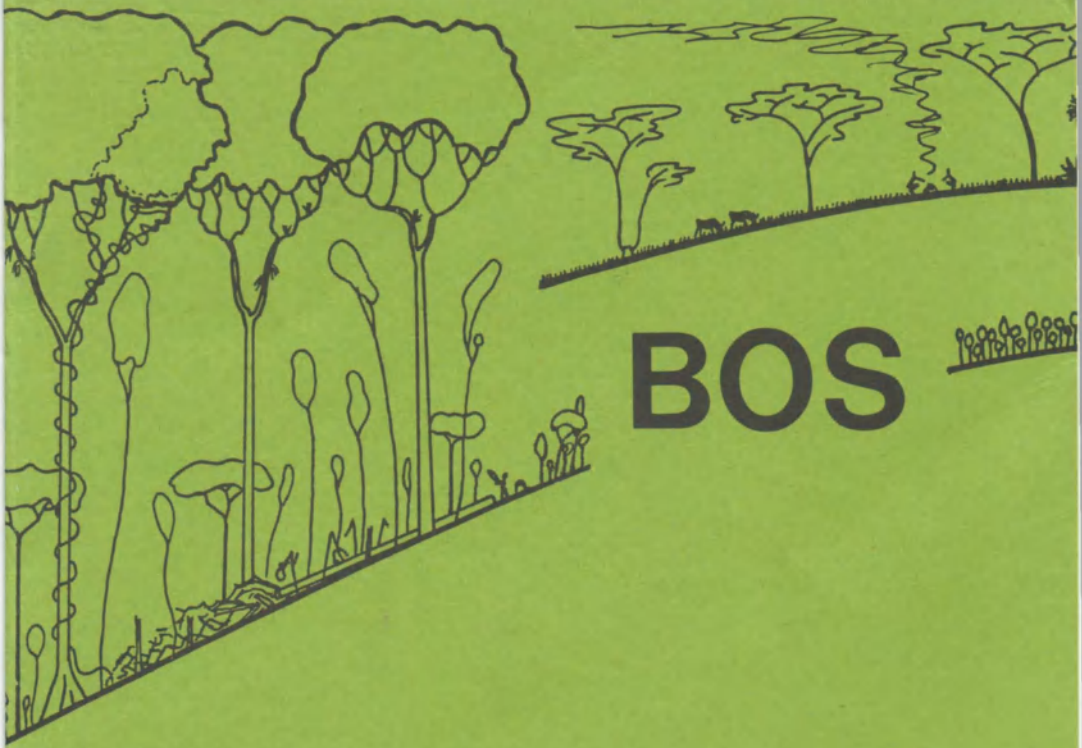

BOS

Vol. 2 (1)
April 1983

NIEUWSLETTER

Stichting voor Nederlandse
Bosbouw **O**ntwikkelings **S**amenwerking

The BOS Nieuwsletter is a bulletin of the Foundation for Dutch Forestry Development Cooperation - Stichting voor Nederlandse Bosbouw Ontwikkelings Samenwerking.
c/o Dorschkamp Research Institute for Forestry and Landscape Planning De Dorschkamp (Rijksinstituut voor onderzoek in de bos- en landschapsbouw "De Dorschkamp").

Objectives of BOS

- to promote and improve the quality of the work and cooperation of Dutch tropical foresters in developing countries,
- to exchange information between tropical foresters and between tropical foresters and Dutch institutes on forestry development in the tropics,
- to increase awareness of the importance of tropical forests and forestry to society in the tropics.

Activities of BOS

- to compile and to publish this newsletter in which all types of information on tropical forestry will be incorporated: practical experiences, short descriptions of present and future projects, library surveys, new publications, vacancies, etc.
- to establish and to maintain a register of tropical foresters who may be available to advise agencies or companies involved in forestry development cooperation,
- to maintain contacts with all types of organizations, national and international, in order to avoid duplication and to carry out joint activities whenever possible.

BOS secretariat

Address:	De Dorschkamp	Postal address:	De Dorschkamp
	20 Bosrandweg		P.O.Box 23
	wageningen		6700 AA Wageningen
	The Netherlands		The Netherlands
Telephone:	08370-19050	Giro account:	4296433
		Bank account:	539024414
			ABN bank, Wageningen

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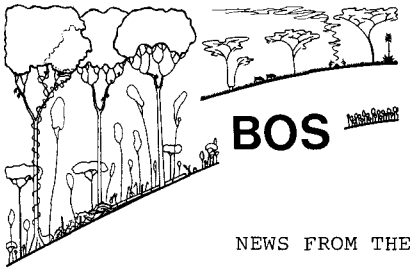


NEWS FROM THE SECRETARIAT

The first Annual Report (1982) for the BOS Foundation is published in this issue of the newsletter. We are pleased to report a very promising beginning for the Foundation, and 1983 also shows promise of being a good year.

After new year, a fourty more subscriptions have been paid. Two consultancy agencies, Euroconsult and HVA Netherlands BV, have donated f 5000,- to support the BOS Foundation. In return they will make use of the services offered by BOS. It is very encouraging to note that in the near future more foresters will be needed for projects in tropical areas. Forestry is becoming more integrated into rural development projects. The policy of the Netherlands Directorate-General for Development Cooperation (DGIS) gives greater emphasis to projects on the supply of energy in developing countries. Several fuelwood projects are to be initiated. DGIS is at present recruiting foresters (assistant-experts) for projects in Africa, South-America and Asia, and is looking for specialists to set up village woodlot projects. Consultancy agencies are also interested in recruiting foresters for energy projects to be carried out in tropical areas.

Several requests concerning the recruitment of tropical foresters and consultants for short-term assignments and other positions have been received by BOS. The requests have been answered in terms of the information provided by

foresters in response to the request made on the last page of the newsletter. However in view of the recent increased interest in the recruitment of tropical foresters, BOS is planning to set up a professional register to assist with the recruitment of tropical foresters. It is proposed in the near future to sent out all subscribers a checklist on professional qualifications, experience, etc.

There has been a very good response to the request in the last newsletter for contributions from foresters about their projects and general matters of interest in tropical forestry. Please keep the articles coming in. One of our planned activities for 1984 is a review of all ongoing projects. So if you would like to send us an outline of your project, we would be very pleased to hear from you.

