damage is not restricted to production forests only.

Forest rehabilitation is carried out by stages and is also included in the Five-Year Development programme, namely the Forest, Soil and Water

Preservation programme aimed at returning the original functions of the natural resouces of energy mentioned above and at improving the management of them.

2. Forest Management

Basically forest planning follows the system of centralized planning inproducing overall plans, as bases for the management plans and operation plans. In forestry there exist work plans or work schemes for periods of 20 years, 10 years, 5 years and 1 year at every management unit i.e. Forest Management Unit or Forest Utilization Unit. So far only a few Province have drafted Regional or Provincial Plans, which are to used as bases to make Forestry Work Plans or Work Schemes. The centralized planning principle is further characterized by the procedural approval of plans by the Central Office/Directorate General of Forestry, as detailed as long term management plans is concerned. In view of the improving conditions of the forestry apparatus in the Provinces and the integration into the Provincial Development Plans, the function of planning at certain levels ought to be delegated to the Provinces concerned yet still oriented to the Central Plans. The Director General of Forestry is responsible for the overall forest management of the country including the forestry apparatuses in the Provinces with the Heads of the Provincial Forest Services as executives, concurrently Provincial apparatuses, except in certain scopes that are directly handled by the Central Office, such as nature conservation and wildlife management, research and development, education and extension.

Perum Perhutani is in charge of forest management and exploitation in Central Java and East Java. This State enterprise in obliged to follow the Forestry Director-General's directions. The establishment of Forest Management Units aimed at ensuring the best possible management has not come up to expectation yet because it needs large investments involved in the accuisition of the necessary means and infrastructures, besides the fact that comprehensive studies should be made first before decision can be taken considering the complex functions of the forest.

3. Forest Utilization

On the islands outside Java, forest utilization (comprising planting, tending, harvesting, forest product processing and marketing) of the tropical forest is conceded to third parties by granting them utilization rights (concessions) to forested areas (to begin from forest product harvesting) as well as to unforested areas (to start from planting).

Until the end of 1975 there were registered 267 concessionaires covering 26,204 million ha of forests with a total investment of US $1,000 million. In addition there were 379 aspirant concessionaires anticipating settlement of their applications, for whom 39,156,000 ha were reserved.

Supervision and guidance on the implementation of forest utilization are given by the Central Office with the Heads of the Provincial Forest Services as direct supervisors in their respective Provinces.

Apparently the concessionaires have not succeded yet to fulfil all the obligations and stipulations in connection with forest utilization because of various factors, among other things, the physical situation of the forest areas, external and internal factors of the companies themselves (lack of expertise, etc.). Likewise, the controlling/guiding apparatuses should also be upgraded qualitatively and quantitatively.

Apart from the above-mentioned weaknesses, forest utilization companies play a part that is not to be neglected in the development of the Provinces, particularly in the development of the interior, including spontaneous resettlement of dry rice farmers who have so far led a nomedic life. From the forestry point of view utilization is nothing also but benefiting the forests resources of natural wealth, and simultaneously replacing over-mature stands with more values than existing.

III FORECASTING

1. Economy

Based on the trend of the export-balance and the GNP, the Indonesian economy showns an upward tendency accompanied with rising in crese of cost of living, which means rising consumption, in this case housing in particular.

Investments also show an increase in the exploitation of natural resources and industrialization by the Government and the private sector.

The multiple influence of investment will cause an increase in the national income as they will open more employment opportunities. A handicap in the effort to distribute income evently is the rapid population growth, especially in Java where the natural resources are handling and the employment opportunity is scarce.

The above-stated trend indicates an ever-rising demand for forest products which is not only confined to domestic needs but also for overseas consumption.

2. Socio-economy

The population with its annual growth rate of 2.5% will reach the 225 million mark in the year 2000, and the distribution pattern will not be much different from the present, namely ±70% in Java.

No changes can be expected in means of livelihood, which indicate that agriculture will still remain the major subsistence, but it will be carried out in a more intensive manner-owing to better irrigation system, modern technology, prime seeds and better management and guidance through Government efforts. A great deal of the labour force will be absorbed in industrial and commercial business, and activities in the fields of services, including health care, law enforcement and insurance, will necessarily be stopped up.

Forest utilization will became an accelerator of rural development and resettlement, so that areas with well-develoved forest utilization business will also have flourishing hinterlands. Likewise, the prosperity approach in the forest management in several areas is a support to the development of the community in the surroundings of the forests.

3. Forest

The forest, which according to current estimates cover 120 million ha, should in the fature integrate with other sectors in line with the land-use pattern stipulated by the Government. There will always be more need for land. This is based on the assumption that most people will still live on agriculture. The intensive method of rice cultivation is the only hope for minimizing the expansion of agricultural areas and for producing enough food to meet the demand.

Non Forest lands that can be considered fit for other uses are located along traffic-routes: land as well as water routes. Certain forest areas need conservation for the sake of their hydrological function which is based on their physical conditions and fungtional effectiveness (right extentand location) on each watershed.

The productivity function is needed to meet domestic demands and to earn foreign exchange currency by exporting wood and nonwood forest products. Nature reserves and tourist forests need extension and better management in the light of the progress in the economic, social, cultural, and scientific fields combined with the great intensity in international co-operation.

4. Forest Products

Wood is the most important forest product to ratio the share of forestry in the drive to increase the national income and the standard of life of the sociaty.

The rising demand for export will concur with the rising domestic demand which is prompted by the increase in population and per capita consumption.

Overseas demands are mostly for materials for the manufacture of plywood, while in the country wood is required for construction and paper. Large quantities of raw material can find their way to the domestic sawmills, plywood mills and paper mills. The future forest product marketing pattern is predicted to experience no major changes, thus the main flow of the domestic interinsular trade will be in the direction of Java, and export will go to Asian countries (chiefly Japan), Europa (the Netherlands, Great Britain and Germany), and America (Canada, US).

With the development of the wood-processing industry trade commodities will be in the form of finished or semi-finished goods for export as well as for interinsular trade.

