



### SUMMARY OF THE SIXTH TRONDHEIM CONFERENCE ON BIODIVERSITY: 1-5 FEBRUARY 2010

The Sixth Trondheim Conference on Biodiversity met from Monday, 1 February to Friday, 5 February 2010 in Trondheim, Norway. The meeting was attended by more than 300 participants from almost 100 countries representing governments, intergovernmental and non-governmental organizations, and scientific and academic institutions. Over the five-day meeting, participants discussed status of and lessons learned from the current Convention on Biological Diversity (CBD) 2010 target and setting post-2010 targets, including emerging issues and challenges for addressing drivers of biodiversity loss.

The Conference produced a Chairmen’s Report, which incorporates the presentations, questions, written suggestions and working group discussions, along with advice from the Friends of the Chairs. The Report will be forwarded as information document at the upcoming CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) and Working Group on the Review of Implementation meetings. This report summarizes the Conference proceedings.

### A BRIEF HISTORY OF THE TRONDHEIM CONFERENCES

Since 1993, the Trondheim Conferences on Biodiversity have sought to enhance cross-sectoral dialogue on biodiversity research and management, and to establish the best possible scientific basis for policy and management decisions in relation to the implementation of the CBD. The Conferences are a result of collaboration between the CBD Secretariat, the UN Environment Programme (UNEP) and the Norwegian government. They have provided important input to the CBD by focusing on the multidimensional nature of the implementation of the Convention and recognizing that biodiversity-related issues are relevant for sustainable development.

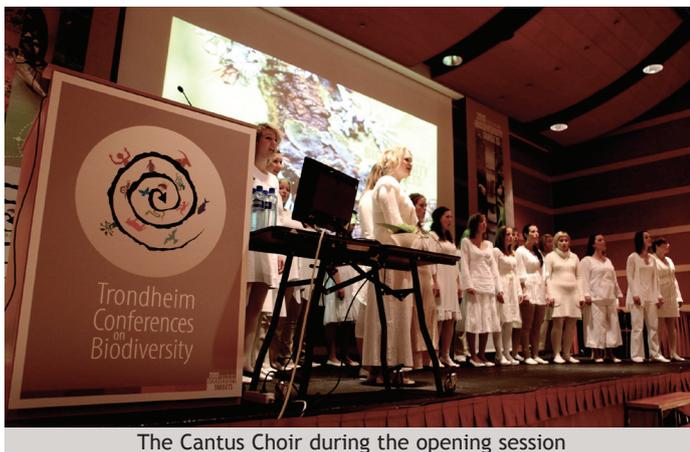
The first Trondheim Conference, held in May 1993, provided scientific input to the first meeting of the Intergovernmental Committee of signatories to the CBD. The second Conference, held in July 1996, focused on alien invasive species, and contributed to SBSTTA-2 and the development of the Global Invasive Species Programme. The third Conference, held in September 1999, discussed the ecosystem approach for the sustainable use of biodiversity, and provided input to SBSTTA-5 and to discussions leading to the adoption of the Principles for the Ecosystem Approach at the CBD Sixth Conference of the Parties in April 2002. The fourth Conference, held in June 2003, focused on technology transfer and capacity building. It provided input to SBSTTA-9

and to UNEP and its intergovernmental strategic plan for technology support and capacity building to developing countries. The fifth Conference discussed why biodiversity is an important component of sustainable development and how it contributes to poverty alleviation as well as progress: in the implementation of the CBD’s Strategic Plan; towards the 2010 target on significantly reducing the rate of biodiversity loss; and towards relevant Millennium Development Goals. The conclusions and recommendations of the fifth Conference, as well as the full proceedings of the Conference, were submitted as information documents to SBSTTA-13.

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The Cantus Choir during the opening session

## REPORT OF THE MEETING

### OPENING SESSION

On Monday, the Sixth Trondheim Conference on Biodiversity opened with a musical performance by the Cantus Choir.

Rita Ottvervik, Mayor of Trondheim, welcomed participants, noting the meeting would add to the knowledge base needed



Rita Ottvervik, Mayor of Trondheim

for the 2010 Convention on Biological Diversity (CBD) process. She outlined local-level biodiversity protection and environmental actions in Trondheim. In his opening address, Erik Solheim, Minister of the Environment and International Development, Norway, said there is enormous value to protecting biodiversity from the three perspectives of morality, ecological interdependence, and economics.

He underscored the need to combine political action with scientific wisdom. Solheim also expressed hope that an intergovernmental platform on biodiversity and ecosystem services (IPBES) would be established this year.

Angela Cropper, Deputy Executive Director, UN Environment Programme (UNEP), called the Trondheim



Angela Cropper, Deputy Executive Director, UNEP

Conferences on Biodiversity a chance for all to “re-dedicate” themselves to the “common purpose” of protecting the environment. She expressed regret that there is “little to celebrate” about efforts to reach biodiversity protection targets set for 2010, and suggested that several questions must be asked, including what lessons can be learned from the collective failures in achieving these targets. She also encouraged

enhancing public awareness and concluding negotiations on the international regime on access and benefit sharing (ABS) under the CBD. Ahmed Dhoghlaf, Executive Secretary of the CBD, underscored the role of the Trondheim Conferences in shaping the international agenda on biological diversity. He praised Japan’s financial contribution to ensuring a 100% rate of country assessments submissions. He stressed that the development of the 2050 vision and 2020 target would coincide with the post-Kyoto time frame and expressed hope that countries would incorporate such a target in their national strategies and also develop country-specific targets.



L-R: Erik Solheim gives Ahmed Djoghlaif, Executive Secretary of the CBD, a Norwegian painting

Ursula Heinen-Esser, Parliamentary State Secretary, Federal Environment Ministry, Germany, highlighted, on behalf of the Ninth Conference of the Parties to CBD (COP 9) Presidency, that one of the key elements of the debate on post-2010 targets is to include all players and establish overarching targets for



Ursula Heinen-Esser, Parliamentary State Secretary, Federal Environment Ministry, Germany

other international conventions. She stressed the importance of adopting an International Regime as well as establishing an IPBES, noting these should build on relevant existing structures and mechanisms. Toshio Torii, Director of the Global Biodiversity Strategy Office, Ministry of Environment, Japan, stressed that his country is working hard to make COP 10 a success, and noted the importance of developing post-2010 targets, including the means to achieve them.

### SETTING THE STAGE

Co-chairs Peter Schei, Fridtjof Nansen Institute, and Finn Katerås, Norwegian Directorate for Nature Management, presented the context and rules of the meeting. Co-chair Schei explained that participants are attending as resource persons and scientists, rather than as representatives of their countries, and thus that contributions are non-attributable. He encouraged active participation in setting ambitious targets and suggesting mechanisms to achieve those targets, and invited submissions for a competition to develop a slogan for the post-2010 targets.

Co-chair Katerås outlined the projected conference outputs: a Chairmen’s Report, full conference proceedings, online access to speakers’ presentations, and coverage by the *Earth Negotiations Bulletin* and media.



L-R: Conference co-chairs Finn Katerås and Peter Schei

Jon Hutton, Director, UNEP World Conservation Monitoring Centre (UNEP-WCMC), and Chair of the CBD Biodiversity



Jon Hutton, Director, UNEP-WCMC, and Chair of the CBD BIP

Indicators Partnership (BIP), presented on “Tracking progress toward the 2010 biodiversity target - and looking beyond.” He outlined metrics and monitoring requirements for an inventory of biodiversity status and trends and efforts to date on indicators under the CBD and other global indicator initiatives. On assessments of the 2010 biodiversity target he described reasons for failure to meet this target and

recommendations for post-2010 indicators. Hutton detailed the CBD indicator framework, agreed to in 2006, noting there is uneven information on species and ecosystems. He stated that data are lacking and investment in metrics and long-term monitoring is inadequate, although there are ongoing efforts in these areas. Hutton also explained the use of a modified “Drivers, Pressures, States, Impacts, and Responses” (DPSIR) model for organizing indicators. Describing empirical tests using indicators from the 2010 BIP, he offered the provisional conclusion that, in spite of some national level successes, the 2010 biodiversity target has not been met at the global level. He said some of the factors contributing to this failure were the lack of mainstreaming biodiversity concerns into land-use change decisions and failures to persuade the public and decision makers of the importance of biodiversity. He provided recommendations for beyond 2010, including linking headline indicators to the main target, creating specific sub-indicators to support these and modifying the CBD indicator framework into four focal areas based on a simplified DPSIR model.

