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## Agroforestry, a solution towards development FOR THE RURAL POPULATION OF THE SOUTHERN HEMISPHERE

For some ten years now, Pro-Natura has been developing agroforestry with the rural populations of Latin America and Africa; an undertaking officially recognised by the FAO in 1998. Agroforestry enables assurance of a secure food supply and often constitutes the only alternative between deforestation and conservation. Unfortunately these agricultural techniques are rarely utilised and little by little become forgotten. Pro-Natura's objective is to provide the link between traditional practices and scientific research in matters of agroforestry so that these techniques can be put into practice on the ground thereby benefiting the rural populations of the Southern Hemisphere.

Agroforestry, which consists of putting into practice both planting and culture in forested areas, is a custom long since practised by many different peoples throughout the world. However, victim of the modernisation of the techniques of production, this agricultural know-how has been rejected because it is often thought of as backward or nonscientific. Replaced by innovations coming from outside, the old traditional practices have gradually become forgotten. Moreover, political hazards, demographic pressures and movements of population have all contributed to this loss of traditional knowledge. For many years agronomic research was



nomic research was not interested in these traditions. However, over the last fifteen years, some of the major world organisations have been studying agroforestry, but The oil palm allows an increase in revenue because all its properties can be turned to profit. their research has been essentially restricted to scientific approaches. Agroforestry is often the only solution to the development of rural areas in the southern

hemisphere because it allows an increase in returns without exhausting the soil and it helps to maintain the land and to protect the forest.

The plantation of wooded areas on parcels of land and the preservation of tree cover allow, amongst other things, the limitation of desertification and the sequestration of carbon within the trees, thereby helping in the fight against climate changes.

It is for all these reasons that Pro-Natura has developed in Africa and Latin America forms of agroforestry intended for small-scale farmers. The way these are effected varies according to the particular circumstances in each case. The programme draws upon the knowledge of the local 'agroforesters' when available and the advances made by international research, as well as doing much in practical terms.



Demographic pressures force the farmers to limit the rotation periods in order to increase production; this in turn leads to soil exhaustion and eventually to soil erosion. When the earth can no longer be cultivated, the forest is burned in order to gain new areas for cultivation.

### INNOVATION TOWARDS SUSTAINABLE DEVELOPMENT

## Experiments with agroforestry techniques in pilot projects in Brazil



 Scientific Director Brazil : Peter May
Project Director : Tony Horta Barbosa.

Pro-Natura's two principal projects in Brazil are taking place in zones where no agroforestry tradition exists.

#### In the Amazon basin

In Mato Grosso, the area of Juruena where Pro-Natura has been operating since 1990 is an area of migration having only a very recent agricultural history. The migrants who come from other areas of Brazil have neither experience of the fragile tropical soils nor



of agriculture generally. In order to encourage them to adopt practices which were entirely novel to them, it quickly became apparent that the best way of doing so was to put Pro-Natura in their situation: buy a parcel of 100 hectares identical to that which had been allocated to them by the government and there to experiment with various agroforestry techniques.

In the Desengano region, the culture of orchids has been developed to limit the digging-up from the forest of wild orchids and to augment the income of the farmers. Working in the heart of the community and with practical demonstrations of the increases in productivity and in soil fertility has enabled the creation of a dynamic agroforestry concern which has now grown considerably. Six other demonstration and experimental centres are currently in course of construction. They are being set up in a project for the protection of the forest covering an area of 10 million hectares financed by the Global Environment Facility.

#### In the Atlantic Forest

The experience acquired in the Amazon basin has, since 1995, opened the way for the creation of demonstration centres for agroforestry techniques around the Desengano National Park to the north of Rio de Janeiro, for the protection of what remains of the Atlantic forest. The rural populations with which Pro-Natura is working in this region practise almost exclusively cattle-raising and, as with our other project in the Amazon, have practically no agricultural tradition.

# Teaching in the agricultural colleges of Nigeria and Ghana



- Director for Africa : Olivier Pascal
  - Agroforestry Co-ordinator : Wilfrid Pineau.

In the south west of Nigeria, there already exists an agroforestry tradition. Thanks to the Anglo-Nigerian Leventis foundation, Pro-Natura has created agroforestry courses which are integrated with teaching programmes in the agriculture schools of the Foundation. After having conducted study groups in agroforestry over three years in an initial school at Ilesha in south-western Nigeria, Pro-Natura has developed its own programme by establishing courses in the five Leventis Foundation schools (four in Nigeria and one in Ghana). These courses are co-financed by the French Foreign Ministry.



The nursery for local species is an essential element of an agroforestry programme since it provides the primary materials for the plantations.

