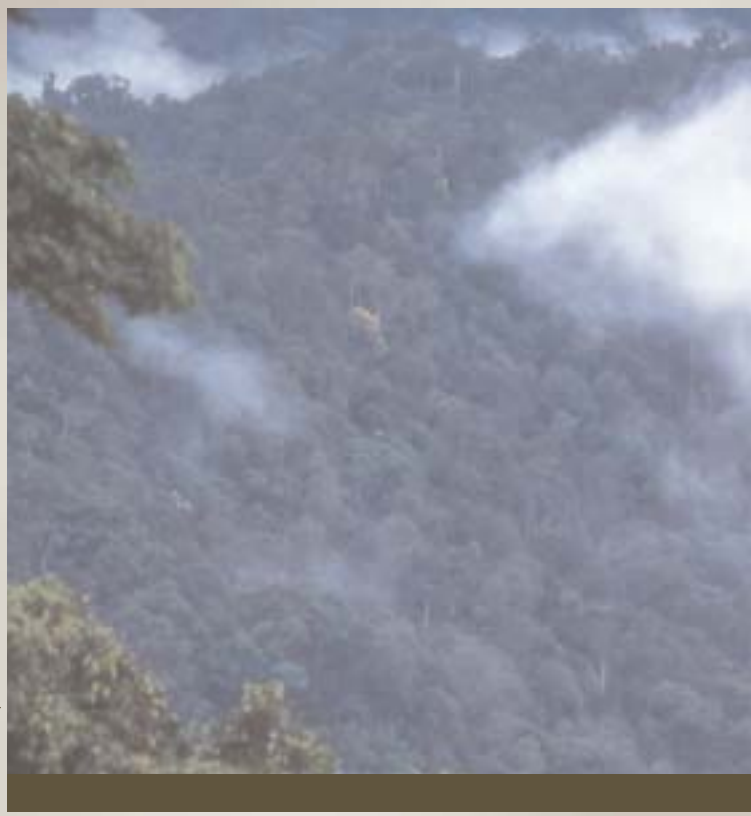
Michael K. Nichols

Not by thoughts alone

The International Tropical Timber Organization (ITTO), the Wildlife Conservation Society and the Government of Congo are working together to protect the forest home of gorillas like this.

Good intentions, put into action.

Not by thoughts alone



Alain Compost

THE partnership, which has been formed within the framework of an ITTO project, will protect the immensely important Nouabalé-Ndoki National Park in northern Congo. This park covers an area of 390,000 hectares and is rich in wildlife, including such animals as western lowland gorillas, chimpanzees and forest elephants. The project is managing nearly 1.3 million hectares of forest adjacent to the park – the buffer zone – with the aims of conserving biodiversity and assisting the communities living there to improve their wellbeing. These two aims are interlinked, because conservation works best when local people benefit from it. And by improving management in the buffer zone, the national park itself will be better protected.

One of many

THE Nouabalé-Ndoki buffer-zone project is one of many biodiversity conservation projects financed by ITTO throughout the tropics. ITTO is an intergovernmental body comprising 56 member countries and the European Community (as of April 2002). It is funding more than a hundred projects in Africa, Asia-Pacific, Latin America and the Caribbean and develops international forest policy with the aim of encouraging sustainable development and the conservation of tropical forests.

Walter H. Wust

WHAT IS BIODIVERSITY?

BIOLOGICAL diversity, or biodiversity, is the variety of genetic material, species and ecosystems found in nature.

Some species, like gorillas, have won our hearts and minds simply for their grace and beauty. Countless less-charismatic species – many too tiny to see – provide services that ensure the Earth remains habitable into the future. Collectively, biodiversity stabilises our atmosphere and climate, protects water catchments and renews the soil. It also helps to keep ecosystems 'adaptable', should environmental conditions change abruptly.