Further economic utilization of non-wood forest products, such as resin, kayu putih oil and others can be secured as long as they face no competitation with imported kindred wares and no dominance of the market by synthetic materials. Non-wood forest products can became valuable export merchandise and give employment to the labour force, especially those that require labour-intensive methods of cultivation, such as natural silk.

IV DEVELOPMENT AND UTILIZATION

1. Areas

a. Inventory

To know the extent, locations and conditions of the forests all over Indonesia a national forest inventory will be carried out covering the entire territory of the Republic of Indonesia for the purposes of establishing a land-use pattern, which in turn will be the basis for the designation of forests.

These activities make use of the results of satellite imagery photography, aerial photography, combined with stratified and systematic ground surveys. The result will be basic maps, topographic maps, vegetation maps and soil maps or land capability maps.

More detailed inventory is to be made of certain areas that are considered to require direct forestry operation, such as rehabilitation or utilization.

b. Forest-land use

Based on the results of the national inventory a study is made in the framework of establishing a forest use pattern, giving priority to areas to be designated as protection forests judged from the physical conditions and needs. The designation of protection forests is accompanied with that of nature reserve forests and as far as possible also with that of recreation forests in anticipation of the feasibility studies. Then follows the designation of areas for production forest taking into account the demand for forest products and the overall land-use plan.

Based on the available criteria and data the designation pattern of the forests is estimated as follows:

1) Protection forests about	45 million ha
2) Production forests about	40 million ha
3) Nature reserve and tourist forests about	10 million ha
4) Reserved forest about	25 million ha

For legal security the results of the activities in the designation of the use of the forests are to be followed up the with forest boundary legalization.

c. Forest organization

To ensure the best possible management, State forest are divided into Forest Management Units and Forest Utilization Units, respectively in charge of public interests and business interests, though the two kinds of interests are, as a matter of fact, inseparable from each other in every unit.

The designation of Forest Management Units is centred on the functions of serving public interests, among other things, the protective function, which is based on the watershed, and the function of nature conservation and wildlife management, which includes recreation. The designation of Forest Utilization Units is stressed on economic considerations, such as marketing trend, type of business, capital and forest condition. In this relation exploitation areas may be regarded as embryos of Forest Utilization Units, which should have an acreage of 100,000 ha each.

Both categories of units need road systems that useful for the forest management or the forest utilization and also for the development of the territory concerned as a whole. In other words, there activities should be oriented to the Provincial development. Further organizational divisions are blocks and compartments to facilitate management and utilization.

2. Reforestation and Rehabilitation

Reforestation is aimed at increasing the forest potentialities in the frame work of establishing man-made forests to meet the need for forest products, while the purpose of rehabilitation is to enhance the function of the forest as regulators of soil conservation and hydro-orological conditions in particular and as regulators for the sustenance of resources of natural energy in general.

Implementation units for reforestation are forest management units in logged-over areas as well as in idle or critical areas. Implementation units for rehabilitation are the watersheds. Both kinds of activities have as physical target ±30 million ha of lands/forests which constitute unproductive areas, idle lands and sedge prairies and logged-over areas.

The undertaking requires projected reforestation and rehabilitation operations able to accomplish +1.5 million ha/year, including 1 million ha of logged-over areas so that the target of reforestation and rehabilitation of areas outside these areas will cover ±0.5 million ha/year.

The implementation of reforestation and rehabilitation of areas within consessionaries is the responsibility of the concessionaires concerned, while outside those areas it rests with the Government to carry it out through development projects and participation of third parties in the framework of forest plantation.

3. Nature Conservation

Nature conservation is aimed at enhacing the quality of human life by taking measures to preserve natural resourse of energy through extensification and intensification of the management of nature reserve and tourist forest toward the establishment of National Parks and brosphere reserves, combined with the protection of fauna and flora outside these conservation areas. with nature reserve and/or tourist forest as care the total area for the conservation of natural resources is estimated at 10 million ha.

The implementation of these activities is of multidisciplinary character involving various agencies, including international organizations, so it requires contralization. Participation by third parties is allowed, especially in the management of national parks and recreation forests.

4. Exploitation

Forest exploitation is aimed at the utlization of forest produce that has reached maturity and has to be harvested, or at land-use conversion. Forest exploitation is always linked with the principle of progressive sustained yield and maximum benefit principles. Consequently, every exploitation of an area must be followed by the reforestation of it using species and methods that produce stand which are quantitatively and qualitatively better than the predecessors, while the exploitation is to be carried out in such a manner that the volume of the remaining stands amounts to the minimum difference between potential and production.

The above mentioned principles of sustained yield and maximum benefit apply to every Forest Management unit or Forest Utilization Unit. The principle does not apply to exploitation for conversion purposes.

The physical target of forest exploitation is ±40 million ha of production forests and 27 million ha reserved forests. Of the total ±75% or 48 million ha are productive and have an annual allowable cut of 51 million cu.m or indicative production of ±37 million cu.m. This exploitation does not include exploitation of artificial forests in Java, which have regularly been producing ±0.5 million cu.m/year, and the exploitation of forests resulting from reforestation of the 5 - year plan which are estimated to produce regular yields after 2000.

Third parties' participation in forest exploitation will be continued, at least until the expiration of the concessions, while supervision and guidance will be intensified to ensure that the two principles be observed.

5. Forest-based Industry

The establishment of forest product processing industries is aimed at ensuring the realization of the maximum yield principle, enhancing the added value of wood, giving more employment opportunities and increasing the GNP.

Efforts are therefore made to reach the ideal situation in which only processed timber are put on the market, and in which log export are kept to a minimum and confined to those logs that exported as such will have a higher value and produce the least waste. Avaiable wood to be used as basic material for sawmill is estimated at 18 million cu.m. for veneer and plywood mills 4 million cu.m. and for export 15 million cu.m.

Forest-based industries are established by concessionaires, private non-concessionary business firma, State enterprises and individuals.

