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**AMENDMENTS RECEIVED FROM THE
SUBMITTING MEMBER IN RESPONSE TO THE
TECHNICAL REPORT OF THE EXPERT PANEL**

PROJECT PROPOSAL: PD 176/91 (F) *Rev.1*

Submitted by Government of Ecuador

EQUADOR: PD 176/91 (F)

EXPLANATION OF THE RECOMMENDATION MADE BY THE EXPERT
PANEL IN ITTO'S 2ND MEETING IN YOKOHAMA (14-19 OCTOBER
1991) TO THE PROPOSALS PRESENTED FOR THE XI SESSION

PD 176/91(F): SUSTAINED MANAGEMENT FOR PRODUCTION, CONSERVATION,
DEMONSTRATION, DIFFUSION AND PROMOTION ACTIVITIES
IN MOIST TROPICAL FORESTS IN ECUADOR'S NORTHWEST.

1 General aspects

Project PD 176/91 (F)'s proposal is presented for consideration in ITTO's XI meeting in Yokohama having consolidated and directed activities to form and develop a sustainable forest management in Ecuador's northwestern moist tropical forest zone.

Any consolidated forestry proposal makes presumptions and time limit implications, given the complex controversy of forest resources and environment, i.e. conservation and utilization. In his manner short and long term results are compounded, such as in botany, in soil management, in forestry work training, in utilization planning, in forestry management hypothesis of resource replacement, of preservation and/or forestry growth options. Finally in biological areas, edaphological, climatic and social aspects, of ecology, economy and administration.

2 Answers to recommendations

The proposal is to structure and start up forest management in a farm with silvicultural hypothesis, and an administrative and economic capacity while taking care of social feasibility. Juan Manuel Durini Forestry Foundation begins in 1978 and tries out a model of "Stratified Policycles" that combine artificial and natural regeneration as one of the new lines in our investigation.

The farm has land with forestry aptitude, it is in the tropical humid forest of the country's northwestern lowlands, we will develop conservation activities in 250 ha.; rational harvesting with natural regeneration management in 200 ha.; seed collection, nurseries (70.000 plants/year), making plantations and species essays in 200 ha., and the conversion of fragile agricultural land crops into agroforestry through plantations in 150 ha.

2.1 Recommendation No.1 "Consolidating the objective into a clear and concise statement of the overall goal and a series of measurable outcomes."

The main objective is to develop and apply a new idea to carry out forest management -which FFJMD is developing in Ecuador- and which consists of mixing natural regeneration and

plantations in such a way as to obtain high yielding tropical forests which allow (need to) combine concepts of conservation of virgin forests with production necessities rendering a sustainable utilization and better social and environmental impact.

The definition of activities (A,B,C,D, and E) are in themselves the measurable objectives to be achieved. For this reason they will be explained based on the 5 Activities (A,B,C,D,E)

A: Conservation and identification of virgin areas in order to maintain bio-diversity and germ plasm in-situ and ex-situ

+objectives: To preserve untouched virgin forests for observation and future testimony.

+area : 250 hectares

+execution period: 3 years

+management period: 3 years

250 ha. will be declared untouched forest. Two high "miradores" will be built for observation and demonstrative paths will be designed. Germ plasm and seedlings will be collected to provide for the local nursery.

B: Natural regeneration management for the sustained yield of forests under selective cutting, and tree marking.

+objectives: Utilization of primary forest with tree marking, selective cutting and natural regeneration management.

+area: 200 hectares

+execution period: 1st year forest utilization

+damages evaluation and regeneration: thirteen years

+management period: 3 years

The first summer will be harvested, prior estimate of the commercial volume for exploitation, skidding will be controlled in order to minimize damages to the soil and natural regeneration; damages to neighboring trees from felling will be evaluated.

Natural regeneration of commercial and potentially commercial trees will be evaluated and they will be marked with stakes made expressly for individual plants or groups. In the 2nd and 3rd year there will be an enrichment with seedlings and we'll be able to try enrichment with the complementary species trying to achieve in some way Stratified Polycycles.

C: To execute forest plantation, species Introduction Essays, Provenances studies and native species Arboreta.

- +objective: To execute plantations with Stratified Polycycles in 150 ha. and Introduction and handling Essays in 50 ha
- +area: 200 hectares
- +forest species: intolerant y tolerant
- +forest nurseries: 40-50,000 seedlings/year, in scarce nurseries
- +execution period: 3 years.
- +management period: 3 years

Commercial forest plantations will be created in about 150 ha. with known species and management. To obtain Stratified Polycycles requires starting after the primary and secondary forests. We will carry out introduction and management essays in 50 ha. in the first 3-4 months (winters) during the three years. Valuable natural regeneration comes from existing seedlings or seeds in the soil. Seeds for nurseries come from crop collections in the area, from JMDFF seed bank or from the State's Forestry Service, from donations and agreements or from foreign providers.

Weed control is essential during all the stages in the three years and will be executed manually in crowns, in a strip line or in "chapias" (the whole area).

D: Rehabilitation of suitable soils with forest aptitude under other uses, for permanent forest use through afforestation and reforestation activities.

- +objective: Recover forest soils currently in agricultural use through reforestation and making them sustainable with agroforestry systems.
- +area: 150 hectares
- +Execution period: 3 years
- +Management period: 3 years
- +forest species: mainly intolerant
- +forest nurseries: 30,000 seedlings/year, in scarce nurseries

Many forest soils are without forests or with underbrushes or fruit trees (Coffee, Cocoa, Banana) which suffer erosion making the cultivation unsustainable. They are the soils mainly used by farmers and migrants. The forest tree will be put as the fundamental component of a basic sustainable system which permits the revenues of agricultural farming and wood's future commercialization.