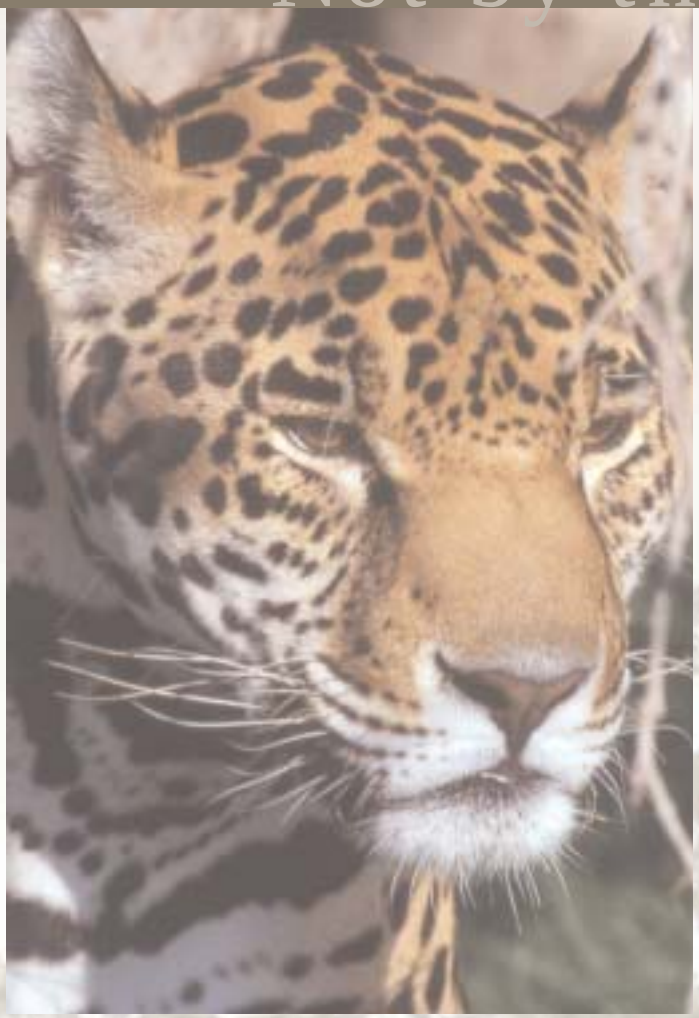
The diversity of nature is the foundation of the world's material wealth. From biodiversity we develop food crops and derive the raw inputs and genetic materials for industry, agriculture and medicine. These benefits are worth many billions of dollars each year, and people spend further billions to appreciate nature and its diversity through tourism and recreation.

Walter H. Wust

The partnership, which has been formed within the framework of an ITTO project, will protect the immensely important Nouabalé-Ndoki National Park in northern Congo.

Background: Rod Mast

Not by thoughts alone



Walter H. Wust

ITTO and biodiversity

THOUGH they cover only five per cent of the globe, tropical forests harbour more than half the world's terrestrial plant and animal species. This biodiversity performs many useful functions, including helping to maintain forest health and productivity. In the early 1990s ITTO worked with the World Conservation Union to develop the *ITTO Guidelines for the Conservation of Biological Diversity in Tropical Production Forests*. These set out the reasons for making biodiversity conservation a goal of national forest policy and show how to establish a permanent forest estate integrating conservation areas with natural and planted production forests.

The guidelines provide advice on planning at the landscape level, such as linking reserves with corridors of natural forest to allow wildlife to move between reserves. At the field level, they present principles and actions to maximize biodiversity conservation during management activities.

The need for totally protected areas

ITTO is working with its many partners on a wide range of in-the-forest activities across the tropics to implement these guidelines. It has a sizeable portfolio of projects designed to promote sustainable management in production forests and through this the conservation of biodiversity (see *Better forestry means more conservation*).

But the Organization recognizes that in addition to well-managed production forests, a network of totally protected areas – land dedicated exclusively to conservation – is also needed. The ITTO biodiversity guidelines stress that the contribution of production forests to biodiversity conservation can only be fully realized within an integrated national land use strategy that includes such a network.