The function of the Forestry Directorate General in the development for forest-based industries is to create a favorable condition for their smooth operation and development and to give guidance and supervision, mainly to concessionaires. This function of the Forestry is to serve ±100 concessionary and 1000 non-concessionary sawmills, 30 concessionary and 2 non-concessionary veneer and plywood mills, while more forest-based industries are still being contemplated, including the possibilities of setting up pulp and paper mills. Industrial areas are located in several places taking into account the supply of basic materials, availability of facilities, infrastructures and labour force, and the distance to marketing centres.

In the framework if industrial development the various agencies involved work co-operatively, whenever necessary making use of foreign assistance, chiefly in feasibility studies.

6. Forest Product Marketing

Forest product marketing aims at meeting the domestic demand for forest products at prices within reach of most people, at increasing the State income, viz. foreign exchange and royalties, and at acquiring funds for forest and forestry development in the framework of maintaining the principle of sustained yield and maximum benefit.

The domestic consumption, indicative of the demand, is estimated to reach 0.1 cu.m. per capita/year calculated in round wood, amounting to ±20 million cu.m/year by the year 2000. Overseas demand for wood will remain considerable: for Asia alone the estimate is ±65 million cu.m easily absorbing the projected 15 million cu.m export quota (citeris paribus), of which, for instance, ±19 million cu.m. will go to Japan as from 1980 and this will increase to 21 million cu.m. there after.

Still, the demand will non exceed the potential productivity (51 million c.m.) of the Indonesian forest or the production expectation (37 million cu.m.). This means that the supply for the demand can be done in an economical way.

Since Java is the centre of domestic marketing, the interinsular trade should necessarily be oriented to this island. Hence, the inter-island timber transportation means obviously need improvement.

To accelerate the timber trade, especially export, efforts have been made to diversify the commodities (quality and species) and the destination through surveys and sales promotion, monitoring of market fluctuations and improvement to the quality of the forest products.

Forest product marketing is carried cut in co-operation with other Government agencies, the privates sector or with certain bodies.

7. Facilities and Infrastructures

a. Legislation

The legislative foundation of forestry is act No. 5, 1967 concerning Basic Provisions on Forestry or in short the Forestry Basic Act.

The Forestry Basic act is, however, not the only regulation that governs forestry matters, but there are a number of crainances which also refer to forestry, forest management in particular, such as the Agrarian Basic act. and the Regional Autonomy act.

For a uniform interpretation of the Forestry Basic act. a forum will be initiated to synchronize the various renderings and draft a Government Regulation for the implementation of the act.

Other legislative bills, on a par with the act or implementory, will also be worked out. Furthermore, synchronization is also effected in Central as well as Provincial forestry legislation wherever necessary.

b. Organization

The organizational and functional structure is explicitly stipulated in the prevailing legislative regulations. What is to be done now is to provide detailed job descriptions, to regulate work procedures and relations between central and Provincial apparatuses, relations among the Central instutions, and relations among the Provincial agencies.

In addition, continous efforts are made to stop up the efficiency of the apparatuses through work and job analyses and research of the systems and procedures of the various activities.

c. Manpower

Forestry activities, Government as well as private, are basically aimed at providing as many as possible employment opportunities.

The Indonesianization of personnel in the field of forest exploitation is carried out according to the current regulations and plane. To this and special educational and training programmes are arranged.

The staffing of the Central and the Provincial forestry offices and the Government undertakings (public corporations, limited liability companies and State enterprises) is patterned after an overall manpower planning, including career planning, mutation, tours of duties and transfers.

d. Physical infrastructures

Caused by the increasing volume of activities and the intensified relations among the various forestry agencies an urgent need is felt to construct a Forestry Centre in Jakarta. The Provincial agencies are expected to follow suit. Improvement will also be made in telecomunication by enlarging the existing network between the Central and the provincial offices and among the Provinces.

To ensure the smooth flow of up-to-date information a Data and Information Centre, using modern systems of operation, will be put into use.

8. <u>Research and Development</u>

The forest and forestry as a vast natural resource of energy leave much to explore as for their potentials and utilization, so that research and development efforts are to be advanced at an increasing rate. Priority targets are forest soil, tropical forest, and man made forests, including the wealth they contain (productivity and other functions), to be continued with reasearch and development in the fields of forest product processing and marketing.

9. Education and extension

Activities in these fields will be continued in the framework of up-grading the skill of the apparatuses on the one hand, and developing the careers of the workers on the other hand. Education has the character of quality improvement and manpower recruitment. Extension is directed to the society's participation in the forestry development efforts in particular and to the safeguarding of the forest, soil and water resources in general - participation with full sense of responsibility.

Number of population aged 10 years and older, listed according to level of education

Island/Island Group	Male/ Female.	Uneducated	Have non finished elementary school	elementaly school	Junior secondary school		Senior secondary school		Academy	University	Total
					General	Vocational	General	Vocational			
1	2	3	4	5	6	7	8	9	10	11	12
1. Java-Madura	M	7,771,509	9,446,728	5,752,777	890,394	434,775	414,626	310,179	78,358	67,770	25,167,116
	F	14,690,371	7,517,610	3,792,140	590,358	188,721	176,641	147,707	22,659	20,521	27,146,728
	MF	22,461,880	16,964,338	1,480,752	623,496	623,496	591,267	457,886	101,017	88,291	52,313,844
2. Sumatra	M	1,294,406	2,973,304	1,823,320	378,302	133,843	96,103	94,267	16,312	8,686	6,818,548
	F	2,776,458	2,498,593	1,332,413	193,098	44,038	65,523	39,817	5,548	2,711	6,959,009
	MF	4,070,864	5,471,897	3,155,733	512,210	177,881	161,631	134,084	21,860	11,397	13,777,557
3. Kalimantan	M	658,356	559,871	423,445	57,224	11,880	20,911	7,118	1,364	567	1,740,736
	F	1,011,110	439,277	244,410	20,545	3,900	11,419	3,201	154	104	1,714,120
	MF	1,069,466	999,148	647,855	77,769	15,730	32,330	10,319	1,518	671	3,454,856
4. Sulawesi	M	925,235	827,637	663,103	146,537	60,030	40,399	44,474	3,177	5,022	2,715,614
	F	1,412,180	774,107	572,006	86,349	1,961	27,367	19,763	1,767	2,688	2,915,804
	MF	2,337,415	1,601,744	1,235,109	232,886	79,607	67,766	64,237	4,944	7,710	5,631,418
5. Other islands	M	988,998	831,042	570,860	96,047	36,723	39,613	33,003	4,036	6,483	2,606,705
	F	1,453,991	646,155	435,927	59,203	10,331	21,663	13,174	1,037	564	2,642,045
	MF	2,442,989	1,477,197	1,006,787	155,250	47,054	61,176	46,177	5,047	7,047	5,248,750
Indonesia	M	11,638,504	14,638,082	9,233,505	1,568,504	677,251	611,557	489,041	103,247	88,528	39,048,719
	F	21,344,110	11,875,112	6,306,806	950,363	266,567	302,613	223,662	31,165	26,588	41,377,706
	MF	32,982,614	26,514,324	16,590,311	2,518,857	943,818	914,170	712,703	134,412	115,116	80,426,425