In the meantime you are most welcome to call at the office of the BOS secretariat when you are visiting Wageningen. We hope to meet many of you during the summer months when so many are on home leave.

ANNUAL REPORT OF THE FOUNDATION FOR DUTCH DEVELOPMENT COOPERATION(BOS) 1982

Mailing list

The mailing list for the BOS newsletter has increased from 250 in January 1982 to over 400 in December 1982. It includes foresters working in the tropics and those with a tropical experience, students and others, as well as institutes concerned with forestry in the tropics.

Register of Technical Data

At the end of December 1982, a total of 137 foresters who have been working or who would like to work in tropical or sub-tropical areas had been placed on the Technical Data Register. By means of this register, people are put in touch with various organizations recruiting foresters for the tropics. In addition, foresters with similar interests, areas of specialization and experience can be brought into contact with one another.

Subscriptions

Regretfully because of budget restrictions, it has not been possible to issue the newsletter free of charge. In 1982, the annual subscription was fixed at D.fl. 35,-- and for students D.fl. 25,--. In response to an appeal made to support BOS activities, 171 donations have been received during the year.

Management Board

The members of the Management Board are as follows:
- R.A.A. Oldeman, Department of Forestry, Agricultural University, Wageningen (Chairman);
- W. Kriek, Dorschkamp Research Institute for Forestry and Landscape Planning, Wageningen (Treasurer);

- A.J.M. Wouters (Secretary until April 1982);
- E.M. van 't Leven (Secretary from May 1982);
- N.W.J. Borsboom, Netherlands State Forestry Service, Utrecht;
- A.G. Gerritsen, College of Forestry and Rural Engineering, Velp;
- G. Sicco Smit, Department of Forestry, International Institute for Aerial Survey and Earth Sciences, Enschede;

In October 1982, J.M. Heering, State Forestry Service, was appointed as advisor to the BOS Foundation.

Secretariat

During the first part of 1982 Fred Wouters was secretary of the BOS Foundation and laid the foundations for many of its contacts and activities. In May 1982, Liesbeth van 't Leven became secretary. At the same time, a working group of volunteers was formed to assist the secretariat, especially with the production of the newsletter. The members of the group are: Rob Busink, Han van Dam, Wiebe Kloppenburg, Jan Kuyper, Gommert Mes and Ad Olsthoorn. Since November 1982, Jaap Meyer has been assisting with the ever increasing number of daily activities of the secretariat.

Newsletter

Up to date, four newsletters each of 500 copies have been published. In order to further contacts with foresters and institutions abroad, as much of the text as possible is written in English. During the year, readers have been asked to send information on matters of interest in tropical forestry including announcements of meetings, book reviews and short articles on activities within their project or organization. It is very pleasing to report that contributions have been steadily increasing. Reactions to the information

provided in the newsletter, especially to the list of newly published books and articles, have been very positive.

Activities

Two main activities which have occupied the Secretariat are the preparation of copy for the newsletter and the collection and processing of information for the Technical Data Register. However during 1982, efforts have been made to extend contacts with other organizations and institutions. Contacts were made with: Directorate-General for International Co-operation (DGIS); Ministry of Agriculture and Fisheries; International Agricultural Centre (IAC); Organization of Netherlands Volunteers (SNV); Euroconsult; Royal Dutch Forestry Society (KNBV); Foundation Technical Development with Developing Countries (TOOL), Agromisa, Global Forest Fund, Association of Development Workers (BOW); International Union for the Conservation of Nature and Natural Resources (IUCN); Working Group for the Conservation of the Tropical Forests (WBTR). Contacts have also been made with several other organizations concerned with rural development in the tropics, such as DOG, NOVIB, ICCO and HIVOS. In addition, contacts were established with a number of sister organizations abroad: die Ausschuss für Internationale forst- und holzwirtschaftliche Zusammenarbeit (AIFHZ) in West Germany; Commonwealth Forestry Institute (CFI), England; Forest Support Programme (FSP) and International Society of Tropical Foresters (ISTF) in United States; and Centre Technique Forestier Tropical (CTFT) in France.

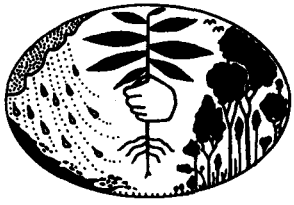
During the autumn meeting of the Royal Dutch Forestry Society in October, an evening was devoted to acquainting Dutch foresters with the objectives and activities of BOS.

We are pleased to report very favourable reactions. In addition, a pamphlet was compiled in the Dutch language setting out the objectives and activities of the foundation. In each newsletter an invitation has been extended to those interested in tropical forestry to visit the office of the BOS secretariat. During the year, we have received an increasing number of visitors, especially foresters on home leave and those who have completed a project in a tropical area. The secretariat has dealt with an increasing number of requests from institutions and organizations looking for foresters for both short-term and long-term projects.

Several requests have also been received for the BOS Foundation to act as an intermediary in looking for places for forestry students to undertake fieldwork. These requests have come from the Agricultural University, Wageningen; the Velp College for Forestry and Rural Engineering; and the National Agricultural College Deventer. In addition requests have been received on how to obtain information about forestry in developing countries and also about various Sylvicultural problems in tropical areas. Members of the management Board have been asked to comment on ten project proposals. Whenever possible, the advise of specialists in the area was sought.

In the coming year, we intend to extend those activities which were commenced in 1982. In view of the increasing interest in the recruitment of foresters for work in the tropics, emphasis will be placed on the establishment of a register of all tropical foresters which will list their professional qualifications, experience and interest.

LET THERE BE FOREST
International Symposium on strategies and designs for afforestation, reforestation and tree planting
Hinkeloord 1983



LECTURE PROGRAMME

Introduction: Toward a global afforestation strategy
by staff Hinkeloord Institute of Forestry LH, The Netherlands.