They are programmed for students of 20 to 30 years old who are destined to return to their

parents' agricultural undertakings. The courses in these five schools are both theoretical and practical at the same time.

Learning by experience is at the heart of the formation process because it allows for the improvement of techniques.

The pupils are also taken to meet farmers who practice agroforestry as well as to meet former students now installed in their own businesses. Whenever it is possible, visits are organised for the students

in national agroforestry research centres.

The students learn the simple techniques of vegetation production and propagation such as via the taking of cuttings.

Practical work in the llesha nursery.

## A working experiment

The groups are organised following an in depth study of agroforestry practicalities already present in the region and after having listed the vegetal species which could be utilised for human and animal alimentation as well as in the pharmacopœia.



## Mobile practical workshops on the lvory Coast



The Taï National Park is one of the last tropical forest areas left intact in the lvory Coast. The people who live on the periphery have held on to some part of their traditional savoir-faire in matters of agroforestry but the forces of demographic explosion exert a constant pressure on the natural resources of this protected zone.

A mobile agroforestry training scheme from village to village started early 2002 in collaboration with the local NGO "Vie et Forêt". The project team has already trained 170 farmers in 9 villages around the Park. The villagers have chosen themselves leaders who participate actively in the training programme. Collective nurseries have been set up with 11,000 seedlings that will be planted during 2003 on the demonstration plots. This action will significantly reduce the pressure on the Park and will help Biodiversity

conservation. The project is co-financed by the French Foreign Ministry and by the local Professional Training Fund.



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#### WASHINGTON

> John van D. Lewis, former Director of Agriculture at USAID (US Aid Agency) and specialist on Africa, has just been nominated as Executive Director of Pro-Natura US, based in Washington.

#### **BIOMASS CHARCOAL**

> Pro-Natura won the 2002 prize of the ALTRAN Foundation for innovative technology for its project in developing the biomass charcoal machine. The theme of the 2002 competition was "innovation technology for developing countries".



FAIR TRADE

> The Brazilian Government (Ministry for Agrarian Reform) has charged Pro-Natura with promoting in Europe the various products cultivated by small-holders who have been beneficiaries of the agrarian reform programme. The Alter Eco Company, which works particularly closely with Monoprix, has just placed an order for canned palm tree hearts.

# On the ground promotion of practical knowledge in agroforestry

For 10 years now, Pro-Natura has been trying to bring together traditional knowledge, scientific research and experimentation and to exchange experience in order to allow the farmers in the South to produce more and to give them access to better living standards while at the same time protecting the environment.

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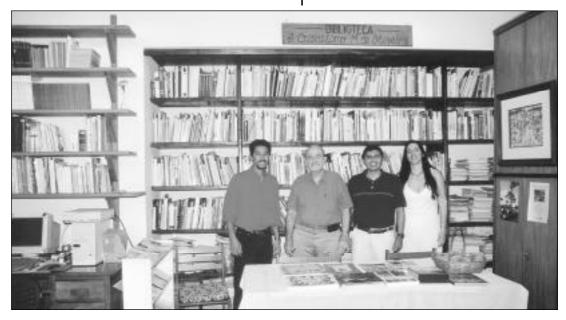
#### NIGERIA

> We are launching "The Institute for sustainable development of the Niger Delta" under the direction of Bill Knight, director of Pro-Natura for the Niger Delta. The purpose of this Institute, which started with a pilot scheme in 2002 with the financial aid of French Ministry of Foreign Affairs, is the training of potential directors of participatory development projects, local and regional officials and managers of the oil companies with whom they can work together on the ground.

To increase its expertise, in 2002 Pro-Natura allied itself to the Brazilian agroforestry network REBRAF. This NGO founded in 1990 at Rio de Janeiro by Jean Dubois, a Belgian agronomist who is heading the organisation, has made a unique compilation of agroforestry practices studied for 30 years on the ground in Brazil. REBRAF also has a reference library of more than 1,500 works and also offers technical assistance in the field.

The partnership of Pro-Natura and REBRAF has as its objective the exchange of this immense traditional Brazilian knowledge with the traditional know-how in the other countries of the Southern Hemisphere so that agroforestry can develop wherever it is required.

Jean Dubois and his team in the REBRAF library.



### > Pro-Natura as an organisation



Created in Brazil in 1986, Pro-Natura is a non-governmental organisation that specialises in sustainable development. In 1992, after the Rio Conference, Pro-Natura became one of the first NGOs in the Southern Hemisphere to gain international status. Today it is a global organisation that is composed of two major hubs: Instituto Pro-Natura in Brazil, which is responsible for the Americas and Pro-Natura International in France, responsible for Europe, Africa and Asia. A strategic co-ordination Council manages the organisation.

www.pronatura.org

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