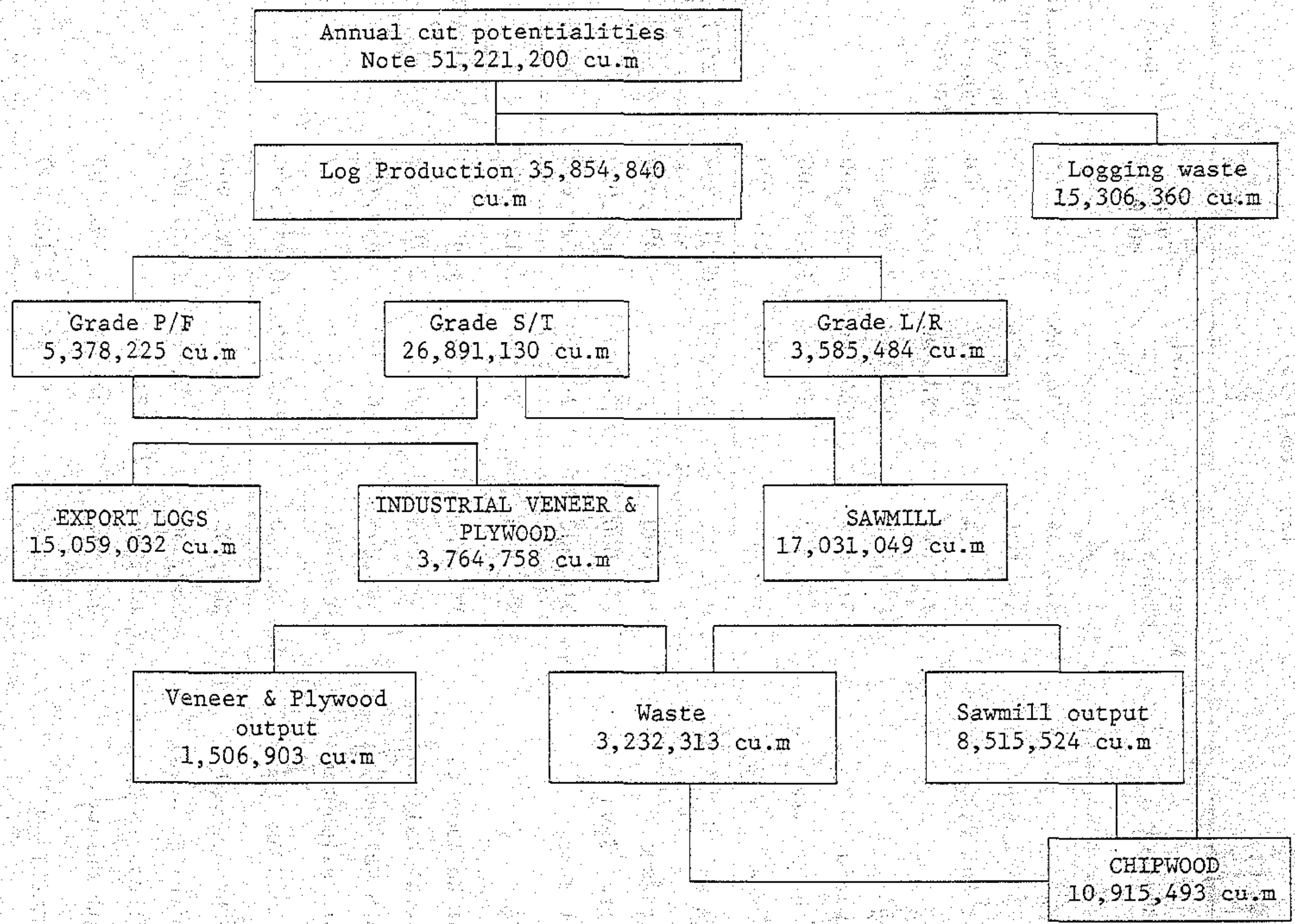
Source: Central Statistics Bureau, 1972.

FOREST UTILIZATION
PHASE, EXTENT AND INVESTMENT
(up to December, 1975)

Phase	Form (Type) of Business	Total	Extent of operation/ reserved area (000 ha)	Investment US $ (000)	Investment Rp. (000)	Note
I. Letter of Decision on Concession	a. National	192	16,410.60	418,750,00	520,000,00	
	b. Joint venture	58	6,441,75	220,726,27	-	
	c. Straight Inv.	14	2,948,00	339,770,00	-	
	d. Perhutani	3	404,00	-	-	
Total I	-	267	26,204,35	979,176,27	520,000,00	
II. Ministerial Approval Investment Agreement	a. National	67	5,787,50	174,050,00	-	
	b. Joint Enterprise	4	360,00	8,750,00	-	
Total II	-	71	6,147,50	182,800,00	-	
III. Forestry Agreement	a. National	18	1,627,50	35,700,00	-	
	b. Joint Enterprise	9	791,00	26,700,00	-	
Total III	-	27	2,418,50	62,400,00	-	
IV. Survey - Total IV	-	233	29,343,00	-	-	
V. Basic Agreement	-	48	1,247,00	-	-	
Grand Total	-	646	65,340,35	1,224,376,27	520,000,00	

