

TFD Review



Forest and Biodiversity Conservation

A summary of a multi-stakeholder dialogue exploring opportunities for collaboration among environmental groups and the forest industry

9-11 October 2003
Santa Cruz de Cabralia, Brazil

The Forests Dialogue

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TFD Review

The purpose of the *TFD Review* is to inform stakeholders about the dialogues and activities sponsored by TFD. For more information on topics covered in the issue visit our website at www.theforestsdialogue.org

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Executive Summary



Red-browed Parrot

From October 9 to October 11, 2003, thirty participants met in Santa Cruz de Cabralia, Brazil to discuss issues related to forestry and biodiversity conservation. This meeting was convened by The Forests Dialogue (TFD), an on-going international, multi-stakeholder dialogue process focused on forest related issues. The meeting participants represented environmental groups and the forest products industry, as well as representatives from landowner groups and academia.

The purpose of the meeting was to provide a forum for the exchange of information and ideas on the key factors needed to achieve successful biodiversity conservation and business outcomes in forest regions worldwide.

The dialogue began with a field tour illustrating the integration of forest conservation projects and intensive plantation forestry in the Atlantic Forest region of Brazil. The group later reviewed selected case studies of successful forest and biodiversity conservation projects from around the world. The group then examined the obstacles that prevent wider acceptance and implementation of forest management and land use choices that benefit business and biodiversity. The dialogue concluded with several recommended actions for follow-up activities, with the goal of replicating successful models in future projects.

The dialogue concluded with agreement on the need for the following actions:

1. Reporting from the meeting, including a published summary report, translated into several languages, with the case study presentations, a CD containing all the products from the meeting including the bibliographic database, and a website focused on the dialogue, products and outcomes.
2. Convening scientists from the conservation community to meet with scientists from the forest companies to discuss conservation data, priority setting, mapping and information technology.
3. Development of a shared vision for forestry and biodiversity conservation.

4. Discussion on the funding challenges for conservation and sustainable forest management, and strengthening the business case for conservation.
5. Engagement with other stakeholders, especially social and environmental activist groups, for purposes of exchange of information and discussion on points of consensus and disagreement.

There was a genuine appreciation among the participants for the premise of this meeting: to bring together leaders in forestry and biodiversity conservation to build understanding and trust to pursue improved conservation and business outcomes. The Forests Dialogue is committed to continuing the discussions and catalyzing action. Individual participants committed themselves and their organizations to implement and report on practical actions that combine leadership, conservation planning and priority setting approaches, biodiversity information tools, social and political factors, and funding and related economic incentives to achieve measurable conservation outcomes.

This publication is intended to summarize and serve as a lasting record of the discussions that took place in Brazil. For more information about follow up actions on this or other TFD dialogues, contact TFD at www.theforestdialogue.org or +1 203 432 5966.



Dialogue participants

Introduction



Golden Lion Tamarin

Pressures are mounting on the world's forested land base to meet society's needs for wood and paper products. At the same time, scientific understanding and public concern is mounting over the biodiversity impacts of global forest destruction. Deforestation trends are particularly acute in the tropics, where only about 45 percent of the world's original extent of tropical rainforest currently remains, and these forests are being lost at a rate of about one percent per year.

There is growing international agreement on the need for effective priority-setting, planning, conservation action, and monitoring to address current threats to the world's forests and the biodiversity values they contain. New alliances have been formed among industry, government and NGOs to combat illegal logging that endangers forest species and ecosystems, and undercuts the competitive position of businesses operating with sustainable practices. Significant measures for conservation of imperiled species and habitats are being incorporated into the performance standards of leading forest certification programs. Recommendations from the World Parks Congress in September 2003 emphasized the urgent need for expansion of the international system of protected areas in order to assure complete representation of the diversity of life on Earth.

The conservation community and forest industry have made significant strides working together on biodiversity conservation initiatives designed to prevent species extinctions, expand protected areas, and establish landscape-level corridors linking critical habitats. Notwithstanding this progress, consensus remains elusive as large-scale forest destruction continues in the world's biologically richest places and industry faces an increasingly competitive and challenging global marketplace.

The Forests Dialogue convened this discussion to seek agreement among key stakeholders on strategies to achieve biodiversity conservation outcomes while avoiding economic dislocation. The meeting agenda was focused to a large extent on ecological regions featuring mosaics of land uses ranging from intensive fiber plantations to strictly protected natural forest reserves.

Estação Veracruz Field Tour

The meeting began with a day-long field tour to learn about key issues surrounding the integration of plantation forestry and biodiversity conservation, as well as social development with local communities. The tour was organized by Veracel Celulose S/A and Instituto BioAtlântica. In the morning, the group visited the CEMAS-Wildlife Management Center and hiked through the Estação Veracruz, a 6200-hectare UNESCO World Heritage Site and the largest Atlantic Forest private reserve in Northeastern Brazil. The next stop was the Veracel nursery at Eunapolis and an in depth explanation of the eucalyptus cloning program. The tour moved on to several eucalyptus plantations at various stages in the eight year rotation cycle. The tour ended with a visit to the site of future US\$1.25 billion - 900,000 tonne/year kraft pulp mill being constructed by Veracel.

Key lessons from the tour relate to appropriate conservation strategies for endangered species and landscape-level biodiversity corridors, the importance of indigenous land-use legacies, challenges of conservation projects surrounded by impoverished communities, and the complexity of economic development, employment, pasture reclamation, out-grower schemes and native forest protection. Additionally, the tour highlighted a positive role for private sector forestry companies to help restore and protect sensitive ecosystems near areas of their operations, particularly in regions where government resources are scarce.