Session 1: AFFORESTATION AND DEVELOPMENT: AIMS AND OBJECTIVES

1. The place of afforestation in the general development situation
   by: J. Berkhout, H.J.J. Stolwijk & D. Faber, Centre for World Food Studies, the Netherlands
2. The place of agriculture and forestry in land-use with emphasis on aspects of afforestation and land-use planning
   by: J.S. Spears, Worldbank, Washington, USA (provisional)
3. Afforestation for local community development
   by: J.E.M. Arnold, FAO, Rome, Italy
4. Needs for forest products with their consequences for afforestation
   by: T.J. Peck, Timber section, ECE/FAO Agriculture & Timber Division, Geneva, Switzerland
5. Soil and water management aspects of afforestation
   by: J. Evans, Forestry Commission Research Station, Farnham, UK
6. Biological diversity and afforestation
   by: G. Bodowski, CATIE, Turrialba, Costa Rica (asked)

SESSION 2: DEVELOPMENT OF DIFFERENT AFFORESTATION SYSTEMS

1. Man-made industrial forests in Brazil: possibilities and constraints
   by: A.P. Mendes Galvao, EMBRAPA, Brazilia, Brazil
2. Afforestation in the Sahel, lessons from USAID-assisted projects
   by: G. Taylor, USAID, Bamako, Mali
3. Plantations villageoises et aménagement des fôrets classées en Haute Volta
   by: staff project Bois de Villages, Ouagadougou, Haute Volta
4. Strategies adopted in diversified reforestation project Northeast Thailand
   by: P. Pinyosorasak, UNDP/FAO/RFD project, Thailand
5. Local community and forest
   by: N.G. Basu, Ranchi Consortium for Community Forestry, India
6. Traditional afforestation strategies of local farmers
   by: R.B. Peck, Colombia

SESSION 3: DIAGNOSTIC METHODOLOGIES FOR AFFORESTATION

1. Land evaluation for afforestation
   by: H.F. Gelens, K.J. Beek & C.P. van Goor, ITC & De Dorschkamp, The Netherlands
2. Diagnostic methodology for afforestation in industrial projects
   by: Weyerhauser Company, USA (asked)
3. Diagnostic approach to agroforestry design
   by: J.B. Raintree, ICRAF, Nairobi, Kenya

SESSION 4: ANALYSIS OF SPECIFIC DESIGN COMPONENTS OF AFFORESTATION

1. Why do forestry plantations fail?
   by: J.K. Jackson, Middlesex, UK
2. The economics of forest plantations: a world view
   by: R.A. Sedjo, Resources for the future, Washington, USA
3. Comparative assessment of various incentives for afforestation
   by: H.M. Gregersen, University Minnesota, USA
4. Institutional arrangements for afforestation
   by: D. Palin, Swedforest Consulting AB, Solna, Sweden
5. Training and extension for community forestry
   by: staff FAO/UNDP Community Forestry Development project, Nepal
6. A modular approach to reforestation systems
   by: A. Grainger, International Tree Crops Institute, UK

SESSION 5: NATIONAL AND INTERNATIONAL ACTION FOR AFFORESTATION

1. Policies, strategies and designs of forest development on the island of Java
   by: H. Wirjodarmodjo, Perum Perhutani, Jakarta, Indonesia
2. Activating policies and increased effective afforestation projects bij NGO's
   by: representative Global Forest Fund
3. International policy and action for afforestation
   by: Forestry Department FAO

In addition to the lectures over 40 posters will be presented giving further information and illustrations on afforestation.

Also an evening programme with films and slides will be organized as well as one day excursion to afforestation objects in the Netherlands.
Further information can be obtained from Ir. K.F. Wiersum or Ir. J.J. van der Wal,Forestry Institute Hinkeloord, P.O.Box 342, 6700 AH Wageningen, The Netherlands (tel. 08370-82915).

The plunder of our forests

Last Thursday, the Indonesian Association of Sylviculturists held a national discussion in Yogyakarta. The star of the event was evidently Dr. Achmad Soemitro, forestry economist at Yogyakarta's Gajah Mada University. Presenting a paper on the situation of our forests, he told the 200 assembled forestry experts that our forests have by and large come to be seen as a thing to be doled out (among certain people) and to be fully consumed. He also said that our forests are being taken for granted as a source of (personal) gain, as economic production's free-of-charge input and treasure trove to satisfy short needs instantly. Our forests have become everyone's target for massive unrestrained plunder.

Indeed, the Financial Note on the Bill for State Budget 1983/1984, mentioned that that timber production shot up from 8,107.000 cubic meters in 1969 to 31,094,000 cubic meters in 1978, whence it came down some to 15,376,000 cubic meters in 1981, At the height of the plunder, 86.4 pct of the timber was exported to make it the second largest foreign-currency earner after crude oil. During the period 1969-1981, some 256,943,000 cubic meters of timber was felled out of which 187,913,000 cubic meters was exported and valued at US $ 9,495 million.

Dr. Achmad Soemitro also criticized his fellow forestry experts, in particular those leading the Indonesian Association of Sylviculturists. He saw them lacking the political will to live up to their vow to see to it that our forests are being protected, conserved and used for purposes of national development in a wise manner. To remind his learned audience, Dr. Achmad Soemitro quoted the Bali declaration of the world conference on national parks last October: "... We are the last generation that still has a chance to make decisions that will shape the day of tomorrow".

Stinging remarks were made by Dr. Achmad Soemitro about those who held forestry 'concessions'. He saw them lacking the initiative to replant their contracted plots. Concessionaries also never bother to make maximum use of one whole tree, they just take the most profitable part of the trunk and leave the rest of the tree behind to rot.

The same Financial Note on the Bill for the State Budget 1983/1984 states that up to December 31, 1981, there were 518 timber companies, out of which 87 pct was classified as national, whatever that means. The total acreage of all the forestry concessions covered 52,172,000 hectares, out of which almost 85 pct was in the hands of national companies. The total investment that was supposed (repeat: supposed) to be made by all the forestry concessionaries was US $ 1,825 million.

As for the effectiveness of government control on the implementation of the pertinent articles of their contract by forestry concessionaries, Dr. Achmad Soemitro had really little praise. The felling of trees have been going on with only one goal in mind: to make huge profits in the shortest time with complete disregard for mindful land-use less so replanting of the cut plots.

With all that, we have come to the point to wonder whether we have done that to our next generations because of ignorance or because of sheer criminal greed? Judging from the strength and the persistence of slightly veiled allegations circulating in public, the latter may well be the pre-dominant cause of the plunder of our forests.