Tropical forests harbour more than half the world's terrestrial plant and animal species

Alain Compost

Accordingly, the Organization is funding a growing suite of projects aimed at creating and maintaining totally protected areas (see table next page). Making use of its ability to bring countries together on a regular basis, ITTO has established a substantial program of 'transboundary' reserves straddling the borders of two or more tropical countries. As well as conserving wildlife, transboundary conservation projects seek to improve the livelihoods of forest communities, promote cooperation between neighbouring countries, and control illegal logging and wildlife smuggling.

The first of the reserves to be financed by ITTO was the Lanjak-Entimau/Betung Kerihun Trans-boundary Conservation Reserve on the island of Borneo (see *Borneo's jewel*), an undertaking that began in 1994 and continues today. To the northeast, ITTO is funding another project in collaboration with the World Wide Fund for Nature (Indonesia) for the management of the Kayan Mentarang National Park.

Background: Haroldo Castro

Not by thoughts alone

Initiative	Partners	Funding countries	Area of influence*
Condor Range (Peru and Ecuador)	Ecuador Ministry for Tourism and the Environment; NATURA Foundation; Peruvian National Institute for Natural Resources (INRENA); Conservation International; local organizations	Japan, Switzerland, USA, Korea	2.42 million ha
Tambopata-Madidi (Peru and Bolivia)	INRENA; Bolivian National Service for Protected Areas (SERNAP); Conservation International; local organizations	Japan, USA	2.85 million ha
Phatam Protected Forests Complex (Thailand)	Thai Royal Forest Department	Japan, Switzerland, USA, France	130,000 ha
Buffer zone of Kaeng Krachan National Park	Thai Royal Forest Department	Japan, Netherlands	348,000 ha
Lanjak-Entimau/Betung Kerihun Transboundary Conservation Reserve (Malaysia and Indonesia)	The Sarawak Forest Department; Park Management Unit of the Betung Kerihun National Park; World Wide Fund for Nature (WWF) (Indonesia)	Japan, Switzerland	980,000 ha
Kayan Mentarang National Park (Indonesia)	Directorate General of Forest Protection and Nature Conservation; WWF (Indonesia)	Switzerland, Japan, USA	1.4 million ha
Buffer zone of the Nouabalé-Ndoki National Park (Congo)	Wildlife Conservation Society; Government of Congo		1.69 million ha (national park + buffer zone)
Mengamé Gorilla Sanctuary (Cameroon)	Directorate of Fauna and Protected Areas, Cameroon Ministry of Environment and Forestry	Switzerland, Japan, USA	137,000 ha
Cahuinarí National Park (Colombia)	Colombian National Institute for Renewable Natural Resources and the Environment; Puerto Rastrojo Foundation; Bora-Miraña Indigenous Peoples	Austria, USA, Denmark, Norway	600,000 ha
Iwokrama Forest (Guyana)	Iwokrama International Centre for Rain Forest Conservation and Development; Indigenous communities	Japan, Switzerland, USA, Korea	371,000 ha
Total			**10.9 million ha**

** Area of influence includes, in some cases, buffer-zone management areas.*

In South America, ITTO projects are being implemented to establish a 2.9 million-hectare reserve in the Tambopata-Madidi region on the border between Peru and Bolivia, and a 2.4 million-hectare reserve in the Condor Mountain Range on the border between Peru and Ecuador. In both instances, the non-governmental organization Conservation International is implementing the ITTO-financed activities in collaboration with governments and local stakeholders.

Good intentions, put into action

Walter H. Wust

In Africa, an ITTO project led to the demarcation of a 500,000-hectare wildlife reserve in the Minkebe Forest in Gabon and also supported a pilot sustainable management program in about 80,000 hectares of the reserve's buffer zone. Another ITTO transboundary initiative launched recently is establishing a wildlife sanctuary on the border between Cameroon and Gabon in an area that is particularly rich in elephants, lowland gorillas and at least eight other primate species, as well as a vast array of lesser-known but equally important plants, animals and fungi.