The tour underscored the reality that it will take these types of non-traditional solutions involving industry to help restore and protect the Atlantic Forest. This ecosystem is extremely high in biodiversity and endemism, but also faces severe threats from industrial development and population growth, with only about 7% of its original forest cover remaining. The Atlantic Forest is home to Brazil's flagship species - the Golden Lion Tamarin - thus its preservation is critical not only for biodiversity considerations but also for national pride.



Denise Balbão Oliveira —
Biologist, Estação Veracruz

Country Case Studies



Roseate Spoonbill

Case studies were selected to illustrate and enrich the dialogue on key topics within the meeting agenda. They were structured to highlight diverse locations in both the Northern and Southern Hemispheres; the use of different criteria and methodologies in biodiversity science; a variety of strategies employed to achieve conservation outcomes; and the roles of different participants involved in forest conservation, management and certification.

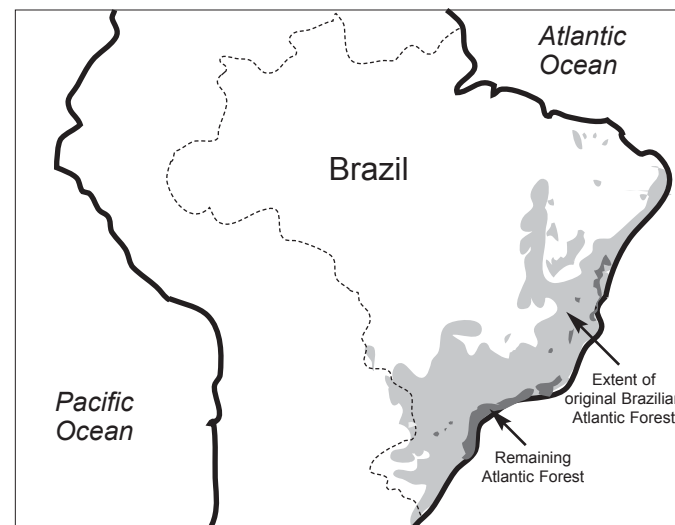
Although the cases reflected a diversity of geographic contexts, a number of common threads emerged from the presentations. Elements that were common to all of the case studies were: definition of biodiversity objectives; priority setting; use of information technology; involvement of multiple institutions, with different roles played by governments, markets, NGOs, and donor organizations; communications strategies for informing and gaining support from stakeholders; implementation plans and timetables; measurement of biodiversity outcomes; formation of partnerships and alliances for creation and implementation of conservation projects; and available financing for project activities.

The case studies are summarized in the following pages and available in their entirety on the TFD website.

THE ATLANTIC FOREST REGION OF BRAZIL

The meeting location was chosen because of its importance to biodiversity and to the international production and trade of forest products. The Atlantic Forest is considered one of the most threatened and important biomes in the world. The area that was formerly covered by the Atlantic Forest now accounts for 80 percent of the country's Gross Domestic Product and is home to 70 percent of the human population of the country.

Once a continuous stretch of tropical and subtropical rainforest covering almost 1.4 million square kilometers (140 million hectares or 15% of



Brazil), it ran from the northern state of Piauí to Rio Grande do Sul. Today, only approximately 7% of the original forest cover remains. In spite of this fragmentation, Brazil's Atlantic Forest is one of the biologically richest ecoregions in the world by virtue of being home to a vast array of plants and animals including many endemic species such as the woolly spider monkey and golden-headed lion tamarin. Major threats to the region include illegal and unsustainable logging, poaching, deforestation from agriculture and pasture expansion, and urban and industrial development.

Scientists working together through a priority-setting process have identified the Central Conservation Corridor, which extends from Bahia to the state of Espírito Santo in Brazil, as the highest priority area of focus for conservation activities within the Atlantic Forest Region. The Central Corridor contains 8.6 million hectares, and features large numbers of plant and animal species found nowhere else on earth.

In recent decades, the wood fiber industry has become a major economic driver in the Central Corridor and throughout the Atlantic Forest. The industry has taken on a key role in efforts to protect and restore natural forest ecosystems in the Atlantic Forest. For example, Aracruz Celulose and Veracel Celulose together own about 150,000 hectares of forest remnants. This includes pastures in a primary stage of natural regeneration, secondary forests in primary, secondary and advanced stages of regeneration, and some areas with native forest characteristics. Both companies have been taking actions to protect and recover these areas through the independent initiatives of their respective environmental programs. Significant examples of these initiatives include the two cases below: the creation of the Instituto BioAtlântica and Aracruz's Watershed project.

INSTITUTO BIOATLÂNTICA

ANDRÉ GUIMARÃES - EXECUTIVE DIRECTOR
INSTITUTO BIOATLÂNTICA

Instituto BioAtlântica (IBio) was created to marry the creativity, resources and ingenuity of industry with the scientific capacity and solutions of the conservation community, recognizing that it will take all sectors of society to solve the biodiversity crisis within the Atlantic Forest. In July 2002, Instituto BioAtlântica was founded by Conservation International do Brasil, Aracruz Celulose, DuPont Brasil, Petrobras and Veracel. IBio is a non-profit organization with headquarters in Rio de Janeiro and a mission to contribute to the conservation and restoration of biodiversity in Brazilian ecosystems, especially the Atlantic forest and coastal regions, as a tool for promoting sustainable development. IBio works to promote synergies between business activities and biodiversity conservation in the Central and Serra do Mar Corridors of the Atlantic Forest. The Institute acts as a catalyst for bringing the private sector together with local governments and the conservation and development communities to implement projects that focus on conservation of the remaining fragments of Atlantic Forest, restoration of forest in critical biodiversity

corridors, and promotion of sustainable development options for local communities and land owners in the Atlantic Forest region.