Source: Directorate General of Forestry, 1975

UTILIZATION OF WOOD POTENTIALITIES
(Annual average estimates)



Note:

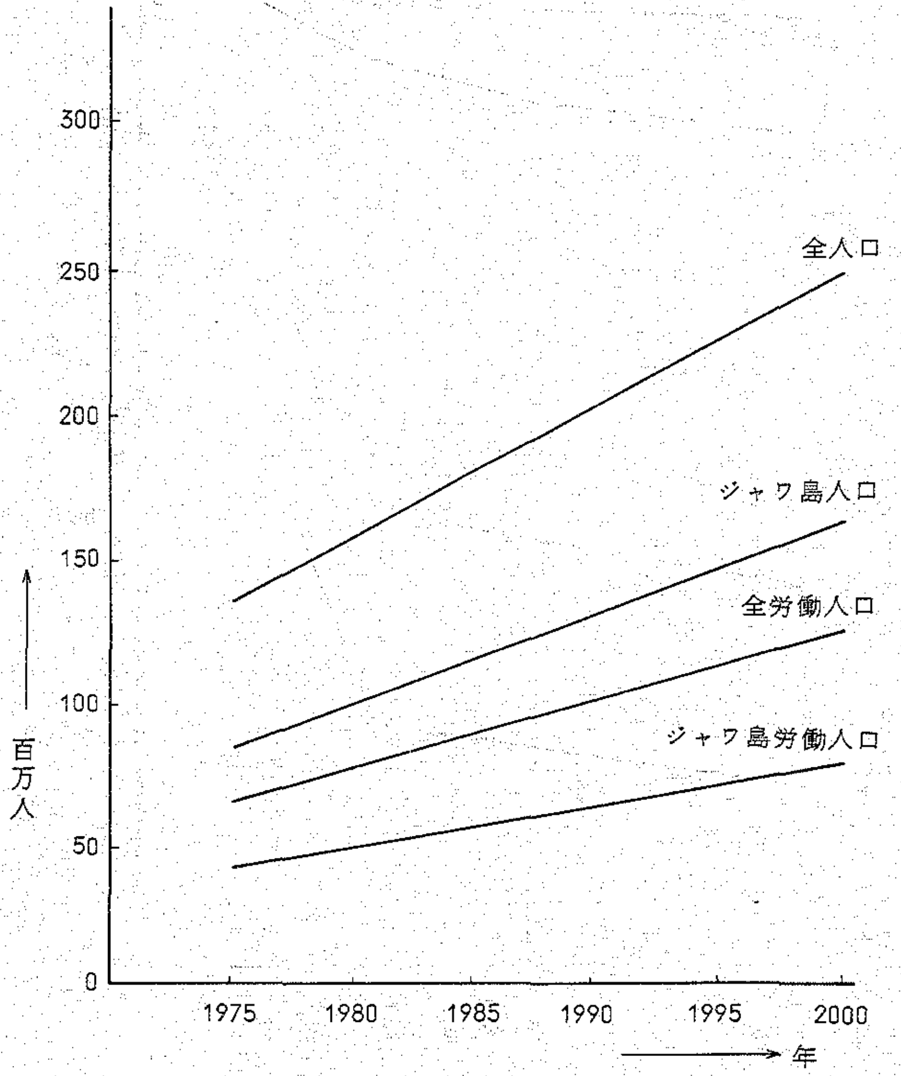
Grade P/F = fair
Grade S/T = saw log
Grade L/R = local rejected
Source : Directorate of Forest Production 1975.

LOG PRODUCTION ESTIMATE AND DESIGNATION
(as from 1975)

PROVINCE	Material for industries cu.m.	Export Logs cu. m.	Total cu.m.	Note
1. Aceh	876,554	634,746	1,511,300	Production calculation based on AAC, ETAT and exploitation factor.
2. North Sumatra	570,024	412,776	982,800	
3. West Sumatera	367,024	265,776	632,800	
4. Riau	1,765,694	1,278,606	3,044,300	
5. Jambi	1,276,058	924,042	2,200,100	
6. Bengkulu	318,709	230,790	549,500	
7. South Sumatra	626,052	450,348	1,079,400	
8. Lampung	124,236	89,964	214,200	
SUMATRA	5,924,351	4,387,048	10,311,399	±0.7
9. West Java	307,800	-	307,800	
10. Central Java	275,000	20,000	295,000	
11. East Java	510,600	10,000	520,600	
JAVA	1,093,400	30,000	1,123,400	
12. West Kalimantan	1,144,717	828,933	1,973,650	Total AAC = 51,221,200 cu.m./year.
13. Central Kalimantan	4,523,043	3,275,307	7,798,350	
14. South Kalimantan	365,806	264,894	630,700	
15. East Kalimantan	6,099,744	4,417,056	10,516,800	
KALIMANTAN	12,133,310	8,786,190	20,919,500	
16. North Sulawesi	209,902	151,998	361,900	
17. Central Sulawesi	580,530	420,420	1,001,000	
18. Southeast Sulawesi	126,266	91,434		
19. South Sulawesi	406,812	294,588	701,400	
SULAWESI	1,323,560	958,440	2,282,000	
20. Maluku	1,095,469	793,270	1,888,740	
21. Irian Jaya	287,448	208,152	495,600	
22. West Nusatenggara	35,322	25,578	60,900	
INDONESIA	21,892,860	15,188,678	37,081,538	

Source: Directorate of Forest Production, 1975.