Alain Compost

Ted Parker

ITTO ... funding more than a hundred projects in Africa, Asia-Pacific, Latin America and the Caribbean

Background: Russ Mittermeier

BORNEO'S JEWEL

Alain Compost

DEEP in the tropical rainforests of Borneo, it is taboo to fell a tapang tree, a favoured nesting site of honeybees. Neighbouring trees yield nourishing fruits, the makings of traditional shelters, tools and medicines, even poisons for hunting. Many are cushioned in mosses – lush reservoirs of moisture, microscopic life, snails, worms, ants, spiders and rare orchids.

Sarawak Forestry Department

Botanists encountered this diversity of life during the 1997 ITTO Borneo Biodiversity Expedition, a pioneering journey through the million-hectare conservation reserve that spans the Lanjak-Entimau Wildlife Sanctuary in Sarawak, Malaysia, and the Betung Kerihun National Park in the Indonesian province of West Kalimantan.

The establishment of this transboundary conservation reserve with ITTO assistance in 1994 secured one of the world's richest areas of rainforest; it provides a sanctuary, for example, for about 3,000 orangutan, perhaps one-tenth of the world's remaining wild population of this seriously endangered species.

Sarawak Forestry Department

Buffer zone management

The local Iban people living in the buffer zone adjacent to the park need new sources of income to replace those lost through restrictions on their access to the reserve. The ITTO project is developing several such sources, including fish-ponds – for growing native species of fish in high demand in city markets – and agroforestry activities to produce local fruits for commercial sale.

Local support for the reserve has increased dramatically in recent years due to such initiatives. There is increasing awareness among local people, too, that the nearby reserve is helping to keep the buffer zone well stocked with wild animals that can provide additional food.

Sarawak Forestry Department

Buffer zones

ONE way of reducing the damaging effects of human activities on totally protected areas is to practice biodiversity conservation in a buffer zone around the reserve. For example, ITTO's Nouabalé-Ndoki project is using a landscape-scale ecosystem management approach that balances biodiversity conservation with timber production and other income-generating activities.

The key to success in this project – and in most tropical forest management endeavours – is engaging the local communities. In the buffer zone outside the park, the project partners are working with the local people to prevent the commercial trade in bushmeat – which poses a serious threat to several species, including the lowland gorilla and forest elephant – and to establish community-managed hunting zones that help ensure a sustainable supply of meat to fulfil local needs. Several communities in the area are already seeing the benefits of this management system and have adopted it enthusiastically.

The project is also employing 'forest guards' recruited from local villages to control wildlife poaching; employment opportunities such as this provide local communities with an additional incentive for wildlife conservation. The logging company working in the area –a partner in the ITTO project – is committed to minimizing the damage caused by the logging process and is training its workforce in reduced impact logging, with ITTO assistance.

Alain Compost

Another ITTO project is establishing a working model for effective buffer zone management at Kaeng Krachan National Park in Thailand's Petchburi Province. This project is working with the local community to find ways of increasing income for villagers without compromising the integrity of the park, and to raise awareness of the benefits of conservation. In the 'sustainable use' zone adjacent to a newly created 187,000-hectare totally protected area in Guyana's Iwokrama Forest, the local indigenous communities are developing and implementing a sustainable management strategy with ITTO-funded assistance.

Background: Haroldo Castro

BETTER FORESTRY MEANS MORE CONSERVATION

IN the absence of biodiversity payments, few countries can afford to dedicate all their natural forests to biodiversity conservation. Harvesting for timber and other products bestows value on the forests and is far better for conservation than clearing – if it is done properly. Indeed, with proper planning and appropriate practice, logging need not greatly disrupt forest processes or cause substantial permanent losses of biodiversity.