Currently, one IBio's projects is working with partners Aracruz, Veracel, CI-Brazil, and The Nature Conservancy to promote conservation activities on private lands. Starting with lands owned by the forest industry partners, this project is identifying non-productive lands that could be restored and protected in ways that would contribute to the effective implementation of the Central Conservation Corridor. In doing this, IBio is also testing new models of protected area status for private lands, and intends to present its results to the state and federal governments for consideration.



André Guimarães

THE ARACRUZ WATERSHED PROJECT

AURO C. ALMEIDA - ENVIRONMENTAL PLANNING COORDINATOR
ARACRUZ CELULOSE

In order to study the interaction between eucalyptus plantations, native reserves of the Brazilian Atlantic rainforest (Mata Atlântica) and the surrounding environment, Aracruz created the Watershed Project in 1993. Over the last decade, the project has since emerged as one of the company's most important research efforts into eucalyptus trees and their interactions with the environment.

The project is located in the municipality of Aracruz, Espírito Santo. It has been developed in partnership with leading research institutions in Brazil and other countries. The watershed being studied was chosen because it has an ecosystem that represents various forest environments in which Aracruz operates. A complete eucalyptus cultivation cycle is monitored continuously, and scientific studies are carried out on biodiversity, water resources, physiology, soil conditions, and forest growth. These studies generate a database of information and knowledge that allows Aracruz to improve its forest management procedures continuously and to minimize the impact of the company's activities on the environment.



Facilitator Dan Johnston with participants Amy Skoczlas and Steve Ruddell

COASTAL BRITISH COLUMBIA, CANADA

DANIEL JOHNSTON - DIRECTOR

PACIFIC RESOLUTIONS

Following years of controversy, in April 2001, a multi-stakeholder framework agreement was reached by government agencies, forest companies, international environmental NGOs, and others affecting 5 million hectares in the Central Coast region of British Columbia. Key elements of the agreement include: designation of 1 million hectares as protected areas; identification of an additional 600,000 hectares as "option areas" subject to future decisions affecting protection and commercial management; articulation of a commitment to ecosystem based management; creation of an independent scientific knowledge team; reduction in timber harvest levels; establishment of First Nations protocols; establishment of provisions for economic mitigation, compensation, and diversification; and statement of a commitment to proceed to a "completion phase" of the process initiated by the framework agreement.

Implementation of the April 2001 accord proceeded during 2001-2003 through commencement of a formal multi-stakeholder land management

planning process; creation of an independent science body known as the Coast Information Team with an initial \$3.4 million budget jointly funded by government agencies, international environmental NGOs and forest products companies; and initiation of a conservation financing initiative known as the Conservation Incentives and Investment Initiative. Detailed outcomes remain uncertain, but the process launched by the April 2001 framework agreement is scheduled for completion in late 2003 or early 2004.

Editorial Note: In December 2003, implementation of the April 2001 accord was successfully completed with an agreement on designation of an additional 546,000 hectares as protected areas, finalization of an ecosystem based management system based on the work of the independent science body, and joint establishment of an EBM Council by government agencies and First Nations to oversee ongoing implementation and adaptive management.



Adhi Rachmat

FIELD APPROACHES IN FOREST CONSERVATION, INDONESIA

ADHI RACHMAT HARIYADI - PROJECT MANAGER

WWF INDONESIA

Under pressure to fulfill demands of various industries, Indonesia is facing extensive conversion of natural tropical forest to other land uses. Unsustainable forest practices and illegal logging are prevalent throughout the country.

WWF Indonesia has identified forest conservation as a key priority for ensuring the survival of endangered species and for other conservation values. Protection of remaining natural forests is also important for various social reasons, such as solving human-elephant conflicts in the Tesso Nilo forest landscape of central Sumatra. Working with multiple stakeholders, WWF is pursuing strategies based on landscape-level conservation planning, community empowerment, policy development, and cooperative engagement with existing industries.



Nigel Sizer

Local communities play a major role in determining conservation outcomes in and around protected areas. Community forestry may become an option for reducing or preventing negative impacts in natural forest areas. A WWF Indonesia project in Java's Ujung Kulon National Park involves neighboring communities in sustainable agroforestry activities such as planting suitable agricultural land with commercially valuable commodities and producing tree seedlings for forest restoration. At the global level, WWF is promoting independent certification as a major incentive for biodiversity conservation and sustainable forest management.

SAVING BORNEO'S LAST GREAT PLACES, INDONESIA

**NIGEL SIZER - DIRECTOR, ASIA-PACIFIC & CALIFORNIA FORESTS PROGRAM
THE NATURE CONSERVANCY**

The tropical forests of East Kalimantan provide critical habitat for orangutans and many other species. Key threats to biodiversity include: forest land conversion, destructive fishing, and lack of knowledge at the community level; uncontrolled logging, short-term vision, and lack of knowledge on the part of forest industry; and problems of corruption, inadequate transparency, and lack of capacity with local governments. The region suffered major impacts from destructive forest fires in the late 1990s that resulted in significant part from unsustainable forest management.