全インドネシア及びジャワ島における一般人口
及び労働人口増加推定値



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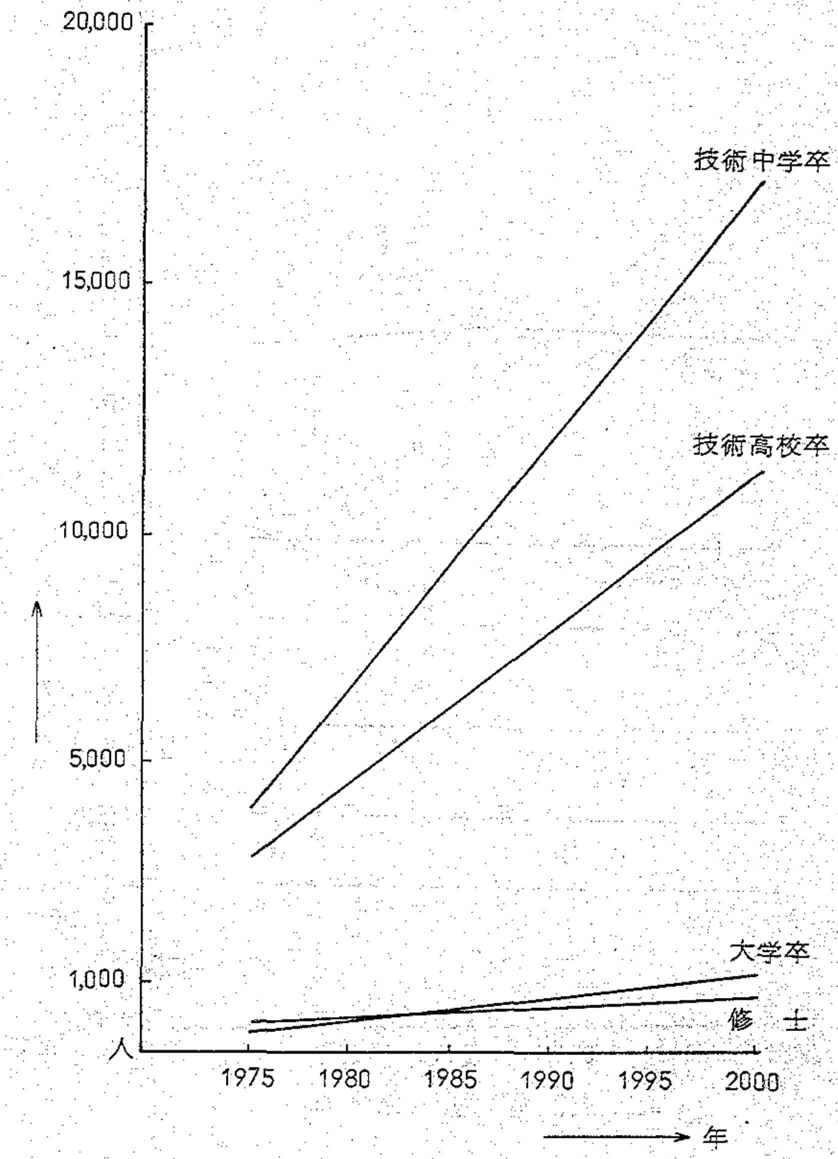

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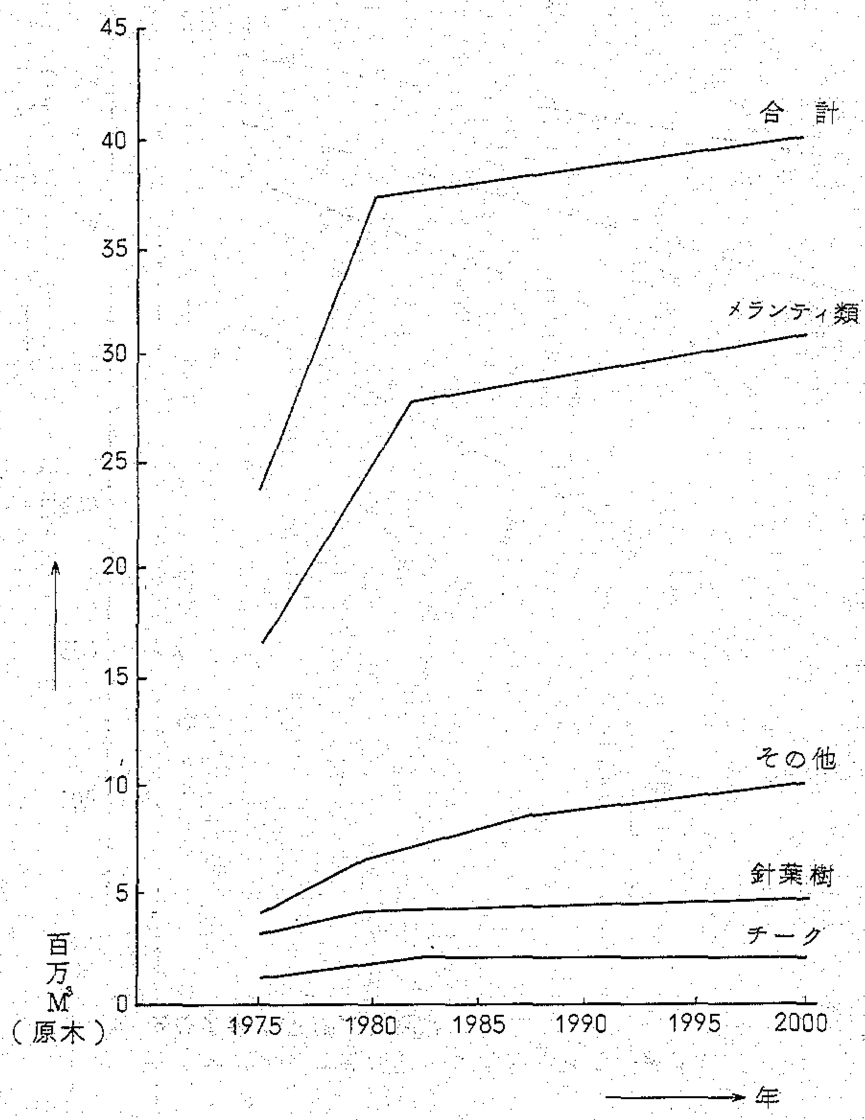