Tropical Forest Foundation

A practice known as reduced impact logging (RIL) can significantly reduce the environmental damage and social disruption caused by logging. It includes: a detailed survey of the forest before logging; planning the network of roads, stream crossings and trails needed to extract the logs in a way that minimizes soil disturbance and protects waterways; building such roads, crossings and trails to adequate standards; cutting vines and climbers that bind trees together and cause damage to non-harvest trees during felling; felling the harvest-trees in the direction in which they cause least damage to other trees on the way down and are most easily extracted; winching the logs so that the harvesting machine can remain on the designated trail at all times; and, after logging, evaluating the degree to which the logging guidelines have been applied.

ITTO has embarked on an ambitious program to train forestry workers in RIL techniques through the establishment of a series of permanent RIL training schools in the tropics. For example, a recently financed ITTO project will create such a RIL training facility in Guyana, along with a model forest in which RIL practices will be demonstrated. RIL training is also being conducted in Cambodia with ITTO assistance, and regional-scale facilities are being planned in Indonesia, Cameroon and Brazil. An earlier ITTO project in Brazil trained several hundred forest workers in RIL techniques.

ITTO is also working with individual companies to implement the *ITTO Criteria and Indicators for Sustainable Management of Natural Tropical Forests* in the forest, which will not only improve harvesting practice but also provide the basis for monitoring trends over time.

Russ Mittermeier

Paying for biodiversity

TROPICAL deforestation and poverty often go hand-in-hand. The poor and landless in the tropics clear the forest for agriculture because they have few alternatives for feeding their families. Similarly, many tropical countries encourage the conversion of tropical forests to industrial crops as a way of promoting development, reducing poverty and creating export revenues.

These phenomena are not new. Indeed, in many countries that are now prosperous – and where people are expressing their dismay at tropical deforestation – forests were cleared on a large scale to make way for development.

It is increasingly clear that concern for biodiversity is not enough: a much greater commitment of financial resources is needed

Tropical countries don't want to repeat the mistakes of other countries, but they also have a right to develop. In recent years, the idea that the global community could make 'biodiversity payments' for tropical forests has been raised. Such payments would simultaneously assist development, reduce poverty and provide a strong incentive for conservation.

ITTO is making biodiversity payments through its project program, as are other national and international bodies (see *Innovative payment systems*), but these efforts are small given the scale of natural tropical forest loss and degradation. It is increasingly clear that *concern* for biodiversity is not enough: a much greater commitment of financial resources is needed if the tropical forests, and their biodiversity, are to be conserved for the benefit of future generations.

Background: Russ Mittermeier

INNOVATIVE PAYMENT SYSTEMS

TROPICAL countries know they will have to bear most of the cost of conservation, but supplementary payments for the global benefits of biodiversity are needed and are starting to be made, albeit on a small scale. ITTO's forest conservation projects are examples of the form such payments can take, as are grants being made through the Global Environment Facility. One of ITTO's partners, Conservation International, is experimenting with 'conservation concessions', through which it leases forest from governments at the market rate for a timber concession but manages it for conservation.

A tax-free zone in the Brazilian state of Amazonas, which contains about 150 million hectares of tropical rainforest, has acted as a kind of biodiversity payment for several decades. Since the 1960s the Brazilian government has granted Amazonas tax-free status to encourage development, at a cost to Brazilian taxpayers of about US$3 billion a year. As a result, development in the state has concentrated in the capital, Manaus, which is now home to more than 400 industries. These industries, most of which import and assemble parts into manufactured goods, are the main employer of the state's 2 million people. The state government has not encouraged forest harvesting, rural settlement, agriculture or pastoralism because the economy has been able to develop without them. As a result, the forests – and their biodiversity – have remained in virtually pristine condition.

Discussion about biodiversity payments is growing, but more information is needed on the potential sources of funds and the mechanisms for applying them.