The Nature Conservancy is working to apply spatial planning approaches to achieve biodiversity conservation at multiple scales in East Kalimantan. The Conservancy is partnering with timber concession holders in the region to engage in mapping and analysis to identify and protect critical habitat, develop compensation strategies as necessary, and promote well-managed certified forest practices in areas outside critical habitat reserves.

THE NEW ZEALAND FOREST ACCORD, NEW ZEALAND

**JAMES GRIFFITHS - DIRECTOR, SUSTAINABLE FOREST PRODUCTS INDUSTRY
WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT**



James Griffiths

The New Zealand Forest Accord was signed in August 1991 after three years of dialogue and more than two decades of social conflict over forest management. Considered a unique undertaking for its time, the accord brought together 14 signatories from the business and NGO sectors in a voluntary agreement designed to benefit New Zealand's indigenous forests and industrial timber plantations. Among other key provisions, the accord affirms the role of plantation forestry as the primary source of wood fiber, while ensuring that new plantations do not disturb indigenous forest vegetation and that any wood from natural indigenous forests originates from sustainable management practices.

The New Zealand Forest Accord works well within its national context as a common basis of understanding and as a platform for cooperation between the commercial plantation industry and the environmental NGO community. The agreement is based on simple definitions relating to vegetation, and not on complicated biodiversity criteria and indicators. The absence of participation in the accord process by key stakeholders including indigenous peoples and social policy organizations is limiting further development of more advanced performance standards and verification systems.

THE SWEDISH CASE: FOREST OWNERS, INDUSTRY AND GOVERNMENT IN A LONG-TERM COOPERATION, SWEDEN

**ÅKE BARKLUND - DIRECTOR, REGIONAL LAND MANAGEMENT UNIT IN
KENYA, SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY**

In Norway, Sweden and Finland, forests play important economic, environmental and social roles. Enacted in 1994, the Swedish Forest Act

places wood production and environmental stewardship on equal footing. Forest owners' and forest workers' representatives were deeply involved in the development of the present forest policy and law.

In 2001, the Swedish Board of Environment and Board of Forestry jointly presented a comprehensive evaluation of the results of the Swedish Forest Act. The evaluation found that forest practices throughout the country were generally in line with the government policy, and reaffirmed the view that the most effective way to encourage sustainable forestry is to vest responsibility with forest owners and forest workers. Public programs should focus on providing education, training and incentives, rather than on punitive regulation and enforcement.

The Swedish government provides some compensation for forest owners who are told to set aside forest areas with high biodiversity values. Besides such official reserves the 2005 targets for the owners' voluntary conservation set-asides on forestlands had already been achieved in 2001. A challenge for the future is to improve the management of a number of conservation reserve areas - representing the bio-diversity of forest use, not in practice any longer - that were created prior to the recent sustainable forestry programs in Sweden. Many reserves are not getting enough financing to be managed according to plans.

SOUTH CAROLINA'S RED-CKADDED WOODPECKER SAFE HARBOR PROGRAM, USA

BOB FLEDDERMAN - MANAGER, ENVIRONMENT AND REGULATORY ASSURANCE, MEADWESTVACO CORPORATION

SHARON HAINES - DIRECTOR, SUSTAINABLE FORESTRY - FOREST POLICY INTERNATIONAL PAPER COMPANY

The United States federal government enacted the Endangered Species Act (ESA) in 1973. During the mid-1990s, the U.S. Fish and Wildlife Service created a program promising that landowners entering

agreements with the agency would not face increased responsibility for providing habitat for species listed under the Endangered Species Act, provided the landowners agreed to provide habitat for any known endangered species populations on their property at the time of the agreements. This concept became known as "Safe Harbor."

In the late 1990s, MeadWestvaco and Environmental Defense, a leading American environmental NGO, formed a partnership to develop a Safe Harbor program in the state of South Carolina for the red-cockaded woodpecker, an endangered species listed under the US's Endangered Species Act. The U.S. Fish and Wildlife Service approved a model contract developed by MeadWestvaco and Environmental Defense and the South Carolina Department of Natural Resources agreed to administer the program. MeadWestvaco and an adjoining MeadWestvaco landowner assistance program cooperator, Mepkin Abbey, a Roman Catholic monastery, started the program by enrolling adjoining tracts totaling over 5,200 hectares protecting 12 colonies of red-cockaded woodpeckers. The program was later scaled up to cover the entire red-cockaded woodpecker range in the state. Since 1999, the program has enrolled nearly 80 participating properties covering more than 120,000 hectares protecting 277 colonies of red-cockaded woodpeckers.

International Paper (IP) owns about five million acres of timberland in the southern United States in the historic range of the red-cockaded woodpecker. In the late 1990s, IP developed a Habitat Conservation Plan for the endangered woodpecker. Developed with assistance from Environmental Defense, the U.S. Fish and Wildlife Service, and the Georgia Department of Natural Resources, the 30-year plan allows IP to shift management for the species to optimal habitat within the company's southern U.S. forest ownership. The plan also contributes to recovery of the woodpecker by creating a "link" population connecting woodpecker populations on the Apalachicola National Forest with other populations in the Red Hills Region of southern Georgia. The plan creates the first mitigation bank for the red-cockaded woodpecker, and is the first HCP



Sharon Haines



Cassie Phillips

under which a private landowner (IP) has committed itself to increasing woodpecker populations and enhancing habitat for the species on its lands instead of relocating birds to public lands.