David Cooper, CBD Secretariat, discussed: the failure to achieve the 2010 target; what should be done differently in



David Cooper, CBD Secretariat

the 2011-2020 timeframe; and better implementation of the CBD. He highlighted, *inter alia*, that the drivers of biodiversity loss are increasing and that land-use change is one of the key drivers of such loss. He stressed that action at multiple levels should be taken, including: addressing underlying drivers; using Specific, Measurable, Attainable, Reliable and Time-bound (SMART) targets and mechanisms to support

implementation; integrating the new CBD Strategic Plan and biodiversity targets into national actions; integrating biodiversity into broader policies and strategies; capacity building; and developing knowledge networks.

## KEYNOTE ADDRESSES ON IMPORTANT AND EMERGING ISSUES FOR MAKING POST 2010 TARGETS

Pavan Sukhdev, Study Leader of The Economics of Ecosystems and Biodiversity project (TEEB), UNEP, spoke on “the economics of biodiversity and ecosystems - a tool



Pavan Sukhdev, Study Leader of TEEB, UNEP

to improve understanding and impact.” He described the growing recognition of the interconnection between economics and biodiversity, noting that organizers of the 2010 World Economic Forum in Davos took biodiversity concerns seriously. Sukhdev stated that the “economic invisibility” of environmental costs and benefits is a driver of biodiversity loss. As an example, he highlighted that land conversion from mangroves

to shrimp farms is economically justified when private benefits alone are considered, but not when public benefits and losses are included. He underscored the importance of presenting TEEB’s findings in ways tailored to specific audiences, including policy makers and citizens. He said there is no single economic value for ecosystem services and biomes, and emphasized the importance of considering socio-economic contexts in these calculations. Further highlighting the social components of environmental decisions, he declared that “economics is mere weaponry; its targets are ethical choices,” and urged precautionary approaches for ecosystems “at the threshold of irreversibility,” such as coral reefs. He asked participants to consider five points in developing new targets, namely to: ensure measurable targets; include ecosystem services in calculating trade-offs; agree on a common framework of indicators, even if not on their relative values; agree on the direction of change, if not the speed; and develop a shared vision to achieve a “net positive impact on biodiversity.”

Robert Watson, Chief Scientific Advisor, Department of Environment, Food and Rural Affairs, UK, underscored that the loss of biodiversity and ecosystems is also a food, human and water security issue. In setting post-2010 targets, he stressed that biodiversity conservation must be approached holistically



Robert Watson, Chief Scientific Advisor, Department of Environment, Food and Rural Affairs, UK

as well as address the following drivers of biodiversity loss: habitat change; climate change; invasive species; overexploitation; and pollution. He noted that the drivers are multiple, vary by region and make setting a meaningful global target challenging. On the linkages between climate change and biodiversity, Watson recognized the role of ecosystem-based adaptation, wherein biodiversity and ecosystem services are used to help affected communities adapt to the adverse effects of climate change. He also highlighted the role of economic and non-economic valuation, and the need to eliminate perverse subsidies. In concluding, he stressed the need for an IPBES and warned that the “world is long on rhetoric and short on action,” noting that biodiversity loss has not been conveyed as a critical issue to the public at large.

One participant underscored the need for language that aligns with the agendas of national decision makers, while another stressed the importance of forests and reduced

emissions from avoided degradation and deforestation (REDD). Sukhdev recognized the importance of REDD and all forests, including mangrove forests, while Watson reiterated the importance of valuation of ecosystem services and a holistic approach to conservation of biodiversity.

In a discussion of “Post-2010: Transforming the global economy to save nature,” Ashok Khosla, President, International Union for Conservation of Nature (IUCN), said the earth is facing multiple interlinked crises, including poverty, climate change and biodiversity loss, which cannot be addressed in isolation. He noted that strong evidence of threats such as climate change and biodiversity loss does not always catalyze action, and called for developing more effective strategies to encourage action. Pointing to recent declines in tiger populations after a period of recovery, he emphasized that economic pressures affect species protection. He offered examples of successful projects for improving ecosystems and livelihoods in Tanzania, Argentina, and Bangladesh, to demonstrate the potential for reversing biodiversity declines with local participation.

Khosla encouraged the development of specific policies to address specific threats, rather than general recommendations, suggesting these would be more readily taken up by politicians. Stating that moral arguments are not persuasive to politicians, Khosla encouraged focusing on the value of biodiversity in subsidizing the economy, and offered examples of the economic value of ecosystem services like pollination, pest control and water purification. He argued that the Millennium Development Goal (MDG) targets were not bold enough and proposed that to make a substantive difference, action would be needed that would “outrage” people and address the root causes of biodiversity loss, such as a “very flawed economic system.”

Johan Rockström, Director, Stockholm Resilience Centre, Sweden, emphasized the importance of biodiversity for social and economic development as well as for ecosystem functioning and resilience. He pointed to evidence that the previously-held belief that ecosystem change is predictable and controllable is an exception, noting that systems are resilient but can tip over abruptly. He further noted that there is no global environmental change model that incorporates tipping points. Rockström reviewed various disturbance regimes and multiple ecological feedbacks caused by biodiversity loss, highlighting the challenges posed by ocean acidification and the need to maintain critical thresholds. He also highlighted the diverse roles of agricultural systems as carbon sources and carbon sinks. Finally, Rockström called for the need to define a safe operating space for humanity to protect nature from human activities.



Ashok Khosla, President, IUCN



Jostein Gaarder, Norwegian author and founder of the Sophie Prize, addressed the conference in a special session

## SPECIAL SESSION

Jostein Gaarder, Norwegian author and founder of the Sophie Prize, challenged participants to consider a “Copernican revolution” by thinking about obligations to protect biodiversity for future generations, using the principle of reciprocity. He emphasized that “we belong to the planet” and have a “cosmic” responsibility to conserve not only cultural traditions but also our natural heritage.

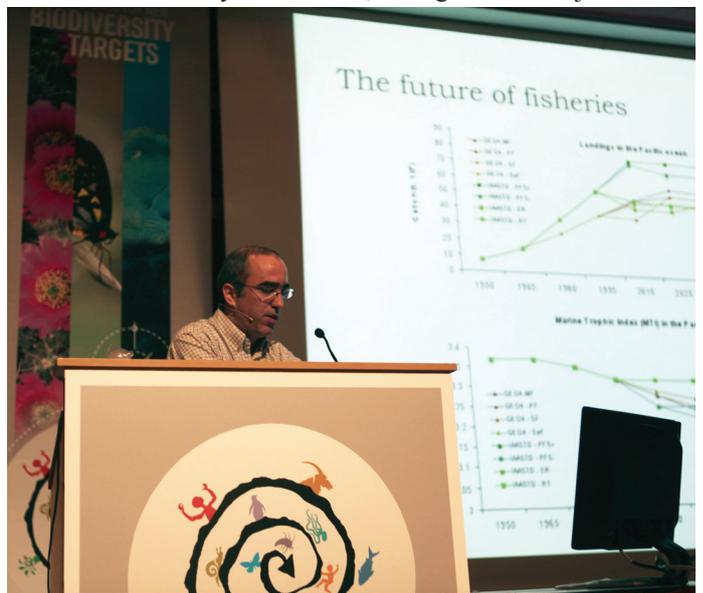
## MEETING TIPPING POINTS AND SERIOUS LARGE-SCALE CHALLENGES FOR MAJOR ECOSYSTEMS

On Tuesday, James Seyani, Malawi, chaired the first session of the day. Paul Leadley, Université Paris-Sud XI, France, introduced the Global Biodiversity Outlook 3 (GBO3), noting the analysis compares multiple models and observations of projected changes in biodiversity and ecosystem services. He stated that a single target for biodiversity at a global scale has no sound scientific basis and is not politically useful, and recommended instead a regional focus. On post-2010 targets, he encouraged considering scenarios in target and indicator development and using the precautionary principle to guide action despite uncertainty.

