



JANUS Newsletter

Creating Opportunities for the Future



Part of OAS Agro-forestry Research Project; July 2003

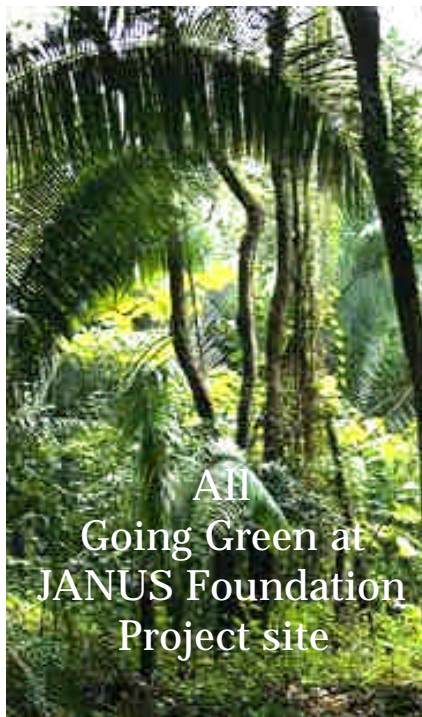
Volume 1

Dear Readers:

Welcome to the first issue of the JANUS Newsletter. It will be published twice a year and will serve to inform you of our ongoing programs and project activities as well as recent achievements. Among our ongoing project activities is an exposition for the development of sustainable land use systems on degraded pastures in Belize as a model for Mesoamerica and the Caribbean. We will make good use of this opportunity to share information, events, determinations and happenings for the last few months and on up-coming project activities. In the future, we plan to include other items of interest to those of us in the field of tropical forest studies and environmental conservation, and also invite you to contribute information as well.

Preserving Nature and the Environment

The increasing demand of mankind to meet its live-hood has lead to a massive destruction of the tropical forest and to the loss of the



biodiversity in tropical forest. This development is mainly caused by livestock production and agriculture use of areas formerly covered by tropical forest. In many of these areas agriculture is connected with "slash and burn", irrespective to the massive wash-out of nutrients and subsequent reduction of soil fertility that limits crop production to one or few vegetation periods and causes the forest to rapidly

degrade. The ongoing destruction of forest also has serious large scale consequences such as soil erosion and changes in the water



Tree nursery at JANUS project site

cycle, and its affect on global climate. In Mesoamerica and the Caribbean there is a significant need for sustainable land-use systems, especially for the revitalization of existing degraded tropical forest. At present knowledge about these interactions is limited, but is urgently required to develop long-term sustainable re-forestation strategies and programs to rehabilitate degraded forest and to develop alternatives concepts to slash and burn. These strategies and programs also have to be economically attractive, because they have to satisfy the needs of the local population by ensuring the supply of food and other resources.

Present Project Activity at JANUS Foundation

A new project primarily based on Agro-forestry system is one of the ongoing projects at the site. This project is based on the



Preparing the land for OAS agro-forestry project



Physic nut trees ready for the agro-forestry project

Development of sustainable land use systems on degraded pastures in Belize as a model for Mesoamerica and the Caribbean. The central objective of the said project is to develop sustainable agro-forestry systems suitable to improve living conditions of small farmers and to contribute to the conservation of tropical natural landscapes and resources in Central America. The project will make use the infrastructure of the JANUS project site to demonstrate the revitalization of degraded pastures and other cleared forest areas for the sustainable use. The other objective of this project is to develop

cultivation and provision of plant material from our local nursery, and to conduct planting as required. Furthermore a network of local farmers, rural villagers and non-governmental organizations will be set up. Instruction material will be developed for education purposes and future activities. Additionally, economic evaluation of the planted agro-forestry system will be provided by the combined analysis of agricultural yield and the determination of growth parameters of the trees. Based on the expected results a model for sustainable



Evaluating the area for agro-forestry project



Inspecting the area for agro-forestry project

new sustainable land use systems suitable to revitalize degraded pastures. The planned activities are based on first scientific results of an ongoing joint research project of the JANUS Foundation Belize together with German experts, U.B and other agencies. JANUS will provide its Education Center and the infrastructure at the JANUS project site for the planned project activities which includes the establishment of demonstration plots,

reforestation of degraded pastures will be developed, as a positive impact for Belize and Mesoamerica focusing on development of agro-forestry plots to demonstrate the revitalization of degraded pastures, training of local farmers, course material and training for UB students, documentation of research results in demonstration plots as a base for long term success of agro-forestry areas and increase environmental awareness through the information network.