Indonesian Observer, 19-1-1983

THE ROLE OF FORESTRY IN RURAL DEVELOPMENT THE CASE OF SANTA ANTAO, CABO VERDE

Introduction

The Cape Verdian Islands, situated 500 km west of Dakar in the Atlantic Ocean,gained their independence from Portugal in 1975. Since then, cooperation was established between the new Cape Verdian Government and the Netherlands Ministry of International Cooperation (DGIS). This resulted in, among others, a bilateral rural development project on the island of Santo Antao. Whereas the first phase of this project consisted mainly in relief employment for the draught-stricken area, in the second phase land use planning was implemented to provide the basis for a comprehensive land conservation project. During 1980-1981 the author, with others, worked on the preparation of this plan. Technical and infrastructural support was given by the International Topographic Center (ITC) in Enschede, Netherlands.

This article will give a brief account of the method of work, the way problems were tackled, the results, and - last but not least - the place of forestry in the local context.

Background

Traditionally the inhabitants of Santo Antao (area: ca 750 km^2) are farmers. Cultivable land has always been scarce and the conditions under a semi-arid climate were extremely hard. This was aggravated by the recent decade of Sahelian drought which caused many peasants to seek overseas employment. Nowadays, a great part of the population is dependent

on relatives abroad and employment relief programs (mainly check dam construction) sponsored by the abovementioned bilateral project and other foreign aid.
The more substantial agricultural production comes from the lower valleys on the island where irrigation is applied. These valleys contribute for two third to the island's economy.

However, as the drought continued, water supplies decreased steadily. Moreover, they were threatened by severe erosion of the upland areas. This erosion is due to:
- the extremely rugged topography of the island,
- the high erodibility of the soils - mostly of recent volcanic origin,
- the extreme variation in climate, showing one of the most irregular rainfall patterns on earth. Rainfall is almost entirely concentrated on a couple of days per year only. On the other hand, intensities may reach 300 mm/day. The occurence of rainy days is almost unpredictable; they may occur any time between July and December.

Soil loss caused by erosion was roughly estimated to be 100 cu.m. per ha per year, which is only a conservative estimate. Besides, there are severe negative effects by runoff and accumulation of sediment on cultivated land, including temporary obstruction of access roads, etc. Though the total annual precipitation is not always really low, and may even sometimes reach 1200 mm/year, most of the rainwater is wasted by runoff to sea.

Land conservation could not only beneficially counteract the first mentioned negative effects but also considerably increase agricultural production (an increase calculated to be 35 % including the effects of 20 % groundwater recharge increase). Not only the irrigated production could increase,

but also the possibilities for subsistence farming in the upper catchments themselves, where dependency on employment schemes was extremely high.
For all these reasons the upper zone was selected as target area for the plan. It occupied an area of 6500 ha between 1000 and 1600 m a.s.l., with a population of over 2300. The planning period was set at 5 years.

Method of work

The first step was to analyse the present situation. Information was collected by various experts and consultants. The results were laid down in maps and reports on: geomorphology, soils, climate, vegetation, population, economy, and legislation. Not all the subjects were investigated equally thoroughly, due to practical constraints. For instance, parts of the information only became available towards the end of the planning work. There was also a delay in the production of basic maps. Aerial photos, however, were available (scale 1:25,000).

The next step was to formulate development objectives according to Government policies. These objectives were then set out against the major constraints in a "consequence matrix" to analyse the potential and limitations for development.

On the basis of this analysis, a number of Land Utilization Types (LUTs) were identified and their potential extent in terms of demand was established.

The next step was to determine land use requirements in order to arrive at a justified land suitablility classification. On the basis of this classification, a recommended land use map was produced with a corresponding table showing necessary improvements and expected potential suitability.

From these maps and table, options for further land use could be derived. Discussion of these options with regards to physical limitations, necessary inputs for improvement and expected returns, resulted in the formulation of a development strategy, on which basis a concrete project proposal was formulated.

Analysis of the present situation

The existing technical and socio-economical information was laid down in a "Technical Guide" in a loose-leaf system because of its extendable character. This was intended to be updated regularly.

A detailed geomorphological map (1:10,000) was made by air photo-interpretation. This was the main basis of soil erosion classification, as there were no means to carry out an adequate soil survey for this purpose. The classification was done according to the "ITC method", and a corresponding erosion susceptibility map was produced for the purpose of land suitabilityclassification.
Climatic data were also scarce, but sufficient to divide the area in two zones, a dry, western zone (with less than 400 mm/yr) and a less dry eastern zone (500-800 mm/yr, augmented by mist precipitation). Vegetation and land use were reflected in a combined map (1:10,000) showing range land (ca half of the area), forests (i.e. old plantations of mainly Pinus canariensis, P. radiata, Acacia mearnsii and eucalyptus - some 400 ha) and cultivated (dry farming) lands.

Further, data on agricultural production were collected. This concerned mainly maize, beans, (especially Congo beans - Cajanus cajan which is very drought resistant and a good soil conservator), and sweet potatoes. Irrigation

does not exist in the area; the farming method is predominantly 'opportunity cropping'. Animal husbandry is limited to goats and, rarely, cattle.

Food and energy demands of the population - at local, island and regional level - were determined as well: It appeared that on the average only 45 % of the daily alimentary needs could be covered by local production. In some places this percentage is much lower. This clearly illustrates the need for cash from relief employment or relatives abroad.

Fuelwood consumption appeared to be notably high (305 kg p.p.p.y.), due to the long cooking time of maize, which is the local staple food. In many places where trees are scarce, shrubs, crop residues and even animal dung was used. The consequences of this, an extremely low organic matter content of the soil and hence a high erosion susceptibility, were clearly visible in the area. In some places the absence of any form of fuel compelled to only one hot meal in every two or three days.

Timber demands were estimated to be around 600 m^3/yr for the whole of Santo Antao. In addition, demands on the other islands were assumed to be around 8,000 m^3/yr. This concerned mainly pine wood which was not produced elsewhere in Cabo Verde.

Infrastructure was examined; it consisted mainly of a few car roads, with a correspondingly low degree of trade, an extremely scarce water supply, and a few primary schools.

Finally, legislation referning to land conservation was found to be mainly effectuated by a Forestry Regulation dated from 1928 based on severly out-of-date principles. Land tenure was regulated by a Land Tenure Act which had recently been revised. The most far-going legal intervention in the next future would be the implementation of a

proposed Land Reform Act. In this Act, special regulations for forestry and rangeland had been provided, but they were not yet specified. The land tenure pattern proved to be very complicated. Almost 2/3 of the land belonged to non-residents and was either hired out or left barren.

