

A PROGRAM PROPOSAL TO EXPAND THE USAID/IND/FORESTRY PROGRAM TO  
DEVELOPMENT OF TWO LARGE LONG TERM TIMBER LEASE (LTTL) BASED FOREST  
IN MR-2

BACKGROUND

Vietnam's timber resource covers approximately three-quarters of the land area. Forest products account for 6% of the GNP, 22% of the industrial product, and could account for a substantial portion of the long-range Vietnamese industrial (CY 72-75) export potential. At present, it is estimated that the forests of Vietnam contain about 175 hardwood species that have commercial applications other than fuel wood. It is believed that about 50 of these species would produce "sought after" export grade lumber, veneer and plywood.

More than 90% of the existing and planned forest industries of Vietnam are located in MR-3 and in the provinces of Tuyen-Duc, Darlac, Pleiku, and Kontum of MR-2.

At the present time, there are in excess of 600 small sawmills, one plywood plant and numerous other types of forest industries operating in this area. In addition, there are firm plans to establish four medium size plywood plants, furniture plants, wood preservation plants, and lumber concentration yards in this most developed area. USAID/IND does not think it wise to grant (exclusive long-term timber leases (LTTL)\* ) in the more developed areas because of possible conflict with the existing and planned forest industries. However, USAID and the GVN are interested in stimulating the development of LTTL based forest industries in the less accessible and unexploited areas of MR-1 and 2, where the bulk of the heavy volume timber is located, to provide employment, decentralize the industrial pattern and to

\* An explanation of a long-term timber lease appears on Page 1 of the Appendices

provide foreign exchange through the export of logs, semi-processed and processed timber products. Only large well-financed forest industrial companies with road building capabilities can develop these areas that are considered less accessible by the GVN and the local forest industries.

In the opinion of the Industrial Advisor for Wood Products, logging there would not be anymore difficult or more expensive than in the timber rich U.S. Pacific North-West.

## II. PROGRAM PROPOSAL:

This program proposal expands the present USAID/IND Forestry Program to provide the identification and development of two large (LTTL) based forest industries in prime timber areas of MR-2. The methods and techniques used will serve as a model in the future development of 10 or more other (LTTL) areas in MR-1 and 2.

### 1. Objectives:

The overall objectives of the program proposal is to present to potential investors enough information to satisfy them that a large logging or a forest industry complex in areas not exploited of MR-2 would be a workable proposition.

#### Specific objectives would be as follows:

- a. To identify two large timber LTTLs of 100,000 hectares or more that could be granted to qualified concessionaires in Khanh Hoa and adjacent provinces of MR-2.
- b. To determine the general order of magnitude of the volume and species composition per hectare and from this information determine the overall volume of the resource of each concession to a 20% margin of error.

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c. From the volume and species composition of each concession recommend alternative compositions of industrial complexes that would provide the best possible utilization of the resource on a sustained basis.

d. Recommend logging and transportation methods and infrastructures with the order of magnitude of costs.

e. Recommend markets (domestic and export)

g. Recommend locations for mill sites

### III. METHOD OF APPROACH:

#### Phase 1:

Identification and documentation of investment opportunities in large scale timber operations in MR-2.

##### a. Inventory of the Resource:

Following a review of available information from existing aerial photos, from Helicopter overflights and from ground penetration wherever possible, the volume will be estimated to a 20% margin of error (with security permitting ground penetration). The acreage of each concession will be calculated to a 2% margin of error.

##### b. Assessment of the Logging & Transportation Methods & Costs:

Terrain and logging conditions will be assessed from aerial photos, aerial reconnaissance and by ground penetration, wherever possible. The location of principal logging roads will be recommended along with the approximate construction costs. Suitable logging methods and equipment will be recommended, approximate logging costs will be calculated, based on estimates of equipment productivity, operating costs, wage levels, transportation distances, and the relationship between the total timber volume and the existing roads and other infrastructures.