E: Work Diffusion and Evaluation

- +objective: Control and evaluation of Activities and objectives.
- +area: all the farm
- +execution period: 3 years
- +Activities: all (A,B,C,D)
- +project evaluation: a formal yearly evaluation by ITTO, we suggest.
- +administrative control: permanent and in the entire area by JMDF
- +diffusion and dissemination: will be made through 8 sight visits and from work with workshops.

We also contemplate the diffusion of information through papers and information bulletins addressed to Universities, institutes related to the resource, NGO. Regional organizations such as INFORANDES and countries of the FACTO AMAZONICO could be very good promotion vehicles.

Equipment, Substructure and Miscellaneous

- +objective: To give transportation, lodging and communications facilities
- +Lodging: To build a central camp for 12 people with electricity and water, and two workers camps each for 20 people, with water; 1st year
- +high miradores: Building two in the conservation area; 2nd year
- +roads: Build 8 kilometers for summer paths; 1st year
- +supervision and control: one person during the whole time
- +vehicles: Acquire a Station Wagon 4x4 for 10 people and four ATV (All Terrain Vehicles) 4x4 type "mule" (Yamaha)
- +computer: Purchase a PC type PS2-55SX and software (word processor, data management and statistics).
- +radios: Acquire two base equipments and two mobile in VHF
- +soil samples: A total of 400 samples will be taken in 4 project areas
- +reports: of yields and utilization damages, yearly about natural regeneration and plantations

2.2 Recommendation Nº2: "To provide an explanation of the mechanism that will be used to secure the participation of local communities in the Project."

Various type of mechanisms are contemplated, they are:

- a) Contracting an Agricultural Technician (or Forestry) who will diffuse and who will make an extension between the neighboring community.

- b) Contracting local hand labor
- c) Elaborating workshops and their records of proceedings
- d) Elaborating seminaries and "field work days".

INFORANDES network will be an excellent diffusion medium, nevertheless this will be possible if they widen the work area (presently only in the andean Highlands) to the low tropical zones. Similarly the organization denominated PACTO AMAZONICO will be a very good dissemination medium also, it groups the amazon countries, but this also depends of the development of said organization.

- 2.3 Recommendation N°3: "Providing details about the future tenure of land and the future ownership of any established plantations."

JMDFF receives a land donation to execute the project approved by its Directory for this project presented to ITTO. The land donor (Ecuador's counterpart for soil) is Enchapes Decorativos S.A. whose only condition is that the soil be kept in forestry use and with activities, such as those described in the project be developed. Land tenure is thus secured with JMDFF.

The plantations property will belong to JMDFF.

- 2.4 Recommendation N°4: "Outlining the principles and mechanisms that will eventually be used to distribute the benefits produced by the plantations"

The benefits (future) from revenues of wood commercializing at first will be for FFJMD (a non-profit NGO) to be reinvested in the project or to sustain other similar projects, or other activities such as supporting the dissemination of techniques and information. We are considering that the forest enterprises who support the future investments will have preference as to the offering of the commercialized wood.

This project's proposal finances three years of activities, enough for a beginning; in the future various mechanisms will appear, amongst them contributions from the private sector, wood enterprises, the Foundations Directory or other Phases through ITTO.

- 2.5 Recommendation N°5: "Providing terms of reference for all key personnel and outlining with detailed justification, the minimum number of international experts needed to achieve the objectives of the Project."

The proposal aims to establish new forest management paths with tangible conservation and production considerations through a combination of natural regeneration and plantation systems and research which will translate into a desired impact both for the environment and production. These complex systems require permanent monitoring through people with a wide tropical experience. It considers the contracting of local and foreign Technicians.

Local Technicians: A Project Manager, Two Forest Engineers to be responsible mainly of Activities A+B and C+D; an Agricultural or Forestry Technician to be responsible of agricultural farming that can exist and basically as a nexus with neighboring communities and farmers. All of them have diffusion activities and care of the land.

Profiles: to be able to work under pressure, ability to command workers, good health and to be able to relate in groups. The Project Manager must have experience in forestry operations, personnel management, and relationship with international organisms.

Foreign Technicians: All of them come for a short period in a way that they give support to the project and in the beginning they cooperate in the formulation and technical refinement of it. A tropical Silviculturist, a Forestry Botanist, a forest Ecologist, a soil and forest nutrition expert. Experts with experience from other tropical forest.

A formal supervision by ITTO is considered in at least three occasions estimated adequate at the end of every year; naturally this criteria can be modified by ITTO as it may consider timely or adequate.

2.6 Recommendation N°6: "Outlining a strategy for the effective dissemination of results both within Ecuador and the wider region."

The basic diffusion and dissemination strategy is to incorporate to public and private local and regional Organizations related with the resources. The fact in itself of ITTO's proposal, of Activities elaboration and their execution have in itself their own dynamics of diffusion. Also through:

- a) Field camp visits (8) planned during the project.
- b) With the participation of local NGO's, State organization and Universities.
- c) The elaboration and dissemination of Papers and Reports.

The State's Forestry Service, the Agricultural Reform and Colonization Institute, Quito's Catholic University, the Ministry's of Foreign Relations and CONADE National Council for Development's Technical Departments, Natura Foundation, The Association of Wood Industrialists of Ecuador AIMA, etc are already involved.

As far as dissemination within Ecuador and the region (INFORANDES or the AMAZONIC PACT) and other mediums are described in points 2.1 and 2.2.

~~Fernando Montenegro/J. Mr. Durini Forestry Foundation/Quito Ecuador
November/91~~