It was concluded that the major constraints for development were due to poor physical resources, as a consequence of which poor socio-economic conditions were aggravated. In turn these were compounded by the absence of services and by the need for relief employment by the state.

Development objectives, potential and limitations

Based on the foregoing conclusions and taking into consideration the national development objectives, the following project objectives were formulated:

- To increase existing soil erosion activities through afforestation, conservation structures and improved forest, agriculture and range management.
- To increase groundwater recharge.
- To maximize production of firewood and timber.
- To increase economic activity.

Based on these objectives the following land utilization types (LUTs) were identified, which potential extent in terms of demand was summarized as follows:

- Forestry for the establishment of conservation zones

  About 3600 ha (55 % of the area) was designated as permanent conservation area. Suitable species for conservation reforestation so far known were Acacia mearnsii and Pinus canariensis. Experiments with imported species were recommended especially to replace the present expensive and labour-intensive mechanical erosion control.

- Forestry for firewood production
  In order to meet local firewood requirements, a production area of 1000-1650 ha was calculated, depending on climatic zone and species used. This could effectively be reduced if cooking stoves would be introduced (an option not further elaborated).

- Forestry for timber production
  Assuming an average animal production of 10 m^3/ha in the moist zone, and a rotation period of 30 years, a total area of 1000-1500 ha was estimated to be required to meet local and national timber demands.

- Fruticulture
  The main options for this LUT was backyard plantations (mangoes, figs, apples, almonds) in addition to subsistence farming. It also appeared to be an effective tool in forestry extension.

- Agriculture
  When conservation would be effectively applied (by terracing and improved crop selection), and when each farm would produce at full capacity, production was projected to increase 3 or 4 fold (even more in financial terms). One of the prerequisites of this increase would be the purchase of the produce by the Government guaranteed prices. It was further assumed that each farmer could not cultivate more than 1 ha intensively (opportunity cropping during limited period of unreliable rainfall).

- Grazing
  Though a grazing capacity of 1-2 goats/ha was considered to be realistic, little else was known to forecast the scale of range management. At any rate, if this LUT would be developed in a later stage, this could be done provided that conservation requirements would be met. Range manage-

ment could also serve for conservation if this proved to be an equally and less costly alternative.

Land use requirements and suitability classification

From a practical point of view five land qualities were selected as determinants for suitability classification: soil depth, inherent soil fertility, availability of moisture, susceptibility to erosion, and slope. (The latter was integrated in the abovementioned geomorphological and erosion susceptibility maps). Besides, possible improvements which could be achieved by alteration of certain factors (e.g. management or investments) were incorporated in the classification, bearing in mind the limited reliability of those elements. Thus, a suitability classification was organized for the following (combination of) LUTs:

- firewood and timber production: 2 classes (suitable and marginally suitable).
- rainfed agriculture and fruticulture: 3 classes (highly, moderately,and marginally suitable).
- grazing: only a preliminary classification with indication of possibly suitable areas.

The classes of lower suitability could be upgraded by improvements, but these were only recommended when this was economically justified. Otherwise another LUT was recommended to be put under permanent conservation.

Development strategy

After compiling a recommended land use map with 5 land suitability units, and discussion of the best LUT for each unit taking into consideration minimum spatial requirements and possible improvements versus returns, a development strategy was formulated based on the following order of priority:

- Agriculture (on land offering the best returns for the least investments)
- Congo beans and firewood (which could be combined and were both effective for conservation)
- Grazing (to support livestock for the farmers)
- Timber (as an alternative for grazing, possibly in the more sparsely populated areas).

A seemingly controversial point emerged from the discussion of the various alternatives. While employment relief was one of the main assets of the plan, labour was extremely scarce during the planting period when the farmers prefered to plant their own fields. This would severely limit the area to be developed annually, when only paid labour would be considered as a tool. However, the problem could be reduced by the introduction of on farm improvements by means of a subsidy scheme supported by effective extension.

The project

In the project formulation, the foregoing strategy was translated into concrete works to be carried out during the next 5 years. These contained:

- Works of general benefit (permanent conservation, timber and firewood plantations, improved pastures).
- Subsidized on farm improvements (terraces and other structures, firewood and fruit tree plantations).

The area was divided into 23 sub-units for planning purposes. Pre-requisites were included (the implementation of land reform, and the timely delivery of funds) and the organizational structure of the forestry service to be (including an extension branch) was described.

Discussion

The approach described above seems highly abstract and theoretical at first sight, even moreso considering the extremely small area for which the project was formulated. However, the scope reached much farther than that: it was the only way to lay the foundations for the development of an island which was - and still is - the country's second highest production area. In this light the size of the area is deceptive: the great variety of problems hampering development in many other larger regions in the world are also present here. It is easy to overlook this fact and instead jump at the nearest solution. Which was what happened to Santo Antao before: in the Portuguese time the problems, erosion control and fuelwood scarcity, were easily recognized, so afforestation was proclaimed as the one and all solution. Though this was successful to some extent, it also caused severe resistance. Land owners did not want their land to be occupied by forests that they were not allowed to cut, and the small farmers and tenants dit not want to yield their meagre crop fields to trees which they could not eat. The government reacted by merely pushing through their tree planting program which consequently grew into an annual rite often stagnating at the same area for years. After independence, this policy was continued, also as a means of relief employment in addition to the aforementioned erosion check dams which were built without any previous assessment of their effectiveness. Though these projects should be seen in the context of a draught stricken economy and therefore should not be criticized too heavily - they certainly offered a better alternative than the mere distribution of food aid - they did not contribute to development. On the other hand, though the above described plan does have development as its objective, it is not

'development' in the sense of simply enlarging the gross national or even island product. It is in the first place orientated towards lifting the local farmers from the level of absolute poverty to that of a small enterpriser providing in his own basic needs.

It is in this context that forestry should be seen: its place is to support agriculture, but at the same time it is indispensable for the success of the latter. Therefore, its implementation falls in line with the "Forestry for local development" strategies currently developed by international organisations such as FAO. But of course, its success will only be proven after its implementation.

Cathrien H. de Pater
March, 1983

Bibliography: Van der Zee, J.J., de Pater, C.H., de Vos t.N.C., J. - Project Proposal Rural Development Eastern Upper Catchments (Planalto Leste), Santo Antao - Cabo Verde.