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c. Assessment of the Species Composition Ability to Compete on World Markets as Plywood, Veneer, Lumber, or Logs:

Vietnam has most of the species of hardwood timber known to South East Asia, many of which have been tested by reliable firms and laboratories. The information will be gathered and assessed. The plentiful but unknown species will be field tested in Vietnam through GVN testing resources. Those plentiful but unknown species showing promise will be tested at the U.S. Forest Service Forest Products Laboratory in Madison, Wisconsin.

d. Review of Suitable Mill Sites:

Mill sites will be recommended that have the best combination of economical factors such as convenience to the timber supply, shipping, and labor. Security factors will also be considered.

e. Appraisal of Factors Affecting Log, Plywood, Veneer, and Lumber Production Costs:

These factors include the characteristics of the species available (density, soundness of log centers, drying rates, resin and silica content, etc.) and the various social and economic aspects of doing business in Vietnam such as wage levels, exchange rates, etc. The annual rainfall, wet and dry season, will be documented.

f. Recommend Basic Terms to the GVN for Granting LTTL:

Information generated from items a. through e. and the review of documents of concession granted by governments of other timber rich countries of Southeast Asia and other worldwide areas will be used by the forestry team in determining the basic LTTL terms that will be recommended to the GVN.

Phase II:a. Dissemination and Promoting the Identified Large Scale Timber Investment Opportunities in MR-2:

A plan will be formulated to promote, publicize, and attract suitable free world timber companies to undertake the early development and export marketing of Vietnam timber resources.

A publication will be prepared for each LTTL that will include the basic data generated from items a. through f. This would include all of the basic information prospective investors would need to reach an agreement in principal with the GVN, after which the prospective investors will make their own detailed investigation and analysis before making a firm investment commitment.

This publication will be used as a basis to conduct a promotion effort aimed at the major timber and timber products companies worldwide.

**IV. INPUTS:**U.S. Inputs:Phase I:

USAID/IND proposes two experts in addition to the four PASA experts assigned to the basic Forestry program for a period of nine months to complete the specific objectives outlined in this proposal:

1 inventory expert, with photo interpretation experience.

1 logging engineer, with experience in mountainous areas.

In addition, a total of 20 hours overflight of the LTTL areas by Helicopter will be required as well as in-country travel and per diem.

GVN Inputs:

Phase I:

1 full time forester that is presently available (expert on species identification).

1 full time forest engineer.

The part time service of DW&F personnel stationed in Khanh Hoa Province (approximately 5%).

The part time services of the DW&F counterparts of the programmed USAID/IND Inventory Advisor (approximately 10%).

The last five months of the program, an additional four full time technicians (graduate foresters or forest rangers) will be furnished.

V. PROGRAM COSTS:

Phase I:

U.S. Costs:

2 technicians - nine months (1.5 man years)	US\$56,000
20 hours helicopter overflight	6,000
In-country travel, per diem, etc.	<u>1,000</u>
Total U.S. Costs	US\$63,000

GVN Cost:

Full time and part time technicians	<u>5,000</u>
Total Phase I U.S. and GVN Costs	<u>US\$68,000</u>

Phase II:

Input:

U.S. Costs:

Publishing, promoting, publicizing, and travel US\$15,000

### Input:

### GVN Cost:

Promoting, publicizing, and travel	2,000
Total U.S. Costs	78,000
Total GVN Costs	<u>7,000</u>
Total Program Costs	US\$85,000

## VI. MAJOR ASSUMPTIONS:

1. That security in the LTTL areas of MR-2 will allow ground sampling and a sustained logging operation.
2. The programmed four man PASA Forestry team will be maintained.
3. The GVN maintains a favorable attitude toward LTTL based forest industries and reaches an early decision on general LTTL terms for foreign investment interests.
4. The Ministry of Economy will continue the high priority classification for export oriented forest industries with tax benefits for the import of capital equipment.
5. A continued realistic rate of exchange for exports.

**VII. ESTIMATED PAY OFFS:**

The acreage, volumes, and species composition will have to await the results of the inventory. However, it is reasonable to assume the LTTL areas under discussion will average 100 cubic meters of merchantable timber per hectare. On this basis, and assuming both timbering areas w

contain a total of 200,000 hectares, the commercial volume would be  $(200,000 \times 100)$  20 million cubic meters. Then, assuming a 30-year cutting cycle, the annual allowable cut would be  $(20,000,000 \div 30)$  650,000 cubic meters.