Currently, IP actively manages over 2,145 hectares of habitat for the red-cockaded woodpecker, as opposed to about 730 hectares prior to the HCP. At the company's Southlands Forest site, the woodpecker population has grown from 3 isolated males in 1998 to 47 birds in twelve clusters today. The HCP has added value for IP by centralizing management responsibility and minimizing regulatory liability for a listed species; increasing management flexibility; creating market share from customers interested in environmental performance; serving as a platform for other conservation initiatives; and demonstrating IP's commitment to sustainable forestry to environmental NGOs, regulatory agencies and the public.

LONG ISLAND, WASHINGTON LAND EXCHANGE CASE STUDY, USA

**CASSIE PHILLIPS - VICE PRESIDENT, SUSTAINABLE FORESTRY
WEYERHAEUSER COMPANY**

In 1979, Weyerhaeuser and the U.S. Fish and Wildlife Service signed an agreement for Weyerhaeuser to exchange its land and old-growth timber for rights to log second growth timber of equivalent value on Long Island, a biologically rich area covering 2,025 hectares along the Pacific Coast in southwestern Washington State. The agreement accompanied a land management plan detailing conservation and timber management activities over a 12 year period. The island features some 400 to 900-year-old stands of western red cedar and a diverse array of wildlife including species such as black-tail deer, elk, black bear, marbled murrelets, pileated woodpeckers, and spotted owls.

Weyerhaeuser completed timber harvest activities on Long Island in 1994. The case study illustrates a fairly straightforward government acquisition of private land involving a high priority target area for conservation. The use of timber as part of the land exchange was potentially

controversial, but successful in the Long Island situation. Lessons from the case include the need for great patience throughout long delays, and the recognition that administrative and transaction costs can be high in exchanges between the government and private landowners

FORESTS AND BIODIVERSITY ON U.S. FAMILY FORESTLANDS DRUE DeBERRY, DIRECTOR, HABITAT CONSERVATION PROGRAMS, AMERICAN FOREST FOUNDATION

The American Forest Foundation's Habitat Conservation Programs ("Shared Streams and Forested Flyways") bring together landowners from the American Tree Farm System with conservation groups and government agencies to improve wildlife habitat across the United States. The "Forested Flyways Gopher Tortoise Initiative" demonstrates and promotes management that is beneficial to biodiversity in the upland forests in the southeastern U.S. Listed as threatened under the Endangered Species Act, the gopher tortoise serves as a true umbrella species with more than 300 other species dependent on the turtles' burrows and habitat requirements. The initiative is working to shift landowners away from short-rotation management that focuses on pulp production and toward longer rotations that focus on sawtimber and pole production.

Partners in the initiative include the American Forest Foundation, Mississippi Fish and Wildlife Foundation, Environmental Defense, American Bird Conservancy, and U.S. Fish and Wildlife Service. The goal is to improve habitat for declining species dependent on fire-maintained southern pine communities, particularly longleaf pine, in Alabama, Louisiana, and Mississippi. The initiative is currently focused on family forestlands in 23 counties covering 4.2 million hectares throughout those three states. The initiative is restoring and conserving privately owned pineland habitat for the benefit of many species of concern such as the endangered red-cockaded woodpecker and the black pine snake, a candidate for listing.



Keys to Successful Biodiversity Outcomes

The main conclusion emerging from the case studies and dialogue was that constructive engagement through partnerships and alliances is essential to achieving conservation outcomes for species and ecosystems at the landscape level. Participants in the meeting agreed that multi-stakeholder strategies for conservation must be employed to be successful at all scales, covering sites, corridors, eco-regions, nations, and the global forest estate.

Dialogue participants expressed a general view that meeting society's needs for wood fiber and conserving biodiversity can be compatible objectives. Nevertheless, preventing unnecessary tradeoffs between fiber production and biodiversity depends on effective strategic interventions to ensure that forest land use choices and management practices promote conservation.

While documenting encouraging examples from around the world, the case studies and dialogue also illustrated the urgency of finding solutions. A recurring message from several participants was that "we need to move fast to conserve threatened biodiversity in regions with scarce remaining intact natural forest." Prompt action is imperative, for example, in the Central Corridor of the Atlantic Forest. It is also necessary in the Teso Nilo forest landscape of central Sumatra, where remaining natural forest cover was reduced by more than 60 percent from 1985 to 1997 as a consequence of illegal logging and conversion of critical Asian elephant habitat to oil palm and acacia plantations.

Drawing upon lessons from the case studies and other relevant experience, the dialogue participants identified key success factors and addressed obstacles impeding progress toward further conservation of forests and biodiversity. Additionally, the group identified a number of strategies to help overcome those obstacles. The discussion of success factors, obstacles and strategies was divided into several inter-related themes, including:



John Musinsky (CI) and Auro Almeida (Aracruz) share models on biodiversity conservation planning

- Conservation planning approaches and information tools;
- Funding and market incentives for conservation;
- Social and political factors.

In each category, leadership was identified as an essential prerequisite to successful biodiversity conservation efforts. Dialogue participants noted that leadership requires unwavering commitment to a mission, combined with patience and tenacity. Additional leadership skills include the ability to work effectively with many different stakeholders, to listen with an open mind to different perspectives, and to harness and channel institutional resources strategically. Leaders must be willing and able to be exposed to public scrutiny and criticism for engaging in conservation approaches that are unpopular with certain constituencies.

CONSERVATION PLANNING APPROACHES AND INFORMATION TOOLS

A key finding from the meeting was that good data and credible, science-based priority-setting are essential to the achievement of measurable conservation outcomes. Sharing of information is critical to assure continuous improvement of relevant data sets. Effective monitoring and evaluation is equally important to measure environmental, social and economic outcomes and to adjust implementation strategies as necessary. Good science must go hand in hand with good process to guarantee lasting results for conservation.