Description of OAS Agro-forestry Research Project

Title

Development of sustainable land-use systems on degraded tropical pastures in Belize, Central America, as a model for Mesoamerica and the Caribbean

Executing institution

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Participating counterparts

University of Belize, Belize, Central America
Scientific Experts from Germany in the area of Tropical Forestry and Research

Objectives

The central objective of the project is to develop sustainable agro forestry systems suitable to improve living conditions of small farmers and to contribute to the conservation of tropical natural landscapes and resources in Central America. The project will make use of the infrastructure of the JANUS project site to demonstrate the revitalization of degraded pastures and other cleared forest areas for the sustainable use

Brief description of activities

The project aims to develop new sustainable land use systems suitable to revitalize degraded pastures. The planned activities are based on first scientific results of an ongoing joint research project of the JANUS Foundation Belize together with German experts U.B. and other agencies. The JANUS Foundation will provide the education center and the infrastructure at the JANUS project site for the planned project, establish demonstration plots, cultivate and provide plant material in the local nursery for this purpose, conduct

planting as required and will continuously care for the planted systems. Furthermore a network of local farmers, rural villagers and non-governmental organizations will be set up. Instruction material will be developed for educational purposes and future activities. Additionally, economic evaluation of the planted agro forestry systems will be provided by the combined analysis of agricultural yield and the determination of growth parameters of the trees.

Outputs

Based on the expected results a model for sustainable reforestation of degraded pastures will be developed, as a positive impact for Belize and Mesoamerica focusing on:

- Development of agro-forestry plots to demonstrate the revitalization of degraded pastures; also as a possibility to increase the income for local farmer
- Training, outreach and regular information system for local farmer
- Development of info and course material for UB students
- Training of UB students in the area of photosynthesis, water status and nitrogen nutrition of species
- Documentation of research results in the area of performance of photosynthesis, water status and nitrogen nutrition of species planted in the demonstration plots as a base for long term success of agro-forestry areas
- Increased environmental awareness through the extended information net work and meetings with government & non-governmental organizations in Belize

JANUS Foundation: A Synopsis of our History

In 1995 the JANUS Foundation started a model project with a portfolio of initiatives in Belize, Central America. The main focus of the Foundation was the creation of a protected private



Canteen and Restaurant at JANUS

area for the development of sustainable land use systems. In partnership with local farmers, NGO's, international scientific and business partners, several environmental projects and educational measures have been carried out. The JANUS Reserve is located at the foot of the Mountain Pine Ridge, as part of the Northern Foothill Ecosystem of the Maya Mountains in the Cayo District. In conjunction with the neighbouring forest landscapes the JANUS Reserve is part of a substantial territory which is still an intact ecosystem. Beyond this, the importance of the JANUS Foundation lies in the combination of activities for the protection of natural landscapes with practical propagation of knowledge on alternative methods of agriculture for local farmers and rural villagers.

The infrastructure of the JANUS Reserve provides the base for the analysis of functional biodiversity and for several activities to develop



Mechanical workshop building

ecological sustainable alternatives to slash and burn cultivation, e.g. the vegetable

garden, demonstrating organic cultivation methods, such as compost production, crop rotation and soil enrichment. An educational herbal trail has been constructed for school groups and interested visitors, to keep the heritage of Belizean rainforest, medicinal plants and their uses. The nursery continually produces tree material for the biodiversity reforestation program. Presently the Foundation has developed a status of its education and research centre, with an outreach and practical training program for local farmers in the field of sustainable agriculture. This centre provides national and international scientists excellent conditions for tropical research. The first research results will contribute to the development of sustainable land use concepts for forest and agricultural use as a model for the Mesoamerican region.

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