Henrique Pereira, Center for Environmental Biology, University of Lisbon, outlined the GBO3’s projected marine and freshwater ecosystem futures, noting that the major



Johan Rockström, Director, Stockholm Resilience Centre, Sweden



Henrique Pereira, Center for Environmental Biology, University of Lisbon



Carlos Nobre, Brazilian Institute for Space Research

drivers of change are resource exploitation, pollution, climate change, habitat change, and invasive species. Underscoring the difficulty in reversing changes after systems reach tipping points, he identified examples of these thresholds including fisheries collapses and eutrophication. Among other solutions for reducing negative impacts, he listed creating protected areas, improving land use planning, halting illegal fishing, and restoring coastal habitats and catchment areas.

Carlos Nobre, Brazilian Institute for Space Research, explored whether global warming, deforestation, increased droughts and forest fires can tip the current biome-climate equilibrium in the Amazon. He described vegetation substitution in “forest-savanna equilibrium states,” cross-scale interactions and how system components reinforce each other to amplify the risk of crossing thresholds. He reviewed current Brazilian policies and laws, including the commitment to reduce greenhouse gas emissions by 36-39% against “business as usual” (BAU) by 2020, and highlighted that deforestation rates in Brazil have been reduced by 75% over the last five years.

Mark Winslow, International Crops Research Institute, India, argued that the UN Convention to Combat Desertification (UNCCD) is more focused on measuring desertification than on developing solutions to it. He suggested that sustainable land management can promote biodiversity conservation and called for: increased CBD cooperation with the UNCCD; monitoring the reasons for problems with agricultural systems; monitoring farm agro-biodiversity; and focusing on the value of new crops added to the agricultural system, including their nutritional status.

Participants asked for clarification on the viability in developing countries of publicly-funded payment for ecosystem services (PES), tipping points and complex



Mark Winslow, International Crops Research Institute, India



Jan Helge Fosså, Institute for Marine Research, Norway

ecological processes of vegetation substitution. Nobre highlighted the difficulty in implementing PES mechanisms in developing states and their greater chance of success at the local scale. Leadley also reiterated the need to identify regional tipping points.

Jan Helge Fosså, Institute for Marine Research, Norway, outlined evidence for ocean acidification and its impacts on biodiversity, providing examples from globally important fish stocks. He noted that many ocean scientists supported the 2008 Monaco Declaration calling for action on ocean acidification, based on evidence that it is detectable and accelerating and that severe damage to marine ecosystems is imminent. He presented evidence from natural and experimental systems of declining species diversity and negative impacts on marine organisms along decreasing pH gradients, particularly for calcifying organisms like corals. He advised fisheries managers to maintain robust fish stocks and use adaptive management, as pressures like overfishing may exacerbate the effects of acidification.

Leadley outlined the biology and chemistry of corals, noting their importance in fisheries, storm surge protection and



Paul Leadley, Université Paris-Sud XI, France

tourism. He called coral reefs “one of the most convincing” of tipping points outside the Arctic tundra, as evidence of bleaching has already been observed. He listed five messages to convey to decision makers and resource managers, namely the need to: minimize atmospheric CO<sub>2</sub> to under 450ppm; minimize global warming to less than 2°C; reduce additional stressors on marine systems, such as eutrophication, pollution and destructive fishing; restore ecosystem functions; and engage in active management. He concluded that, although highly ambitious biodiversity targets cannot be met, highly ambitious targets for expanding protected areas and reducing direct drivers of biodiversity loss could increase resilience, adaptation and recovery of some coral reefs. He underscored the need to improve communication of uncertainty and develop stronger dialogues with the public, industry and policy makers.

Ritesh Kumar, Wetlands International, discussed challenges to wetland management, highlighting that invasive species and climate changes are among the drivers of wetlands loss. He called for the integration of ecosystem management goals with broader developmental planning frameworks and with economic incentives to increase the involvement of local communities.

Participants highlighted: the transboundary component of wetlands conservation; synergies between the Convention on International Trade in Endangered Species of Wild Fauna and Flora and CBD; and setting ambitious post-2010 targets.



Ritesh Kumar, Wetlands International



Patrick ten Brink, Institute for European Environmental Policy

be provided at a lower cost than artificial technological alternatives. He further highlighted the role of valuation and capturing willingness-to-pay to inform impact assessments, land-use decisions and levels of compensation.

In discussions on the challenges of measuring ecosystem services and assigning economic values, participants noted that these are locally variable. A participant suggested additional guidelines for these assessments and increased access to case studies from a variety of countries and institutional settings. One participant suggested that additional consultation across countries is required for assessing the level of incentives needed to avoid poverty-driven biodiversity losses.

Participants discussed the merits of voluntary versus compulsory PES and fees for resource use. Panelists noted that: genetic resources are considered in economic valuations of species; more work is needed to assess the benefits of bio-mimicry in human design; and there is a need to avoid economic overreach and ensure that the intrinsic value of biodiversity is not lost in economic assessments.

Russell Mittermeier, Conservation International, discussed the “hot spots” approach to biodiversity conservation as well as

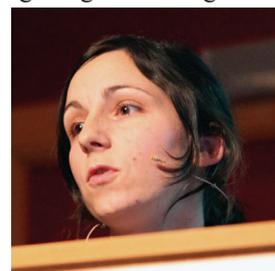


Russell Mittermeier, Conservation International

the designation of high biodiversity wilderness areas. He underscored that areas of high irreplaceability, with high level of species endemism, are candidate hot spots, highlighting Madagascar as one of the highest-priority areas based on the richness of its biodiversity. He described a number of funding mechanisms for conservation in hot spots, from the Critical Ecosystem Partnership Fund to the Global Conservation Fund. He

underscored that all forests in these areas could benefit from the REDD plus conservation in developing countries (REDD+) mechanism and called for greater cooperation between the CBD and the UN Framework Convention on Climate Change (UNFCCC) to address economic imbalances in the world. He summarized suggestions for the new CBD Strategic Plan and post-2010 targets, including: establishing a high-level target to halt biodiversity loss by 2020; setting 50% of the planet under a network of effectively managed protected areas; halting deforestation; and halting overharvesting of fisheries resources.

Katia Karousakis, Organisation for Economic Co-operation and Development (OECD), highlighting outcomes from the UNFCCC COP 15 in Copenhagen, noted progress made on text that recognizes the use of REDD+ in incentivizing the protection and conservation of natural forests and their ecosystem services. Karousakis discussed the potential to promote and enhance biodiversity co-benefits under REDD+. She detailed possible direct PES and layered



Katia Karousakis, OECD

## SPECIAL SESSION

Nick Davidson, Ramsar Secretariat, reminded participants that February 2, 2010, is World Wetlands Day and highlighted that degradation and loss of wetlands is occurring more rapidly because of land-use change, agriculture and water regulation impacts. He underscored that the “Changwon Declaration on human well-being and wetlands” recognizes wetlands as the major source of freshwater for people and called for countries to implement the Ramsar Convention and national wetland policies, noting that a wide range of implementation tools can be used to improve the state of wetlands.