Op het laatst binnengekomen. Uit Intermediair d.d. 29-4-'83

SOLLICITATIE-OPROEP

AMBASSADE VAN DE REPUBLIEK SURINAME

Ten behoeve van het Ministerie van Onderwijs en Wetenschappen in Suriname worden sollicitanten opgeroepen voor de vervulling van de vacature van

leraar

m.i.v. 1 oktober 1983, t.w.:

Bij de middelbare opleidingen van het Natuur Technisch Instituut (NATIN), in de volgende vakken:

Wis- en Natuurkunde
Economie (Algemene en Bedrijfseconomie)
Bosbouw
Werktuigbouwkunde
Scheikunde

Bezoldiging bij VWMKO en NATIN gebaseerd op het bezit van een pedagogisch getuigschrift (akte Q).
Volledig bevoegd (Drs., M.O.-B) schaal XIV (Sf 1549 – 2015). Beperkt bevoegd (M.O.-A, HBO) schaal XII (Sf 1314 – 1808).

Sollicitaties tot uiterlijk **11 mei 1983** te richten aan de Direkteur van Onderwijs d.t.k.v. de Ambassade van de Republiek Suriname, Alexander Gogelweg 2, Den Haag, telefoon 070-650844.

Sollicitatie-formulieren zijn verkrijgbaar op voornoemde Ambassade, alwaar tevens inlichtingen kunnen worden ingewonnen o.a. betreffende de vigerende aantrekkingsregeling (zoals vergoeding overtocht, uitrustingskosten, toeslag op salaris enz.).

Omstreeks eind mei 1983 zullen gegadigden eventueel worden opgeroepen voor een sollicitatie-gesprek.

NEW FORESTRY INSTITUTE IN LINARES, MEXICO

Mr. R.J. de Hoogh informed the BOS-secretariat about a new forestry Institute in the North-East of Mexico. Courses will start in September 1983. Mr. de Hoogh is teacher sylviculture.

We quote from the Information Circular:
The Institute of Silviculture and Renewable Resources management is part of a new project of the University of Nuevo Leon for training and research in applied sciences and technologics, in a new campus in Linares.

The Institute will conduct research, train students and contribute directly to rural development in forestry and in land management systems involving trees and shrubs. The work of the institute will concentrate on the needs of north-east Mexico, taking account of the prevailing uses and productive potential of the land and of improved management techniques. The needs and aspirations of the people, and the importance of environmental protection.

The management of forests and plantations will be included in the programme, but special emphasis will be placed on the improvement of bushland and woodland in arid and semi-arid areas for fodder and economic products, the conservation and management of soils and water resources, and agro-forestry systems.

To promote the implementation of this project, the university has a contract with the German Agency for Technical

Cooperation (GTZ), a non-profit company owned by the government of West-Germany. Under this agreement, GTZ has recruited four expatriate staff for long-term teaching and research. Other technical assistance will be arranged with specialists from Germany and elsewhere as required.

The investigations of the institute will follow four main programmes:

1. Management of forests and plantations.
2. Silvopastoralism: management of rangeland, and fodder trees and shrubs.
3. Agro-silviculture: management of trees and shrubs in farms and villages.
4. Environmental protection: conservation of soils, water, flora and fauna.

The research in natural forests will be mainly in the Sierra Madre, but the plantation research and the other programmes will apply throughout the region. Initial research projects include studies of the structure and functioning of some forests types in the Sierra, and surveys of the composition and uses of some matorral and arid areas. These will be following by planting, controlled cutting and grazing trials.

Where appropriate, research will be in collaboration with other institutions in Mexico and abroad, and with farmers and rural communities.

For additional information write to:

Universidad Autonoma de Nuevo Leon
Instituto de Silvicultura
Apartado Postal 104
67.700 Linares, N.L.
Mexico

A 40 MILLION HECTARE REFORESTATION JOB

In March 1983 with the installation of a new Federal government for Indonesia, a Department of Forestry with ministerial rank was created to succeed the Directorate General of Forestry within the ministry of Agriculture, which formerly was concerned with the forestry sector of this large, forested country. Wood and other forest products are still the second major foreign exchange earner, after crude oil and its products, and therefore forests and forestry play a very important role in the national economy of Indonesia.
During a press conference on March 28 Dr. Sudjarwo, the Minister of Forestry, indicated the four main areas of immediate concern for his Department: the conservation of natural resources, the rehabilitation of arid land, the exploitation of forests, which covers processing, transport and export of wood products, and the inventory of some 120 million hectares of forest land owned by the government.
Of the above, the rehabilitation of unproductive land is, in our opinion, the most urgent problem. We quote from the "Indonesia Observer" of March 30, 1983 covering the press conference by the Forestry Minister:
"The rehabilitation of 40 million hectares of arid land (comment: meant is unproductive or otherwise critical land; Indonesia lies mostly in the humid tropics, with only limited areas of real aridity or semi-aridity B.,v.M) constituted one of the four main working programs of the Department of Forestry, Minister Sudjarwo said after meeting President Soeharto at the Cendana presidential residence here today. He

pointed out, if the arid (= unproductive) plots of land inside or outside the forests were not rehabilitated soon, each year the population will only suffer from floods, erosion, dryness and other such unfavourable conditions." (End quote).

Although we fully recognize the problems associated with nature and natural resource conservation , the industrial exploitation of the forest reserves in perpetuity, and the stocktaking of the forest resource, we would like to comment here only on the rehabilitation of unproductive land. Conservative estimates from 1973 provide us with the following figures: at that time there were 16 million ha. of alang-alang (Imperata cylindrica) grasslands and 23 millon ha. of secondary scrub (belukar) or otherwise unproductive secondary vegetation. Both vegetation types are or were the result of exploitation of high forest, followed by or accompanied with intensive shifting cultivation practices of the indigenous population. Most of these areas of unproductive land can be found on the islands of Kalimantan, Sumatera, Sulawesi and to a lesser extent in Irian Jaya. In addition there are 3 million ha. of badly eroded, "critical" areas of privately owned agricultural land in need of rehabilitation, as well as 400,000 ha of similar lands in the state owned forests. These lands are mostly found on the densely populated islands of Java, Bali and Madura.
The above figures are 10 years old, and should be reviewed upwards, especially since high forest exploitation on the islands outside Java has been intensified in the last decade. The immensity of the problem is obvious, and it will increase every year unless rapid solutions are found.
Solving problems of this nature generally meets with three major constraints: money,organisation and trained manpower.