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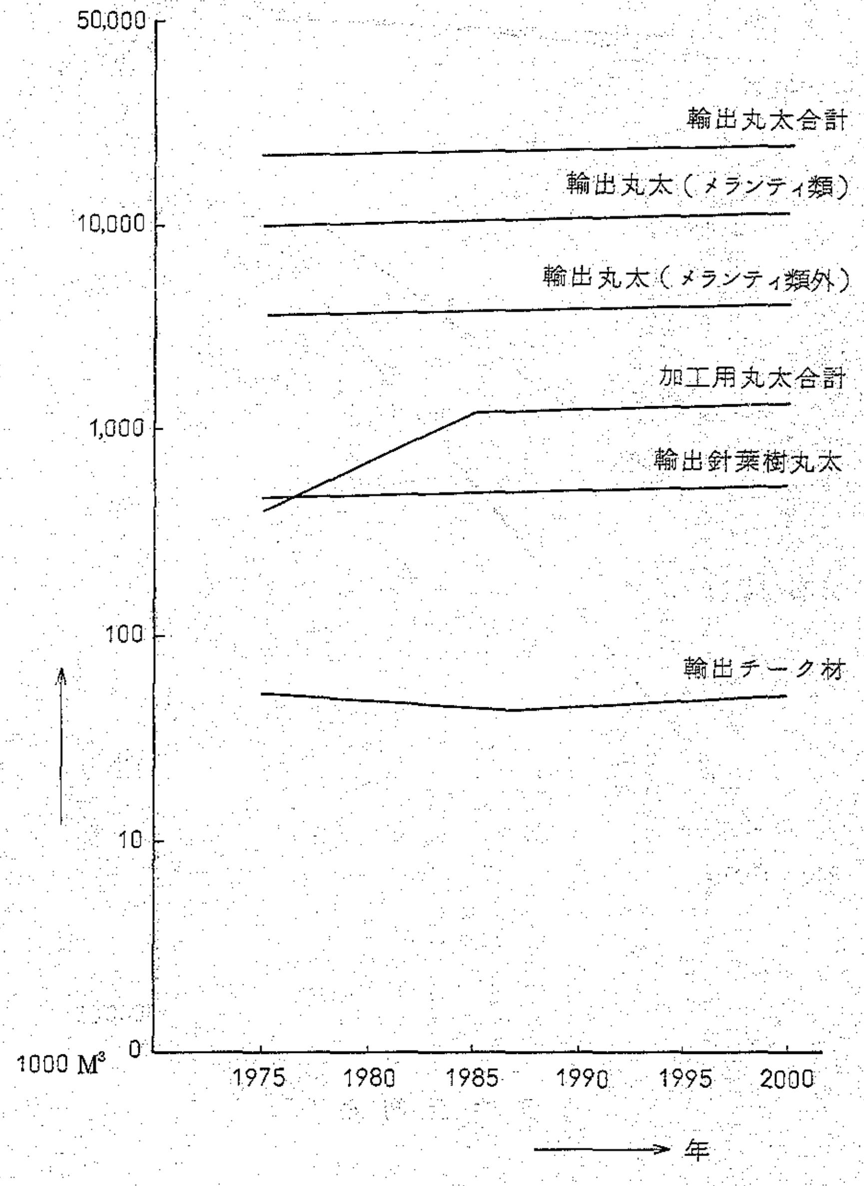
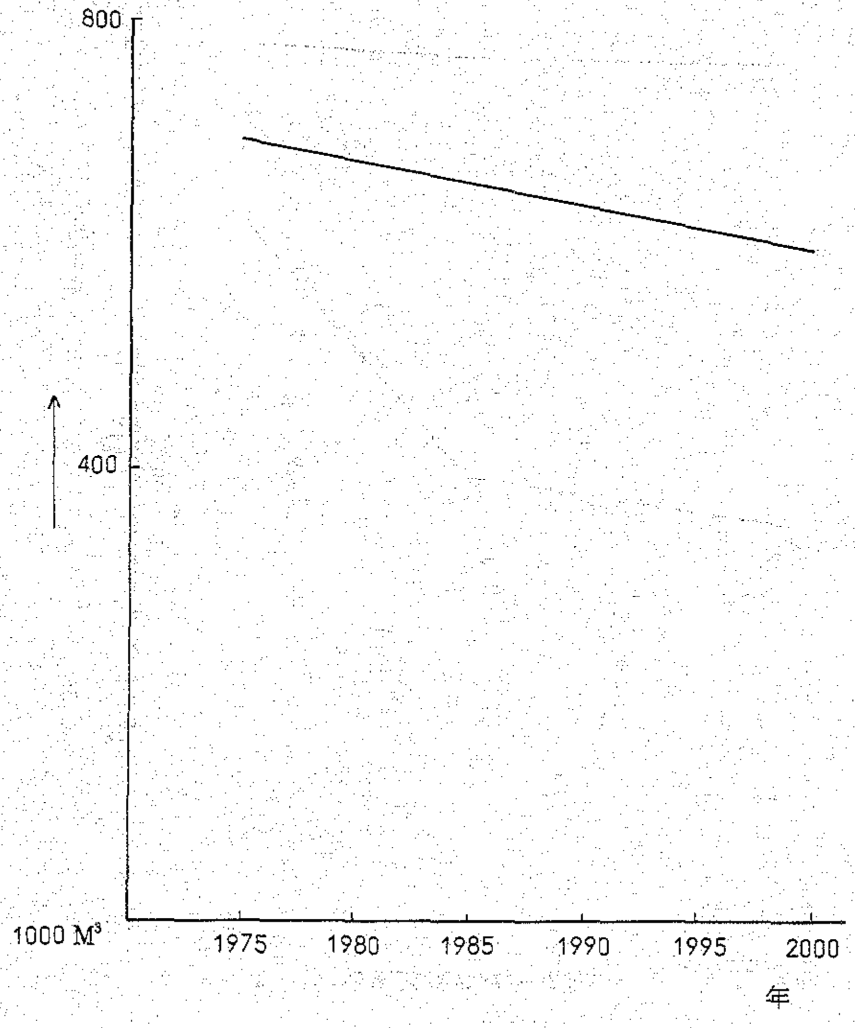
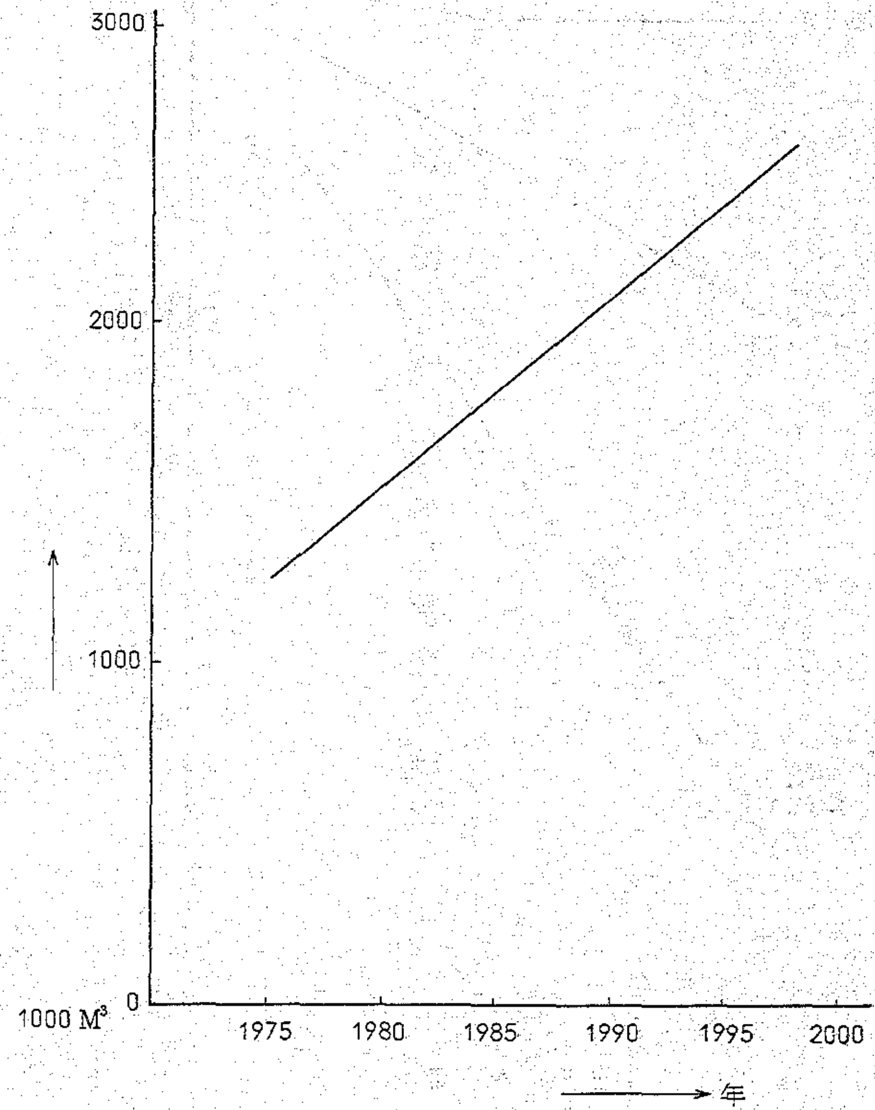