## REFLECTING THE ECONOMICS OF BIODIVERSITY AND ECOSYSTEM SERVICES

Ove Hokstad, Ministry of Fisheries and Coastal Affairs, Norway, chaired the session. Carsten Neßhöver, Helmholtz-



Carsten Neßhöver, UFZ, Germany

Centre for Environmental Research (UFZ), Germany, and TEEB, on behalf of Heidi Wittmer, UFZ, explained that economic approaches to biodiversity can assist with: providing information; stimulating policy making; setting incentives; reforming environmentally-harmful subsidies; and regulating use through standard setting and liability rules.

Using the examples of land use in Indonesia and global fish stock management, Neßhöver outlined governance aspects and the role of economics in setting and meeting post-2010 biodiversity targets. Pointing to the need for good governance, he emphasized that the benefits and costs of biodiversity conservation efforts differ at global, national and local levels. He stated that economics can link biodiversity with human well-being, development targets and climate change mitigation and adaptation efforts.

Patrick ten Brink, Institute for European Environmental Policy, addressed the integration of economic valuation into policy assessment. He highlighted that certain market values are known, some are appreciated when they are gone and others, like climate change, have long been ignored. He noted that there is often tension between private and societal interests but said economic valuation can help identify the value of natural assets and determine where ecosystem services can

carbon and biodiversity payments, including through the Climate, Community and Biodiversity Alliance and CarbonFix Standards. She cautioned that these initiatives might not be able to address biodiversity conservation at the global scale, and that regulatory and policy mechanisms may also be needed. She noted that successful REDD+ will likely lead to biodiversity co-benefits and said investments in economic



**Susan Brownlie,**  
de Villiers Brownlie  
Associates, South Africa

evaluation and spatial mapping of biodiversity and ecosystem service benefits are needed to help REDD+ investors target projects that will bring such co-benefits.

Using South Africa as an example, Susan Brownlie, de Villiers Brownlie Associates, South Africa, stated that international commitments and national legislation, such as participation in international conventions and tax incentives to reward conservation, may not be sufficient to protect biodiversity. She clarified that without stringent enforcement, adequate penalties and non-negotiable rules, businesses will exploit flexibility in search of the “quickest, dirtiest fix.” She emphasized that biodiversity concerns are increasingly important to business in relation to a series of social, operational, regulatory, reputation and compliance risks. However, she explained that environmental protection and social equity are often traded for short-term economic viability, and that small companies in particular might not recognize the importance of biodiversity. She listed strategies to encourage businesses to adopt better practices, including, *inter alia*: clear national-level targets for biodiversity and habitat protection; strict enforcement of performance standards; expedited permitting as a reward for good planning; support for business and biodiversity associations; and capacity building for consultants.

One participant stated that there is some confusion on implementation of REDD on the ground and asked whether there are guidelines to implement REDD at that level. Another wondered why REDD+ has so many phases and whether delaying implementation may trigger loss of interest. One participant worried about investment flight to different countries because of increased regulation. Panelists underscored that REDD+ was proposed to provide incentives to tropical countries and highlighted a number of initiatives to facilitate local REDD+ implementation.

## REFLECTIONS ON FUTURE CHALLENGES FOR ADDRESSING DRIVERS OF BIODIVERSITY LOSS

On Wednesday, Chair Jon Heikki Aas, Ministry of Foreign Affairs, Norway opened the session, which began with a video



**Ivar Baste,**  
Ivar Baste,  
Director, EMG Secretariat,  
UNEP

about the International Year of Biodiversity highlighting species losses, benefits from biodiversity and the need for urgent action. Ivar Baste, Director, Secretariat of the Environment Management Group (EMG), UNEP, presented on collaborative efforts on biodiversity across the UN system through the EMG. He highlighted the EMG’s draft document on “Biodiversity in the UN: a



**Thomas Lovejoy,** Heinz Center for Science, Economics and the Environment, US

contribution to the post-2010 biodiversity agenda.” Baste outlined the importance of enhanced institutional integration for international environmental governance, and presented ways in which sectors and UN agencies can contribute to biodiversity protection, particularly through the integration of biodiversity targets into development cooperation efforts.

Participants discussed: increasing sectoral biodiversity target-setting; gender and regional representation in the EMG; opportunities for countries to provide feedback on the EMG report; and UN system responses to drivers of biodiversity loss, including population pressures and consumption and production patterns.

Thomas Lovejoy, Heinz Center for Science, Economics and the Environment, US, noted that most climate change discussions are dominated by the physical sciences but the reality is more complex. He described the ways in which biodiversity is affected by climate change, highlighting the impact of glacial melting in Glacier National Park on American pika and the correlation between climate change and mountain pine beetle outbreaks in North America. He suggested revising conservation strategies by, *inter alia*: increasing natural connectivity between protected areas; ecosystem restoration at a global scale; and restoring grasslands. Christian Prip, UN University (UNU), assessed National Biodiversity Strategies and Action Plans (NBSAPs) for the CBD, noting their contribution to sustainable development. He called for: a new generation of NBSAPs as part of the post-2010 Strategic Plan; no new Programmes of Work before implementing existing ones; and “tearing down the walls” between Multilateral Environmental Agreements (MEAs).

One participant highlighted the importance of participatory approaches in implementing NBSAPs and wondered whether that aspect is being prioritized. Prip acknowledged that there is a trend towards greater community participation in NBSAPs implementation.



**Ladislav Miko,** Director,  
Nature Directorate, European  
Commission

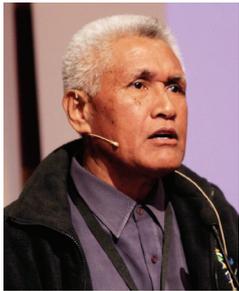
In the second part of the session reflecting on future challenges, chaired by Somaly Chan, Cambodia, panelists shared regional and country experiences with biodiversity policies and institutions. Ladislav Miko, Director, Nature Directorate, European Commission, described EU experiences with using economics to integrate biodiversity

concerns into policy. He described European policy efforts to measure natural capital, develop protected areas and address drivers of biodiversity loss. He highlighted, among other actions, the development of: a set of European biodiversity indicators; the Natura 2000 network of protected areas; green infrastructure; and impact assessments for policy proposals. He underscored the need, from politicians' perspectives, to consider compensation for the loss of jobs in sectors that consume natural capital, and the potential employment opportunities in strategies for the protection and restoration of biodiversity and ecosystem services.

Tanya Abrahamse, CEO, South African National Biodiversity Institute, South Africa (SANBI), identified institutional strength as a key component of the success of sectors like mining and tourism, and advised focusing on institutional development in biodiversity conservation efforts. Presenting SANBI as a model for other national biodiversity institutes, she detailed the "challenges and conundrums" facing the institution, including, *inter alia*, the difficulty in communicating the concept of biodiversity, competition for funding with other sectors and perceived conflicts between development and conservation goals.



Tanya Abrahamse, CEO, South African National Biodiversity Institute, South Africa



Fiu Mata'ese Elisara-La'ulu, Executive Director, Ole Si'osi'omanga Society, Samoa

Presenting perspectives of small island developing states (SIDS), local communities, and indigenous peoples, Fiu Mata'ese Elisara-La'ulu, Executive Director, Ole Si'osi'omanga Society, Samoa, lamented that economic considerations take precedence over the social, environmental and cultural components of sustainable development. He explained the need to consider issues

of land ownership in biodiversity conservation plans, noting that many indigenous people do not trust their governments. Identifying Samoa as highly vulnerable to climate change and listing the biodiversity richness of South Pacific SIDS, he suggested enhancing existing traditional and community governance structures and directing funding to "action on the ground."