Rod Mast

Walter H. Wust

Sarawak Forestry Department

Good intentions, put into action

Alain Compost

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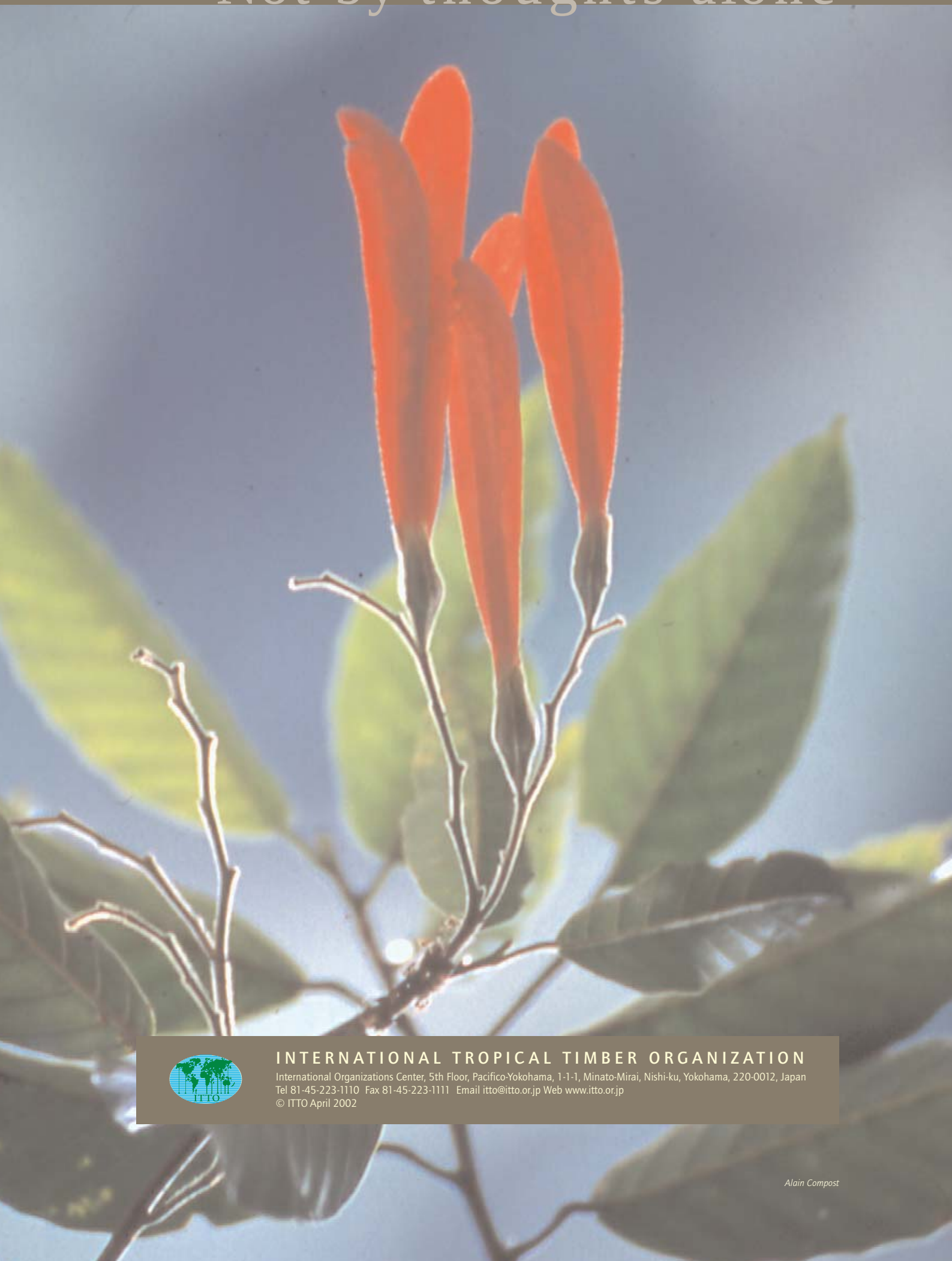

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