John Musinsky, Senior Director for Regional Analysis with the Center for Applied Biodiversity Science at Conservation International, presented an overview of a range of environmental data, tools and methods used by conservationists to set priorities, monitor human impacts and environmental trends, measure success in achieving conservation objectives, and model scenarios of future change. Different organizations may use different approaches, but most of these approaches are complementary and often lead to similar results. Examples of approaches to conservation information, mapping, and analysis include:

- The Global Forest Watch international forest and mapping network;
- The Nature Conservancy's "Conservation by Design" approach;
- World Wildlife Fund's ecoregional planning strategies;
- Conservation International's Biodiversity Conservation Corridor planning approach;
- Wildlife Conservation Society's Range-Wide Priority Setting for Species and Regional Human Footprint Mapping;
- BirdLife International's Important Bird Areas Programme.

Organizations such as Conservation International, Birdlife International, and Plantlife International, are working in many parts of the world to apply the concept of "Key Biodiversity Areas," which are sites identified based on the vulnerability and irreplaceability of species and assemblages of species, and which provide the starting point for landscape-level conservation planning.

The wealth of biodiversity information and conservation planning approaches developed by the conservation science community could be better harnessed for industry and policy applications that benefit biodiversity. The group observed a need for greater synthesis of the criteria and approaches used in regional planning and priority-setting by leading conservation NGOs. The conservation science community's efforts could benefit from a fuller understanding of priorities and what biodiversity information the private sector needs to align land use choices and forest management decisions with conservation objectives.

In some circumstances, the lack of baseline knowledge constitutes an impediment to biodiversity conservation measures. Concerns over cost recovery, liability, and international restrictions sometimes pose constraints to free sharing of data and thus create an obstacle to effective conservation actions.

Making optimum use of conservation data and planning approaches will require:

1. A common information foundation drawn from the best available scientific data and reflecting consensus on assumptions and analytic processes. Building capacity is a key prerequisite to development of the common information framework;
2. Tools such as maps, reports, data bases, and GIS technology that can be effectively applied in the context of forest land use and management; and
3. Processes to engage different stakeholders in development of conservation strategies, including existing governmental processes and institutions such as The Forests Dialogue, to facilitate flow of information.

FUNDING AND MARKET INCENTIVES FOR CONSERVATION

The dialogue reflected widespread recognition that conservation costs money that needs to come from various public and private sources. Innovative, market-based incentive structures have proven successful, as well as promising for wider application, in achieving conservation outcomes. Notable examples featured in the case study presentations include:

- Conservation easements and concessions, which are being integrated into conservation strategies for regions as diverse as East Kalimantan, Indonesia, and coastal British Columbia;
- Carbon credits, which provide a potentially powerful tool for investment in conservation projects, for example in reforestation initiatives in the Atlantic Forest region of Brazil;
- Targeted land exchanges, which have been used effectively in regions such as the U.S. Pacific Northwest to protect high con-

servation value forests while assuring fair compensation for land owners and maintaining the industrial timberland base;

- Government cost sharing of private forest land restoration projects, as illustrated by habitat conservation programs on family forest lands in the United States; and
- "Safe harbor" measures that provide incentives for private land owners to manage for enhancement of endangered species populations.

Among the key obstacles to adequate funding, investment, and other economic incentives for conservation are: limited human and financial resources; constraints on institutional capacity; uneven distribution of costs associated with conservation investments; lack of international rules allowing market trading of forest-based carbon offsets; certain regulatory provisions contrary to maintaining and enhancing endangered species populations; limited consumer demand for certified forest products sold at premium prices; tax policies unfavorable to sustainable forest management; and lack of a common vision for allocation of resources to high priority areas. Although "win-win" solutions are within



Example of Veracel's landscape management mosaic meshing plantations and natural forests



Carlos Santos of Estação Veracruz demonstrates traditional hunting methods used by poachers

reach in many situations, tensions still exist between biodiversity conservation and the economics of the forest industry. There is a need for a stronger business case for biodiversity, backed by functioning markets, institutions, and compensation mechanisms.

The group discussed a number of considerations that need to factor into a strategy for overcoming obstacles to adequate funding and incentives for forest conservation. In particular, it is important to understand the implications of conservation efforts for businesses. Industry can contribute to conservation through practices on its own lands, procurement systems, philanthropic contributions, participation in markets for environmental services, and constructive engagement in regional conservation planning. Different circumstances present different degrees of difficulty depending on such factors as existing "sunk" investments, fiduciary obligations to corporate shareholders, antitrust regulations, and the availability of matching funds from other public or private sources to share in the costs of achieving conservation. Conservation strategies are enhanced whenever there is an alignment among economic and ecological objectives.

A related point is the need to separate neutral science information and identification of relative biodiversity importance and threat, from prescriptions about the land use choices based on that information. Landowners want to know which forests are at risk of widespread extinctions of species and ecosystems if logged, but solutions may be complex and politically challenging. Keeping the technical information separate from the policy questions protects the credibility and integrity of both processes.

Conservation outcomes will depend on successful cultivation of creative economic instruments that can supplement or substitute for direct cash contributions. Examples of such emerging economic instruments include targeted tax benefits, creation of markets for forest-based carbon storage and biodiversity, natural forest reserves on private timber lands, and mitigation banking for protection of endangered species and

habitats. In some circumstances, maintaining a positive reputation and community support can provide incentives that are equal to or greater than direct financial compensation for a forest company's conservation actions. Careful planning and analysis are needed to avoid displacement of impacts such that conservation is achieved in one location but biodiversity destruction is shifted elsewhere.