Yoshihiro Natori, UNU, described the "Satoyama Initiative" as a socio-ecological production of landscapes formed and maintained as a result of interactions between humans and nature and their role in improving human livelihoods and biodiversity conservation. He underscored, *inter alia*, the three-fold approach of the initiative: consolidating wisdom; integrating traditional ecological knowledge with modern science; and creating new co-management systems. Søren Brandt, Herning municipality, Denmark, provided an overview of local "climate" and "nature in action" plans, including their goals to meet reduction in emissions targets, conserve species and prevent environmental degradation. He suggested that in developing post-2010 targets there is a need for binding action plans, public information, and cooperation between local and national bodies.



Yoshihiro Natori, UNU

## DISCUSSION IN BREAKOUT GROUPS ON HOW TO MAINSTREAM BIODIVERSITY AND ECOSYSTEM SERVICES INTO SOCIETAL DECISIONS

In the afternoon, participants split into three working groups and were invited to reflect, through interactive exercises and "small-table" discussions, on the following questions and statements: how the values of biodiversity and ecosystem services can be integrated into policy-making and all areas of public life; at country-level, whether successes in mainstreaming biodiversity outweigh the defeats and whether biodiversity is a central issue of policy making; and whether biodiversity is known to be a critical issue for the future by citizens.

**WORKING GROUP ONE:** This working group was facilitated by Carsten Neßhöver, UFZ. Participants agreed that the economic aspects of ecosystems services have the potential to help halt biodiversity loss, but noted the need to first develop culturally- and economically- appropriate incentives. The majority of participants agreed that defeats have outnumbered successes in terms of mainstreaming biodiversity, citing a lack of government support, funding and coordination. Participants agreed that few citizens recognize biodiversity as a crucial issue. In smaller groups, participants discussed the challenges associated with mainstreaming biodiversity awareness, policies and practices. They identified a number of key issues: building capacity among citizens through better approaches to communication, education and participation; targeting languages and incentives toward specific stakeholders; and developing better media and marketing approaches and relationships.

Participants then discussed governance, institutions and leadership. They identified a variety of suggested strategies such as: establishing partnerships and communication lines on both vertical (local, national, and global) and horizontal levels (across ministries and within sectors); harmonizing legal frameworks and standards; and recognizing local traditional knowledge, as well as relaying this knowledge to professional and political forums. They concluded that building solidarity among stakeholders is required to rally governmental support for biodiversity issues since action plans, however robust, cannot be implemented without adequate funding.

**WORKING GROUP TWO:** This working group was facilitated by Mark Schauer, TEEB. On integrating the values of biodiversity into policy-making, participants suggested that wherever there are real market values, nature should be commodified. One called for integrating cultural and societal



Carsten Neßhöver, Helmholtz Centre for Environmental Research (UFZ), Germany, moderated a breakout group

values with the economic and political roles of biodiversity. Another argued that some of the values associated with biodiversity are intangible and indicated that measuring them could be “very challenging.” Highlighting that politicians value security, taxes and votes, one participant underscored that measuring the value of biodiversity is critical to promoting its relevance to said politicians. One participant raised the issue of time-scale, noting that politicians think in the short-term and thereby often fail to recognize the long-term benefits that biodiversity conservation brings. Another lamented that even when a developing country recognizes the value of conserving biodiversity and promotes a policy in that direction, developed countries sometimes fail to support them.

On successes and defeats, many participants felt that the successes outweighed the defeats, with one participant saying that conflicts between mining and biodiversity conservation in his country have resulted in decisions favoring biodiversity conservation. However, another emphasized the political obstacles in securing success. On whether biodiversity is a critical issue, some participants noted that poverty and human population are considered more important and policy-relevant. One participant indicated that in his country less than half of the population knows what biodiversity is.

On mainstreaming biodiversity at the country-level, some recognized: the potential of the TEEB report in making a “big splash;” NBSAPs as a useful tool; and the need for greater integration of non-governmental organizations working on biodiversity issues. Some emphasized the importance of reviewing “failures” to improve policies. On biodiversity as a critical issue, many recognized the role of the media as a promotional and educational tool. Others noted a lack of clarity on the meaning of biodiversity; to overcome this, many suggested developing a tool-kit for schools and citizens. Others suggested putting emphasis on good projects, providing concrete examples and bringing more science to the table. Many recognized the opportunity to “jump on the climate bandwagon,” with others emphasizing the links between biodiversity and development and the need for greater communication at the sectoral level.

**WORKING GROUP THREE:** This working group was facilitated by Natasha Walker, consultant. Some participants identified central challenges to integrating the values of biodiversity and ecosystem services into policy-making and public life, including: stakeholder engagement and ownership; communication and awareness; multiple types of valuation; and governance and institutional frameworks. Participants noted the challenges involved in valuation processes, including the authenticity of data, the need for peer-reviewed information and improving the abilities of consultants conducting assessments. One noted the need for regionally-specific examples of ecosystem services, and another suggested that valuation should take an ecosystem instead of single-species approach. Others emphasized multiple values and noted concerns with black market values for disappearing species.

Some participants identified mainstreaming successes, particularly in countries where biodiversity was seen as linked to health and tourism. Participants debated the scope and definition of mainstreaming, with one suggesting that it involves cross-sectoral integration. Suggestions for enhancing mainstreaming included: increasing coordination across levels; determining how different sectors understand biodiversity;

providing sector-specific tools to bring conservation interests into debates on areas like finance and budgets; and linking biodiversity goals to regional conservation priorities.

Discussing communication strategies, participants stressed the need for more simplified messages, with some suggesting a single message must be developed to avoid contradictory claims whereas others contested that regionally-specific messages tailored to specific audiences are required. One participant suggested a global communication plan with localized delivery strategies. Participants also explored the media, educational channels and a biodiversity clearinghouse as mechanisms for increasing public awareness. One suggested using images to create a sense of urgency, and others suggested developing slogans and focusing on impacts on regionally-meaningful species.

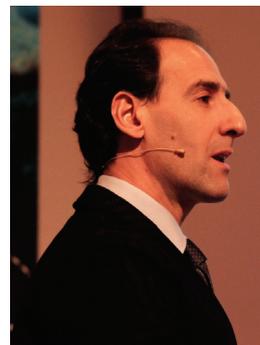
On Thursday morning, Finn Katerås invited the facilitators of Wednesday’s working groups to share a summary of their groups’ discussions.

## LESSONS LEARNED FROM THE 2010 TARGET AND CHALLENGES FOR SETTING POST-2010 BIODIVERSITY TARGETS

The Thursday morning session on lessons learned from the 2010 target and challenges for setting post-2010 targets was chaired by Åsa Norrman, Sweden.

Jo Mulongoy, CBD Secretariat, outlined options for the future CBD Strategic Plan and biodiversity targets, highlighting the need to build on the existing 2002-2010 Strategic Plan and on available scientific knowledge. He presented the proposed content for the Plan and outlined 20 targets clustered into four strategic goals to address: indirect drivers; direct drivers; safeguards and restoration of biodiversity and ecosystem services; and enhanced implementation.

Andrew Stott, Joint Nature Conservation Committee, UK, and Maximiliano Cuñha, Ministry of the Environment, Brazil, presented on the outputs of the “UK/Brazil meeting on the CBD Strategic Plan.” They highlighted its key themes and recommendations, including the call for: a new subsidiary body on CBD implementation to replace the Working Group on the Review of Implementation (WGRI); an IPBES to support the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA); and a review of financial and compliance mechanisms. They underscored support for national implementation and regional cooperation, noting that some of the obstacles against achieving these included lack of commitment, access to financial resources, and knowledge and tools to make them effective.



Salvatore Arico, UNESCO

Salvatore Arico, UN Educational, Scientific and Cultural Organization (UNESCO), summarized the outputs from the UNESCO “International Year of Biodiversity Science-Policy Conference,” and presented recommendations for the post-2010 targets, including the recognition of: the need to conserve the most important sites for biodiversity not just a percentage; national, sub-national and regional plans as fundamental building blocks; indigenous and local knowledge in biodiversity conservation; taxonomy as the foundation of biodiversity

knowledge; gendered division of labor which has resulted in distinct forms of biodiversity-related traditional knowledge; and the need for an IPBES.