The species composition is important in computing the timber value of the LITL areas under discussion as the different species will range in value from US\$20.00 to 125.00 per cubic meter, in log form, FOB dock side, Vietnam.

Assuming LITLs were granted to timber companies who would only export raw logs, and assuming the average selling price to be US\$35.00 per cubic meter FOB dock side, Vietnam, the annual allowable cut would generate gross exports of US\$22,750,000 (650,000 cubic meters x 35.00).

The approximate net value added by in-country processing follows:

Veneer	29%
Plywood	32%
Lumber	12%
Treated poles and piling	14%
Furnitures and component parts	50%

Assuming the exports generated from the LITLs would be one third in log form, one third in plywood, and one third in lumber, the net value added by in-country processing would amount to approximately 3.4 million dollars for total export earnings generated from 200,000 hectares of 26.1 million dollars annually.

The Japanese, Koreans, and Taiwanese have a history of acquiring concessions in timber rich undeveloped countries for the expressed purpose of obtaining raw materials to be exported to their respective countries for processing and re-exporting. Whereas, the U.S.A. and European countries prefer to process or semi-process the raw materials for export in the host countries. Consequently, the production mix and size of the return would depend on who did the cutting.

The concession areas under discussion are by world standards large. The size that would attract large investors such as Ga. Pacific, ITT, Boise Cascade, etc. If necessary, the inventory will be flexible, that is to say, the two LTTL areas could be broken down into three or more to accommodate smaller investors.

Production Goals:

Export of logs could begin within six months after the granting of the LTTL, building up to the maximum allowable cut in 18 months.

In the case of in-country processing, at least 24 months would be required for necessary equipment to arrive in Vietnam. for construction, start-up and training. Exports would begin in 24 months. 36 months would be required to reach the maximum allowable cut.

Investment Requirements:

Rough estimates indicate the cost of the necessary logging and road building equipment to produce 650,000 cubic meters of logs (the estimated allowable cut of both LTTLs under discussion) to be 9 million dollars.

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Assuming two thirds of the log production would be processed in country and this volume is broken down evenly between lumber and veneer and plywood, preliminary estimates indicate the processing equipment for both LTTL areas would cost an additional 10 million dollars.

The results of the inventory will allow the industrial advisor to refine the equipment costs more accurately.

The dollar cost for this program expansion amounts to US\$85,000 for a period of nine months, including the cost of promotion. Assuming that no concession based industries would have been established without USAID assistance, there is an estimated favorable ratio of a one time cost of \$85,000 to obtain an annual export earning of 22-26 million dollars annually by the end of FY 1975 with intermediate FX earnings accounted for by logging efforts.

SUMMARY:

The expanded forestry program presented in this paper is believed to be a sound, efficient, and high return program. The establishment of a successful LTTL based forest industry is likely to result in the creation of 10 or more similar industries.

Generating competitive exports at a favorable yield ratio is critical given the need to develop a self-sustained viable economy.

Cam Ranh Bay would be the logical exporting port. This should spur its development as an industrial park/export processing zone.

The successful use of a selective security system to safeguard the development of LTTL based industries in MR-2 would create investor confidence and would be a major step towards complete Vietnamization.

LTTL

The term long-term timber lease (LTTL) is used in this narrative in lieu of the term timber concession which implies a gift or special consideration, or a grant. However, nothing could be further from the truth. Before any company is willing to spend millions of dollars in a new venture, a source of raw materials must be assured. In the case of forest industries, the raw materials would be assured in the form of a timber concession or long-term timber lease.

Many developed countries including the United States, Canada, and Russia use the timber concession or LTTL method for developing large timbered areas by forest industries who have the capability to develop their own infrastructures.

A number of steps must be taken before the first LTTL is granted. A carefully thought out and detailed blueprint for the concession must be drawn up. Obligations of the concessionaire with regard to timber harvesting, forest management including reforestation, road building, plant investment, export quota, and financial matters must be spelled out. The forest areas to be given under concession must be selected and located so that presently operating small loggers and sawmillers will not be deprived of opportunities of buying timber.