The first two constraints mentioned, money and organisation, are in this case not the most difficult to overcome. Money is available, since the Government of Indonesia imposes a "reforestation tax" of US$ 4,- per cubic meter exploited from all foreign and domestic concessionaires. The Indonesian forest services are well organised government bodies. It is therefore our strong opinion, that the major bottleneck in tackling the land rehabilitation problem lies in the training of skilled manpower.
This training should take place at the sub-professional as well as at the professional (supervisory and planning) level. The training should also not only involve pure technology (seed, nursery or plantation technology), but also socio-economic aspects, since almost always rural people (shifting cultivators, subsistence farmers etc.) are involved.

Among other training institutes for forestry personnel in Indonesia, there are eleven institutes of higher learning involved in training-academic foresters. Three of these have Faculty status (Bogor, Yogyakarta, Samarinda), the other eight are Forestry Departments within Agricultural Faculties. The two most important ones are the Forestry Faculties of Bogor and Yogyakarta. From the latter only about 15 to 20 students graduate annually in the biological specialisations of forestry, which are necessary to handle land rehabilitation problems described above; however, they receive little or no socio-economic training.
The Agricultural University of Wageningen has a programme of cooperation with the Forestry Faculty of the Gadjah Mada University in Yogyakarta. The main activities of the programme centre around staff upgrading through education and research training focusing on the rehabilitation of eroded lands by means of sound land use systems, stressing an

interdisciplinary approach.
Both partner faculties in the cooperation are aware of the ecological and economic importance of rapid solutions to these forestry-related problems. Through the programme of cooperation between Wageningen and Yogyakarta the solutions to the "priority number one" forestry problem could be brought to the near future by improving the educational and research levels and facilities of the Indonesian partner. The programme would increase the knowledge and number of academic and technical staff, who, through the research and educational programmes available at UGM, can be mobilised for the rehabilitation of over 40 million hectares of unproductive land in Indonesia.

Ir. Soedjoko, Ir. P. van Meer, Forestry Faculty, Gadjah Mada University, Yogyakarta.

Yogyakarta, April 1983.

SHORT NEWS

This column of the BOS newsletter is compiled to give short information of your interest. You are kindly invited to sent such information like personalia, address changes, short newspaper articles on tropical forestry, notes about new books, meetings or symposia etc.etc. to the BOS secretariat. You can also sent questions or announcements on which you ask response from other readers of this newsletter.

-Publications

SILVAE CULTURA TROPICA ET SUBTROPICA

Scientific papers of the Forestry Science Institute University of Agriculture, Prague, 281 63 Kostelec nad Cernými lesy Czechoslovakia.

The ninth number of 1982 brings in its introductory parts the contributions entitled "Afforestation of extreme sites" (Skoupý, J.p.3-20); "Regeneration of forests in Iran" (Skoupý, J.p. 21-48); "Introduced woody plants in forest plantation of the equatorial and southern Africa" (Václav, E.p. 49-94); "Protection of forests against insect pests and fungal diseases in Cuba" (Hochmut, R.p. 95-112); "The Himalayan cedar forests" (Borota, J.p. 113-124); "Possibilities and economic aspects of exotic woody plant imports to Czechoslovakia" (Pracna, J.p. 125-140); "Field data recording devices for forestry purposes" (141-160); "Agri-silvaecultura" (Cermák, K.p. 161-177).

BIBLIOGRAPHY OF TROPICAL AGROFORESTRY

J. Combe, H. Jimenez, Saa, and C. Monge, 1981, Centro Agronómico Tropical de Investigacion y Eusezanza, Turrialba, Costa Rica 67 pages.

This bibliography, published in Spanish and English, contains 680 references of documents dealing mainly with the American tropics. There are also documents from Africa, Asia and Oceania. Two indices are presented: one by authors and the other combining subjects, species and geographical names.

NATUURBEHOUD IN INDONESIË

M. Jacobs en T.J.J. de Boo, Conservation literature on Indonesia/Selected annotated bibliography (Rijksherbarium, Leiden, 1982, 274p., 1 kaart f 35,--).

A GUIDE TO SPECIES SELECTION FOR TROPICAL AND SUB-TROPICAL PLANTATIONS. D.B. Webb, P.J. Wood and J. Smith, Tropical forestry papers no 15, University of Oxford, 1980, 342p.

The first aim of this publication is to provide the characteristics and requirements of species in a concise and com-

pact form. The guide is designed to cover species warranting consideration for trial in tropical and sub-tropical climates, i.e. approximately between latitudes 30°N and 30°S. A total of 125 species, varieties and provenances have been included. Species characteristics are presented in the form of data sheets for each species. These include brief information on the species natural occurrence, climatic and edaphic preferences, silvicultural characteristics, production potential, wood properties and uses, seed supply and nursery requirements. More detailed information can be obtained from the principal references quoted for each species.
The second aim is to be of use with the selection of species. Three systems of arriving at an objective selection are presented: computerised data base and retrieval program (which is described and listed), punched card key, and species selection tables.

THE ART OF BEGINNING

This is the title of a book published by Pudoc, Wageningen. It does hot deal directly with forestry, but will be very useful to all foresters, who intend to work in the tropics or who are already working there.
In this book twelve people give a personal account of their experiences while working on rural development projects in Africa, especially their experiences at the beginning of their assignments. Major themes running through their accounts are drawn together in a review of their essays by the editor, Dr Wout van den Bor, senior lecturer in the Department of Education and Teacher Training of the Agricultural University at Wageningen.
Although the Art of Beginning has something to say to anyone involved or interested in development co-operation, it addresses in particular those readers who are considering rural development work for the first time. For them there

is one clear, simple message: inform yourself as best you can before embarking on an assignment abroad. The eleven essays illustrate the sort of problems that development workers may have to cope with. An annotated bibliography of books recommended for further reading is added.
The price of this book is Dfl. 31.20 and is available through normal book stores.