SOCIAL AND POLITICAL FACTORS

The dialogue and case studies confirmed that the likelihood of successful conservation outcomes is enhanced wherever government policy frameworks create favorable climates for multi-stakeholder collaboration and provide incentives for conservation. Additionally, although "win-win" results are not possible in all cases, solutions are most durable when regional conservation planning enables participation by affected stakeholders and their representatives and produces positive biodiversity outcomes along with benefits for private forest land owners and industry. The dialogue participants identified a number of social and political factors that sometimes stand in the way of effective collaboration and conservation outcomes. A partial list of these obstacles includes:

- Fear of failure and reluctance to try untested innovative approaches such as creation of markets for environmental services;
- Political inertia or partisan agendas that impede good conservation projects;
- Low public awareness of the risk of inaction;
- Lack of sufficient trust among participants in multi-stakeholder processes;
- Certain laws and regulations that hamper partnership opportunities.



Roadside charcoal mounds

Meeting participants agreed that creative thinking and a willingness on all sides to try different approaches can help break through traditional "gridlock" and produce outcomes satisfactory to all stakeholders. There is a need to devote time and attention to building trust and capture lessons from successful collaborative processes that have yielded measurable conservation outcomes. Consensus recommendations coming from diverse stakeholder alliances can be influential in shaping policies that are beneficial to business and biodiversity, and in supporting politically favorable outcomes.

Moving Forward Together

The dialogue and case studies gave rise to a spirit of optimism coming out of the meeting, coupled with a strong sense of urgency to achieve conservation of the world's forests and biodiversity. During the closing session, Peter Frumhoff of the Union of Concerned Scientists noted, "Throughout the last three days, we have seen the maps showing the dramatic decline in natural forest area in Brazil's Atlantic Forest over the last 50 years. The question we face is what maps will our children and grandchildren be looking at."



Justin Ward

Participants were eager to translate the major themes and findings from the meeting into concrete actions with measurable results. The group's sentiments were summed up by concluding remarks by Sharon Haines of International Paper, "Let's go out and make a difference!"

There was a genuine appreciation among the participants for the premise of this meeting: to bring together leaders in forestry and biodiversity conservation to build understanding and trust to pursue improved conservation and business outcomes. The Forests Dialogue is committed to continuing the discussions and catalyzing action.

The group agreed that the Dialogue on Forest and Biodiversity Conservation, begun at the meeting in Santa Cruz Cabrália, represents an appropriate launching platform for actions by participants to further implementation of the success factors described at the meeting. Members committed themselves to further work in following areas:

Implementation projects and reporting. Individual participants committed themselves to implement and report on practical actions that combine leadership, science-based conservation planning and priority-setting, biodiversity information tools, social and political factors, and funding and related economic incentives to achieve measurable conservation outcomes. The idea is to achieve large-scale expansion of the kinds of successful examples presented in the case studies, and for the TFD to serve as one clearinghouse for this information. One point of



Sharon Haines and
Ragnar Friberg

emphasis will be to document lessons from specific cases illustrating the successful establishment of trust among stakeholders. An additional point of focus will be to address the funding challenges for conservation and sustainable forest management, and strengthening the business case for conservation.

Synthesis of conservation information and priority setting approaches. Conservation organizations will move forward with their continuing processes toward a common glossary on conservation priority setting and regional planning, as well as on monitoring of conservation outcomes. Efforts will be increased to describe and communicate the areas of overlap, as well as differences in assumptions and approaches, among various methodologies and tools developed by NGOs such as The Nature Conservancy, Conservation International, World Resources Institute, and World Wildlife Fund. Industry is committed to articulating the kinds of data and maps it would value from the conservation science community in order to improve decisions on forest management, and to engage in more informed discussions with governments and other stakeholders on land use. A near term action will be to bring together scientists from the conservation community to meet with scientists from the forest companies to discuss conservation data, priority setting, mapping and information technology. A high-level science consortium from leading conservation organizations is already working to develop a common framework for assumptions and methods used in conservation planning and priority setting. The organizations are also collaborating on approaches to monitoring and evaluation, and are incorporating social, political and economic dynamics into their methods for priority setting and regional conservation planning.

Engagement with other stakeholders. Among participants at the meeting, there was full recognition that the participants of this dialogue do not represent a complete cross section of stakeholders with interests in conservation of forests and biodiversity. There was also a shared understanding that the scope of the meeting in Santa Cruz de Cabrália did not constitute a comprehensive roadmap for saving the world's

forests. The Forests Dialogue is committed, as a priority for future action, to pursuing engagement with other stakeholders, including social and environmental activist groups, on forest and biodiversity conservation and other issues on the TFD agenda. The purpose will be to assure transparent exchange of information and discussion on points of consensus and disagreement and, more importantly, to improve the effectiveness of strategies to achieve on-the-ground conservation outcomes. An additional priority will be to pursue engagement with agriculture and other sectors outside the forest products industry that create significant impacts on forests and biodiversity.

Development of a common vision. Dialogue participants from all sectors commented that the search for solutions is hampered by the lack of a common vision for conservation of the world's forests and for meeting society's needs for wood and paper products. Development of that shared vision would provide a necessary foundation for a coherent, focused and effective strategy for conservation of forests and biodiversity. The common vision would also help guide related TFD dialogues and actions on its other focal topics including illegal logging, forest certification, intensive forest management, and poverty reduction in forest regions. For these reasons, development of a common vision is an integral part of TFD's overall agenda and program of work.