Anne Larigauderie, DIVERSITAS, France, underscored the lack of appropriate tools for addressing the 2020 biodiversity targets, noting that some targets, such as the eradication of invasive species and the elimination of ocean acidification, are not achievable in that time-frame. She underscored that post-2010 targets should encompass the protection of cultural landscapes and large areas of intact wilderness and the prevention of extinction of threatened species. She joined the call for an IPBES and proposed an observation component, noting that the Group on Earth Observations Biodiversity Observation Network (GEO BON) can provide a “global scientifically-robust framework” for the detection of biodiversity change.



Anne Larigauderie,  
DIVERSITAS, France

Shirin Karryeva, Turkmenistan, chaired the second part of the session. Balakrishna Pisupati, UNEP, shared UNEP activities related to developing biodiversity targets. On progress made on 2010 targets between the third and fourth national reports, he highlighted the development of new indicators for targets and the increased use of existing indicators by countries. However, he noted the lack of indicators for some targets like access and benefit sharing. He showed an increase in the extent and number of protected areas, but noted uncertainty about the management effectiveness and long-term sustainability of these areas. He stated that short-term targets for 2020 must: be designed to promote longer-term 2050 goals; involve stakeholder ownership and sectoral targets; and support the development of indicators.

One participant proposed ensuring that targets are easily understandable. On the integration of biodiversity-related MEAs, one suggested learning from synergies among international chemical conventions. One participant questioned how to achieve sectoral ownership of targets at the international level, and another responded that the EMG provides one forum for increasing international sectoral participation in target development. Participants discussed: allowing parties to define their own implementation needs; the need for 5-10 year interim targets and landmarks; support for bioinformatics development; and funding for conservation efforts from developed countries. Several pointed to poverty as a reason for failures to meet biodiversity targets. On the IPBES, participants raised questions about institutional development, infrastructure, and financial contributions for the development of such a body, and one supported its creation but cautioned that its limits must be clearly defined. After a question on the potential relationship between SBSTTA and IPBES, one participant responded that the IPBES would be an independent, apolitical body that would not compete with SBSTTA.

Jane Smart, IUCN, described the status of species worldwide according to the IUCN Red List Index, showing that while birds are “holding up,” mammals are decreasing, especially in Asia, amphibians are “losing ground” and corals are “collapsing.” Outlining the IUCN position on the Strategic

Plan and post-2010 targets, she proposed changes including “halting” deforestation and pressure on freshwater and terrestrial ecosystems rather than “halving” them. She underscored priority areas, namely: scrutiny of progress in 2012; performance of a mid-term review in 2015; the halting of biodiversity loss by 2020; a logical framework of targets and indicators; linkages between the Strategic Plan and the Programmes of Work; an “informed electorate”; and establishment of “optimistic” and “ambitious” targets.



Jane Smart, IUCN

Joji Carino, Indigenous Peoples’ International Centre for Policy Research and Education, (Tebtebba), highlighted the need for open and inclusive environmental governance and REDD+ implementation with social and biodiversity co-benefits. She emphasized the traditional knowledge indicators relevant to indigenous peoples.



Joji Carino, Tebtebba

Participants discussed whether a zero biodiversity loss target is advisable in light of evidence that anticipates inevitable species losses. One commented that ambitious “headline” goals are needed in spite of such evidence, and encouraged further debate on what public message should be conveyed. On traditional knowledge, one participant called for increased consideration of traditional knowledge in the CBD, and another welcomed increased collaboration between traditional knowledge and science. One questioned whether a focus on more endangered species diverted attention from more common species facing population declines. Participants discussed conflicts between human development and biodiversity and habitat protection, with one emphasizing that “ultimately, people depend on biodiversity.”

## DISCUSSION IN BREAKOUT GROUPS ON LESSONS LEARNED FROM THE 2010 TARGET AND ON SETTING OF POST-2010 BIODIVERSITY TARGETS

On Thursday afternoon, participants met in working groups to discuss “lessons learned from the 2010 target and setting the post-2010 biodiversity targets.” They addressed questions on: what problems hindered progress on the 2010 targets; what the main successes were in reaching the 2010 target; whether there was, in participants’ experience, a substantial effort in their country to align work on biodiversity and climate change; whether ambitious targets help stimulate change; and whether a global framework should stimulate direction but not speed. They further reflected on key actions that a new global strategy should include.

**WORKING GROUP ONE:** Asghar Fazel, UNEP-WCMC, facilitated this working group. The majority of the group agreed that the targets were “too unknown,” meaning they: failed to translate at a local and national level; were too confusing; did not clearly outline the benefits of conserving



Participants in a breakout group identified drawbacks of the 2010 biodiversity target

biodiversity; and made progress difficult to measure and track. Many participants agreed that the targets conflicted with other international conventions, and that target timeframes were too ambitious. Next, participants discussed the main successes achieved by striving, though ultimately failing, to meet the 2010 targets. These included improvements in mainstreaming, conservation, communication, ABS and data accessibility. Most participants agreed that the targets helped establish biodiversity conservation on many national agendas and inspired scientific research programmes as well as data-sharing initiatives and systems.

On the question of aligning biodiversity with climate change, participants noted that climate change was an unavoidable element of biodiversity conservation, though more dire and urgent in some regions than others. Participants expressed a variety of opinions about whether ambitious post-2010 targets would serve to stimulate progress. Some noted that when targets are set too low, they convey resignation to failure, while ambitious targets communicate urgency and catalyze new scientific, economic, and political approaches and solutions. Others argued that targets should be realistic, rather than ambitious, or they will not be achieved at all. On whether a global biodiversity framework should dictate direction but not speed, participants agreed that both were imperative: targets should describe both the direction necessary for progress and provide time-constrained milestones for measuring progress.

On the key challenges a post-2010 strategy should address, participants recognized: effective strategies for rationale and communication; specificity on local, national and global scales; relevance for both public and private sectors; clear and compelling economic incentives, subsidies and policies; and milestones for measuring progress toward targets.

**WORKING GROUP TWO:** Gabriele Obermayr, Austria, facilitated this working group. On the problems with the 2010 target, participants were split: although none found them irrelevant, many recognized some level of conflict with other agendas. On the target's main success, one participant noted that it was not the targets that pushed conservation initiatives in his country but those initiatives helped achieve some of the targets. On aligning biodiversity conservation with climate change, some participants lamented that despite progress made on climate change policies, biodiversity policies were lagging behind. On whether ambitious targets stimulate change, some participants noted that much depended on the definition of "ambitious" and underscored that targets that are "too ambitious" might become "paralyzing." Most participants agreed that the global framework should dictate both direction and speed. Participants then discussed, in small groups,

ideas for creating a new global strategy. They proposed, inter alia: preventing extinction of threatened species; a network of connected protected areas; empowering local communities in conservation; engaging the business sector; and science-based targets. They also encouraged: education and dissemination of knowledge on biodiversity; public participation in the preparation of management plans; funding and capacity building at regional and sub-regional levels; major communication between what "happens on the ground" and what "happens in meetings"; baselines for targets and indicators at a global and regional level; poverty alleviation; and a supporting environment that includes IPBES and GEO BON.

**WORKING GROUP THREE:** Natasha Walker facilitated this working group. On reaching the 2010 target, participants did not reach consensus, but many identified the target as "too unknown," with some mentioning lack of public awareness and overly technical targets. Others indicated conflicts between government priorities and unrealistic time frames as implementation barriers. Among the successes, a few noted advances in data accessibility, communication and mainstreaming, and the majority identified the greatest progress in conservation. Some agreed that their countries had successfully aligned biodiversity and climate change activities, but many indicated these efforts were limited. Most were equivocal on the role of ambitious targets in stimulating change, with several noting that targets must be both ambitious and realistic, and one commenting that unless there is a clear plan and the capacity to reach targets, ambitious goals are "just paper." Participants expressed mixed views on the role of a global biodiversity framework in setting the speed of change.