Research

THE NITROGEN-FIXING TREE ASSOCIATION

Based in Hawaii but working internationally, this association encourages research, development, communication and utilization with regard to nitrogen-fixing trees. The aim is to help provide improved fuel, fertilizers, forage, food, fibre, forests and other products for the benefit of mankind. It is a publicly supported, non-profit organization whose activities include: the publication of research reports ("Nitrogen-Fixing Tree Research Reports") and other communications ("NFT Highlights"); the encouragement and conduct of scientific research (International NFT trials); sponsorship of workshops and seminars (e.g. the Rockefeller-supported NFTA Germplasm Workshop recently help at Bellagio, Italy, from 20 to 24 September); provision of technical assistance through its wide network of scientific members; the assembly, increase and dissemination of germplasm, the support and establishment of arboreta. The main role of the NFTA is to promote the use of NFTs by the small farmer in the tropics. The promulgation of Leucaena as a promising species in many parts of the world is an established example of a most valuable NFTA activity. The NFTA has, apart from executive officers of the association, a small international board, invited international associates and a worldwide membership.

- Meetings

INTERCIENCIA SYMPOSIUM ON AMAZONIA: Prospects for Development with Preservation

13 July 1983 Belem, Para, Brazil; Eng: Dr. J.W. Rou executive Director, Interciencia Assocation, c/o AAAS, 1776 Massachusetts are NW, Washington, DC 20036 U.S.A.

TROPICAL MOIST FOREST - Resources, Management and Conservation Training Course, Oxford Oct 17 - Nov 26, 1983.

The Unit of Tropical Silviculture at the Commonwealth Forestry Institute in Oxford is holding a six-week training course which will concentrate on selection, creation and management of conservation areas in Trop. Moist Forests. Further detail from Mr. P.D. Hardcastle, at the above address.

SYMPOSIUM ON EFFECTS OF FOREST MANAGEMENT ON EROSION AND SLOPE STABILITY. IUFRO, New Zealand Forest Service, East-West Center, U.S.Forest Service. 7-11 May 1984 Honolulu, Hawaii/Contact: IUFRO Symposium, C/o Redwood Science Laboratory. 1700 Bayview Drive, Arcata, California 95521 - USA -

- Encountered vacancy announcements

In the circular letter of the FAO to field staff and forw. friends related with watershed management and land use planning we came across the following vacancies:
"Reboisement et protection du bassin versant de Kokoulo". Project Manager. Duration: 42 months from 1.4.83. Duty station: Pita, Guinea. (GUI/80/001).
Développement et aménagement des zones de montage". Senior Technical advisor/Silvi-pasture management and rural development expert. Soonest. Ending 30.4.86. Ecology/Soils/Land Use Expert. Soonest. Duration: 28 months. Duty station: Azilal, Morocco. (MOR/81/004).

"Apoyo a la Ejecución de los Programas Forestales Prioritarios". Watershed management expert. Soonest. Duration 3 years. Duty station: San José, Costa Rica. (COS/79/001).
"TCDC Network on Watershed Management for Asia and the Pacific. Most likely 1.10.83. Duration 2 years. Duty station: Bangkok, Thailand. (RAS/81/053).
"Watershed Management and Conservation Education". Conservation Extension Expert. Starting 18.4.83, for two years. Duty station: Kathmandu, Nepal. (NEP/81/029).
Possible new posts in watershed management: Laos from November 1983; Madagascar from January 1984; Dominican Republic from January 1984; Thailand from January 1984. Applications should be made to the Food and Agriculture Organization of the United Nations (FAO), Via delle Terme di Caracalla, 00100-Rome, Italy.

The Department of World Service of the Iutheran World Federation asks a Forestry Expert to be attached to the reafforestation/sand dune stabilisation project in Nouakchott, Mauritania. The expert shall organize and implement a research programme with sylvicultural and rural engineering aspects and organize on the job training for local personnel as well as training in neighbouring countries. For further information please contact with "Dienst over Grenzen" (Service Abroad), P.O. Box 177, 3700 AD Zeist-Holland.
CARE (Cooperative of American Remittances for Everywhere) is looking for 4 foresters for the Refugee Reforestation Project in Kassala province, Sudan,and for the Hiran Refugee Reforestation Project in Somalia. The salary is the standart CARE starting salary of $12,ooo per year plus CARE provides the house and utilities, car and fuel and a cost of living adjustment. The locations are "en brousse".
Further information is available at the BOS secretariat.

TROPICAL FORESTRY ACQUISITIONS IN SOME DUTCH FORESTRY LIBRARIES

Contact between the Forestry Libraries in the Netherlands and the BOS secretariat is becoming more regular. By publishing the titles of the acquisitions on tropical forestry they are accessible to you. Please, contact directly the appropriate library.

FIBOS-LIBRARY of the Forestry Department of the Agricultural State University of Wageningen, P.O. Box 342, 6700 AH Wageningen.

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An up-to-date register of all foresters and their specializations is very important for the effective functioning of the BOS secretariat.
If you agree to be on the BOS list and in case of change of address and/or change of employment, please return this form as soon as possible to the BOS secretariat.

- name :

- address :

- function:

- employer:

- date of birth:

- year of graduation:

- school or university:

- number of years experience in the Tropics:

- countries in which your experience was gained:

- when available for next project or contract:
  (month + year)

Please give details below of your relevant experience.

Contributions to the BOS newsletter

The BOS secretariat invites you to send information on tropical forestry for inclusion in the BOS newsletter. Announcements of meetings and symposia, book reviews, comments on articles in the newsletter, and short articles describing your activities within your project or organization are most welcome. Copy can be typed or clearly handwritten in English, but Dutch is also acceptable.
In addition please notify us of any change address.

Subscriptions to the BOS foundation

Regretfully the BOS budget does not allow us to issue the newsletter free of charge. Thus we will be unable to send future issues of the newsletter to those who have not paid the minimal subscription fee of f 35,- (for students f 25,-). Moreover we would appeal for your consideration of an additional subscription in support of BOS activities. The newsletter will be provided free of charge to those organizations with which we have reciprocal arrangements.

Subscriptions may be made by cheque or money order to Stichting BOS, P.O. Box 23, 6700 AA Wageningen, The Netherlands on postgiro number 4296433 or ABN Bank account number 53.90.24.414. If you do not have a postal or bank account in The Netherlands would you kindly include an additional f 7,- for bank charges please. If you should use the Dutch money order enclosed with the current issue, ensure that your name and address are printed in block letters.

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