A follow-up TFD meeting on forest and biodiversity conservation will be planned for the near future. The main purpose of the meeting will be to take stock of actions that have been taken to overcome obstacles and further the broad strategic needs identified at the Santa Cruz de Cabrália meeting. Indicators of progress will be built around the thematic areas discussed at the Santa Cruz de Cabrália meeting, including conservation planning approaches and information tools, funding and economic incentives, social and political factors, and leadership. An analysis will be prepared on how progress against the indicators has translated into measurable conservation outcomes related to species, protected areas and landscape corridors.



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Resources for More Information

Bryant, D., D. Nielsen and L. Tangle. 1997. *The Last Frontier Forests: Ecosystems and Economies on the Edge*. World Resources Institute. Washington, D.C. 57 pgs.

Center for Applied Biodiversity Science and Institute for Social and Environmental Studies of Southern Bahia. 2000. *Designing Sustainable Landscapes: The Brazilian Atlantic Forest*. Conservation International, Washington, D.C. 28 pgs.

Cossalter C., and C. Pye-Smith. 2003. *Fast Wood Forestry: Myths and Realities*. CIFOR. Jakarta, Indonesia. 50 pgs.

Gullison, R.E., M. Melnyk, and C. Wong. 2001. *Logging Off: Mechanisms to Stop or Prevent Industrial Logging in Forests of High Conservation Value*. Union of Concerned Scientists. Center for Tropical Forest Science, Smithsonian Institution. UCS Publications. Cambridge, USA. 81 pgs.

Howard, S. and J. Stead. 2001. *The Forest Industry in the 21st Century*. WWF - World Wide Fund for Nature. Surrey, UK. 19 pgs.

Jennings, S., R. Nussbaum, N. Judd, and T. Synnot. 2002. *Identifying High Conservation Values at a National Level: a Practical Guide*. ProForest. Oxford, UK. 85 pgs.

Lindenmayer, D. B. 1999. Future directions for biodiversity conservation in managed forests: indicator species, impact studies and monitoring programs. *Forest Ecology and Management*. 115: 277-287.

Lorentzen, E. 2001. Aracruz Celulose: A Case History. Chapter 8 in *Footprints in the Jungle: Natural Resource Industries, Infrastructure, and Biodiversity Conservation*. Ian Bowles and Glenn Prickett, Editors. New York: Oxford University Press.

Myers, N., R. A. Mittermeier, C. Mittermeier, G. A.B. de Fonseca, and J. Kent. 2000. Biodiversity hotspots for conservation priorities. *Nature*. 403: 853-858.

Olson, D. M., *et al.* 2001. Terrestrial Ecoregions of the World: A New Map of Life on Earth. *Bioscience*. 51 (11): 933-938.

Olson, D., *et al.* 2000. *The Global 200: A Representation Approach to Conserving the Earth's Distinctive Ecoregions*. Conservation Science Program, World Wildlife Fund-US. Washington, D.C. 183 pgs.

Rodrigues, A., *et al.* 2003. *Global Gap Analysis: Towards a Representative Network of Protected Areas*. Center for Applied Biodiversity Science at Conservation International. Washington, D.C. 96 pgs.

Sanderson, J., *et al.* 2003. *Biodiversity Conservation Corridors: Planning, Implementing, and Monitoring Sustainable Landscapes*. Center for Applied Biodiversity Science at Conservation International. Washington, D.C. 41 pgs.

Stone, D., K. Ringwood, F. Vorhies. 1997. *Business and Biodiversity – A Guide for the Private Sector*. World Business Council for Sustainable Development. Geneva, Switzerland. 68 pgs.

World Business Council for Sustainable Development. 2004. *Veracel: Cultivating Eucalyptus for Pulp in Brazil (Case Study)*. Geneva, Switzerland. 5 pgs.

Yale Forest Forum. 2000. *Tropical Forest Plantations and Biodiversity: A Summary of a Forum Exploring Compatibility on the Chamflora (Champion International) Lands in Amapá, Brazil*. Sasha Silver *et al.*, Editors. Yale University School of Forestry and Environmental Studies. New Haven, Connecticut. 36 pgs.

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The Forests Dialogue (TFD), formed in 1999, is an outgrowth of dialogues and activities that began separately under the auspices of the World Business Council for Sustainable Development, The World Bank, the International Institute for Environment and Development, and the World Resources Institute. These initiatives converged to create TFD when these leaders agreed that there needed to be a unique, civil society driven, on-going, international multi-stakeholder dialogue forum to address important global forestry issues.

TFD's mission and purpose is to bring key leaders together to build relationships based on trust, commitment and understanding and through them, generate substantive discussion on key issues related to achieving sustainable forest management around the world. TFD's dialogues serve as a platform to share aspirations and learning and to new seek ways to take collaborative action on the highest priority forest conservation and management issues.

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TFD is developing and conducting international multi-stakeholder dialogues on the following issues:

- *Forest Certification*
- *Illegal Logging and Forest Governance*
- *Intensive Forest Management*
- *Forests and Biodiversity Conservation*
- *Forests and Poverty Reduction*
- *A Vision for the World Forests*

There are currently 23 members of the TFD Steering Committee. The Committee is responsible for the governance and oversight of TFD's activities. It includes representatives from private landowners, the forest products industry, ENGOs, retailers, aid organizations, unions, and academics.

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TFD's Mission

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