Based on small group discussions, Walker identified a series of themes for the ensuing conversation on key issues that must be addressed in the post-2010 agenda, specifically: targets; implementation; synergy among conventions; poverty as a driver; communication and participation; and mainstreaming and sectoral integration. Within these categories, participants identified, inter alia: the need to protect livelihoods; compliance and enforcement measures; finance and implementation structures; the need for clear communication with stakeholders; and the potential to learn lessons from the language of the MDGs. Many underscored the importance of cross-cutting targets across levels and sectors and the need for "scalability" of targets across regional, national, local and sectoral levels. Several emphasized the importance of synergies among climate change, desertification and other biodiversity-related MEAs.

On targets, participants debated specific timelines and interim goals, with some raising concerns with requiring "too many milestones." One advised detailing regional- and habitat-specific targets. One participant emphasized the ABS regime could facilitate implementation by enabling resource flows for conservation into developing countries, and another proposed disseminating best practices and case studies. One highlighted challenges in accessing resources for implementation, advocating for revised Global Environment Facility procedures. Participants discussed PES, with one suggesting it could provide sustainable financing to support biodiversity-related activities, and another noting it could contribute to the joint goals of poverty reduction and conservation.

Finn Katerås opened the session on Friday morning. The working group facilitators summarized outputs from Thursday's discussions.

## COMMUNICATING BIODIVERSITY

On Friday morning, Langston James “Kimo” Goree VI, Reporting Services, International Institute for Sustainable Development, chaired this session. In introducing the speakers and inviting the participants to engage in a stimulating discussion, he emphasized that “biodiversity is not climate change” and that promoting biodiversity as a priority is a challenge in a year that will likely be dominated by climate change negotiations.



Langston James “Kimo” Goree VI, Director, IISD RS

He underscored the importance of communicating biodiversity in a way that is accessible to the public. Fredrik Moberg, Albaeco, Sweden, discussed options and means for improving



Fredrik Moberg, Albaeco, Sweden, juggled plastic animals to demonstrate why communicating biodiversity in creative, effective ways is crucial to reaching targets

communication on biodiversity. He noted that often there is failure in communicating a strong message because the audience does not feel “connected” to the topics in the message. He highlighted that telling stories about everyday life, emphasizing the socio-economic benefits of biodiversity conservation and tailoring the message

to the target group are ways of improving the likelihood that the message will be received.

One participant suggested developing indicators that reflect the need for greater and improved communication to explain what biodiversity is, since many struggle with the concept. Moberg noted that not everyone means the same thing when they use the word biodiversity.

David Ainsworth, CBD Secretariat, talked about the International Year of Biodiversity as an important opportunity to help people appreciate its value, the urgency to take action and steps necessary to save biodiversity. He highlighted a variety of communication efforts, from workshops to media events to the use of Facebook, that will be harnessed to raise global awareness about what people have done to save biodiversity and what people can do to make a difference.

Participants welcomed the initiative, with one suggesting having “ambassadors for biodiversity.” One participant, however, noted that because of culture and religion-specific differences, the message and the promotion may not reach and be effective in many developing countries. Another participant highlighted the need to learn how to communicate about biodiversity at the country-level. Goree called on Nick Davidson, Ramsar Secretariat, to share his experience in



David Ainsworth, CBD Secretariat

South Korea at the Ramsar Convention COP 10. Davidson told participants that an effective communication campaign and publicity led to increased awareness about the Ramsar Convention and wetlands in South Korea, with a poll revealing that 60% of the people in South Korea and 90% of the people in the province where the COP was held knew about it.

## GETTING THE TARGETS RIGHT - COMPLETING THE CHAIRMEN'S REPORT

Co-chair Peter Schei introduced the final session, with David Ainsworth presenting shortlisted biodiversity slogans on which he asked participants to vote. Co-chair Schei presented a summary of the conclusions in the Chairmen’s draft report. He emphasized that he and co-chair Katerås would be held accountable for the content of the final report, but stressed that the document is based on the findings and recommendations of Conference participants, and encouraged their continued input. He explained the report considered the presentations, questions, written suggestions and working group discussions of the Trondheim meeting, along with advice from the Friends of the Chairs, and would be forwarded as information documents at the upcoming SBSTTA and WGRI meetings. Emphasizing that the full report would include more detail on the debates and subtleties of the week’s discussions, Co-chair Schei outlined the twelve central messages of the report (listed below) and noted the complete report would be available online after the meeting.

In elaborating on the main messages, he noted the need to convey urgency while inspiring hope, along with the timeliness of efforts to scale-up science and knowledge without allowing gaps in knowledge to “be used as an excuse not to act.” He highlighted the importance of implementation, encouraging the development of mechanisms for sharing experiences and communicating the significance of biodiversity. He stressed that targets should not be “impossible” or “illusory,” but said the report avoided the word “realistic” in order to avoid undermining the need for ambition.

In the ensuing comments, several participants commended the Co-chairs on the report and identified additional issues of concern, including the need to: include gender considerations; provide examples of biodiversity losses in the polar regions as well as tropical regions; and simplify targets and indicators. Noting the funds already invested in biodiversity by the OECD, one participant suggested outlining in the report the achievements that have been made, stressing that finance ministers must be convinced that additional funding will be well spent. Another identified health as a missing element in the report, and stressed the need to define terms such as “resilience.”

**CHAIRMEN’S REPORT “12 MESSAGES:”** The “12 messages” outlined in the report are the following:

- The 2010 target has inspired action, but will not be reached in full;
- Biodiversity loss and degradation of ecosystem services have increasingly dangerous consequences for human well-being, even survival for some societies;
- Urgent action is needed to address the loss of biodiversity, especially to avoid tipping points;
- Biodiversity is the natural capital for sustainable development;



Participants during the closing session

- Inaction is more expensive than action;
- Many more economic sectors than we realize depend on biodiversity;
- Biodiversity and climate change are inextricably linked;
- Need for implementation;
- Need to scale-up science and knowledge;
- Need to communicate that biodiversity matters;
- Substantially more resources are needed; and
- Need to get the biodiversity targets right.

## CLOSING SESSION

Spencer Linus Thomas, CBD SBSTTA Chair, Grenada, and Sigbjørn Johnsen, Minister of Finance, Norway, offered closing addresses. Thomas called the 2010 International Year of Biodiversity a “great opportunity,” noting that it can build on the momentum of the 2009 focus on climate change, given that the links between biodiversity and climate change have been “clearly demonstrated.” He emphasized the importance of building on efforts of the Strategic Plan, GBO3 and others to mainstream biodiversity, connect with the public, bridge the science-policy gap, successfully conclude an ABS regime and enhance the implementation of the CBD. Applauding the work of those involved in the Trondheim Conferences, he said upcoming meetings such as SBSTTA and WGRI would be “well-informed” by the past week’s discussions.

He said the CBD is at a “critical juncture” and encouraged focusing on ambition over realism to promote the development of new solutions. He cautioned that the IPBES would not

be a panacea for biodiversity conservation, noting that the Intergovernmental Panel on Climate Change did not prevent the Copenhagen “disaster,” but nonetheless called it a “welcome development.” Thomas identified making biodiversity processes more representative, relevant and effective as a central task, and said although “the road ahead is daunting,” success in addressing the “global challenge” of biodiversity protection is possible.