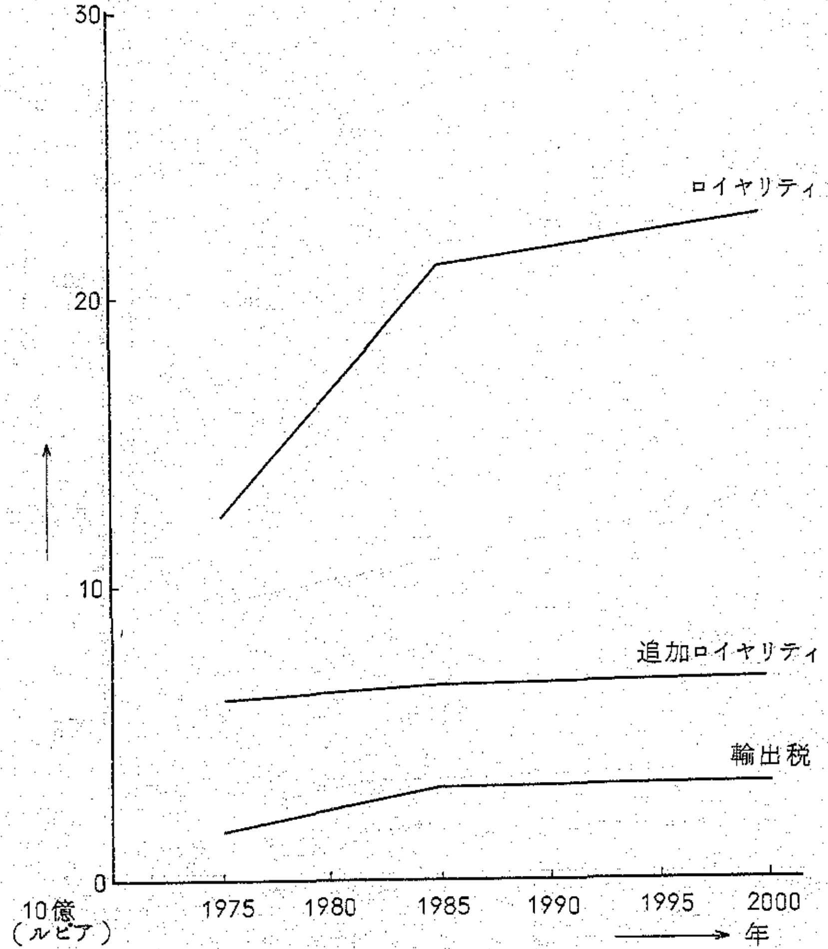
薪炭材消費見通し



加工用木材消費見通し



ロイヤリティと輸出税の収入見通し



消費と投資見通し