Sigbjørn Johnsen, Minister of Finance, Norway

Johnsen explained that in Norway, the finance ministry coordinates sustainable development work, highlighting the inclusion since 2008 of a strategy for sustainable development in the national budget. He stressed that biodiversity is an important part of this strategy, as biological diversity is required for meeting

these goals and ensuring intergenerational equity. He outlined some of Norway’s domestic and international initiatives to protect biodiversity, fund forest initiatives for reducing deforestation and develop PES systems. Highlighting fair access and benefit sharing and the elimination of harmful subsidies, he called for the further development of economic instruments to protect nature. Johnsen stated that the value of ecosystems and biodiversity is often underestimated or ignored, and pointed to TEEB studies showing the financial costs of species loss and ecosystem services. He emphasized these values must be incorporated in national accounting systems.

Johnsen further indicated that the Trondheim Conferences demonstrate that “many competent people take the challenges of sustainable development seriously,” and stressed the interdependence between humans and ecological systems, stating that the economic system is at stake when biodiversity is lost. He underscored the connection between poverty and the environment, underlining that meeting the MDGs will be impossible if natural resources and ecosystems are degraded. He said that while “concrete actions on the ground” are how biodiversity goals “move forward,” meetings such as the Trondheim Conferences provide the knowledge and competence to identify actions needed, and are therefore important for protecting biodiversity for future generations.

In closing, Ainsworth presented the winning slogan: “Our future, today’s biodiversity,” and Co-chairs Schei and Katerås thanked participants, speakers, staff and organizers.



Spencer Linus Thomas, CBD SBSTTA Chair, Grenada

## UPCOMING MEETINGS

### THIRD MEETING ON INTERNATIONAL COOPERATION ON MIGRATORY SHARKS UNDER THE CONVENTION ON MIGRATORY SPECIES (CMS):

The third meeting on international cooperation on migratory sharks under the CMS will meet from 8-12 February 2010 in Manila, Philippines. For more information contact: CMS Secretariat; tel: +49-228-815-2401/02; fax: +49-228-815-2449; e-mail: [secretariat@cms.int](mailto:secretariat@cms.int); internet: [http://www.cms.int/bodies/meetings/regional/sharks/sharks\\_meetings.htm](http://www.cms.int/bodies/meetings/regional/sharks/sharks_meetings.htm)

### 17TH SESSION OF THE AFRICAN FORESTRY AND WILDLIFE COMMISSION:

This meeting will be held from 22-26 February 2010 in Brazzaville, Republic of Congo. It will address: forestry and wildlife in support of sustainable livelihood systems in Africa; sustainable management and benefits; climate change, forests and wildlife in Africa; and other regional issues. For more information contact: Foday Bojangm, FAO Regional Office for Africa; e-mail: [Foday.bojangm@fao.org](mailto:Foday.bojangm@fao.org); internet: <http://www.fao.org/forestry/afwc/en/>

### 59TH MEETING OF THE CITES STANDING

**COMMITTEE:** The meeting, organized by the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), will be held 12 March 2010 in Doha, Qatar. For more information contact: tel: +41-(0)22-917-8139/40; fax: +41-(0)22-797-3417; e-mail: [info@cites.org](mailto:info@cites.org); internet: <http://www.cites.org/eng/com/SC/59/index.shtml>

**CITES COP-15:** The fifteenth meeting of the Conference of the Parties to CITES, organized by the CITES Secretariat, will be held 13-25 March 2010 in Doha, Qatar. For more information contact: tel: +41-(0)22-917-8139/40; fax: +41-(0)22-797-3417; e-mail: [info@cites.org](mailto:info@cites.org); internet: <http://www.cites.org/eng/news/meetings/cop15/index.shtml>

**ABS-WG 9:** The ninth meeting of the UN Convention on Biological Diversity (CBD) Ad Hoc Open Ended Working Group on Access and Benefit-Sharing (ABS) is scheduled from 22-28 March 2010 in Santiago de Cali, Colombia. This meeting will continue negotiations on the international regime on ABS. It will be preceded by two days of regional and interregional consultations, from 20-21 March 2010, and a three-day inter-regional informal consultation hosted by the Working Group Co-Chairs, from 16-18 March 2010. For more information contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/doc/?meeting=ABSWG-09>

### WORKSHOP ON REGIONAL ACTION TO COMBAT INVASIVE SPECIES ON ISLANDS TO PRESERVE BIODIVERSITY AND AID CLIMATE CHANGE

**ADAPTATION:** This workshop, organized by the CBD Secretariat will be held 12-16 April 2010 in Auckland, New Zealand. For more information contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); Internet: <http://www.cbd.int/meetings/>

### NINTH SESSION OF THE UNITED NATIONS PERMANENT FORUM ON INDIGENOUS ISSUES:

The ninth session of the UN Permanent Forum on Indigenous Issues will be held from 19-30 April 2010, in New York, US. For more information, contact: Secretariat of the Permanent Forum for Indigenous Issues; tel: +1-917-367-5100; e-mail: [IndigenousPermanentForum@un.org](mailto:IndigenousPermanentForum@un.org); internet: [http://www.un.org/esa/socdev/unpfii/en/session\\_ninth.html](http://www.un.org/esa/socdev/unpfii/en/session_ninth.html)

**CBD SBSTTA 14:** The fourteenth meeting of the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) will be held from 10-21 May 2010,

in Nairobi, Kenya. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/doc/?meeting=SBSTTA-14>

**WGRI 3:** The third meeting of the Ad Hoc Open-ended Working Group on Review of Implementation (WGRI) of the Convention will be held from 24-28 May 2010, in Nairobi, Kenya. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/doc/?meeting=WGRI-03>

**IPBES III:** The 3<sup>rd</sup> Ad Hoc Intergovernmental and Multi-stakeholder meeting on an Intergovernmental Science-Policy Interface on Biodiversity and Ecosystem Services (IPBES III) will be held from 7-11 June 2010 at a location to be confirmed. For more information, contact: UNEP Secretariat; tel: +254 (0) 20 762 4011; fax: +254 (0) 20 762 4300; e-mail: [delc@unep.org](mailto:delc@unep.org); <http://ipbes.net/en/Index.asp>

### INTERNATIONAL CONGRESS ON BIOLOGICAL AND CULTURAL DIVERSITY:

This Congress, organized by the UN Educational, Scientific, and Cultural Organization (UNESCO), in the framework of the International Year of Biodiversity will be held 19-23 July 2010 in Montréal, Canada. For more information contact: e-mail: [s.arico@unesco.org](mailto:s.arico@unesco.org); internet: [http://portal.unesco.org/science/en/ev.php-URL\\_ID=7998&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=7998&URL_DO=DO_TOPIC&URL_SECTION=201.html)

**CBD COP 10:** The tenth Conference of the Parties to the CBD will be held from 18-29 October 2010, in Nagoya, Japan. COP 10 is expected to: assess achievement of the 2010 target to significantly reduce the rate of biodiversity loss; adopt an international ABS regime; and celebrate the International Year of Biodiversity 2010. For more information, contact: CBD Secretariat; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [secretariat@cbd.int](mailto:secretariat@cbd.int); internet: <http://www.cbd.int/doc/?meeting=COP-10>

## GLOSSARY

ABS	Access and Benefit Sharing
CBD	Convention on Biological Diversity
COP	Conference of the Parties
EMG	Environment Management Group
GEO BON	Group on Earth Observations Biodiversity Observation Network
IPBES	Intergovernmental Science-Policy Interface on Biodiversity and Ecosystem Services
MDGs	Millennium Development Goals
OECD	Organisation for Economic Co-operation and Development
PES	payments for ecosystem services
REDD	reduced emissions from avoided degradation and deforestation
REDD+	REDD plus conservation in developing countries
SBSTTA	CBD Subsidiary Body on Scientific, Technical and Technological Advice
TEEB	The Economics of Ecosystems and Biodiversity study
UNFCCC	UN Framework Convention on Climate Change
UNU	UN University