

Rio Conventions Pavilion Bulletin

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A Daily Report of the Rio Conventions Pavilion

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RIO CONVENTIONS PAVILION HIGHLIGHTS: TUESDAY, 9 OCTOBER 2012

The Rio Conventions Pavilion (RCP) commenced on Tuesday, 9 October 2012, on the theme “Towards Integrated Science, Assessments and Monitoring for the Rio Conventions.” The event consisted of five panel sessions including: novel science-based approaches to assessing and responding to the biodiversity crisis; how integrated science can support the goals of the Rio Conventions; advancing the practice of vulnerability assessment for ecosystem-based adaptation to climate change; are we developing a growing body of convincing evidence on the effectiveness of ecosystem-based approaches (EBA) to adaptation; and science-policy interface for collaborative management of international waters.



CBD Executive Secretary **Braulio Ferreira de Souza Dias** emphasizes the importance of monitoring during the event on “Novel Science-Based Approaches to Assessing and Responding to the Biodiversity Crisis.”

NOVEL SCIENCE-BASED APPROACHES TO ASSESSING AND RESPONDING TO THE BIODIVERSITY CRISIS

Neil Pratt, Convention on Biological Diversity (CBD) Secretariat, opened the RCP and welcomed participants, underscoring its purpose to “encourage and support the implementation of the Rio Conventions at the national level.” Panel Moderator Veronica Lo, CBD Secretariat, introduced the panel on novel science-based approaches.

Georgios Sarantakos, Group on Earth Observations (GEO), presented the GEO Biodiversity Observations Network (BON) Aichi Initiative, which aims to enhance global biodiversity observations by coordinating and developing open data access to enable monitoring of biodiversity status and trends at the national and regional levels. He emphasized the need

to intensify the GEO BON effort to mobilize the entire GEO community, and reported that GEO has assembled a far-reaching network of participating organizations.

Linda Krueger, Wildlife Conservation Society, discussed the aims of the Tropical Ecology Assessment and Monitoring (TEAM) project, including improving current biodiversity indicators to support implementation of policies at the national and global levels, and enhancing international monitoring. Defining TEAM as a “robust information management system,” she highlighted the Wildlife Picture Index and the Forest Resilience Index as two promising initiatives under development. As challenges, Krueger noted that methodological differences make global consensus on the best global biodiversity monitoring practices difficult to achieve. She concluded emphasizing that the TEAM data is publicly accessible.



Neil Pratt, CBD Secretariat



Georgios Sarantakos, GEO

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Linda Krueger, Wildlife Conservation Society

Jonas Rupp, Conservation International (CI), described CI's Ocean Health Index as a policy neutral tool, assessing ocean ecosystem health and ecosystem service provision. He also provided information on the effectiveness of regional, national and local management measures and policies. Acknowledging that "people are part of oceans ecosystems," Rupp listed ten goals for healthy oceans identified in the index, including: food provision; artisanal fishing opportunities; natural products; carbon storage; coastal protection; coastal livelihoods and economies; tourism and recreation; sense of place; clean waters; and biodiversity.

Natalia Pérez-Harguindeguy, Inter-American Institute for Global Change Research (IAI), presented results from DiverSus, an interdisciplinary research network, which examined how social actors value ecosystems. Stressing that components of biodiversity are not equally important, she underscored the importance of understanding which ecosystem components are critical for different stakeholders. She concluded that the current challenge is to transform project results into effective policy options.

Providing his perspectives on ecosystem monitoring, CBD Executive Secretary Bráulio Ferreira de Souza Dias, stressed the need for an integrated global biodiversity monitoring system, providing information on ecosystem trends to developing countries in particular. He recommended up-scaling initiatives by bringing together scientific capabilities and support from governments.



Participants at the RCP.

CBD Executive Secretary Dias noted that early access to ecosystem data allows for monitoring progress in achieving the Aichi Biodiversity Targets to adjust actions where needed. However, he called for some caution with regards to: the use of past baselines that undermine long-term perspective; the use of simplified indexes that may hide trends or problems; and the sensitivity of the parameters and data collection design. He commended parties for having agreed to a multidisciplinary approach during the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) meeting in Panama, including natural and social science experts, which provides important social context for policy makers.

Dias observed that providing information to citizens impacts policy by forcing government and business to respond to public demands. He proposed engaging local communities to increase both their ownership in ecosystem monitoring and the cost efficiency of data collection.

HOW INTEGRATED SCIENCE CAN SUPPORT THE GOALS OF THE RIO CONVENTIONS

Anne Larigauderie, Executive Director, DIVERSITAS, introduced the panel and gave an overview of how biodiversity science evolved. Noting a paradigmatic shift, she highlighted emerging concerns for scientists, including assessing the links between biodiversity and ecosystem services. She underscored the challenges for the DIVERSITAS Strategic Plan, such as building a longer-term vision and developing a knowledge base composed of various disciplines. Larigauderie concluded emphasizing the need for policy relevant science.



L-R: Natalia Pérez-Harguindeguy, IAI; Jonas Rupp, CI; Linda Krueger, Wildlife Conservation Society; and Georgios Sarantakos, GEO

Paul Leadley, DIVERSITAS and University of Paris, France, presented on using scenario modeling to anticipate, mitigate and adapt to future changes in biodiversity and ecosystem services. He compared previous scenario models, which focused on impacts, with new assessment scenarios, to be published in the “Global Biodiversity Outlook 4,” which translate data on impacts into policy relevant information.

Leadley said the new assessment scenarios: calculate economic costs of biodiversity and ecosystem trends; test impacts of development pathway changes that are “Aichi relevant” to inform policy makers about the consequences of certain policy measures; and suggest technology, decentralized solutions and consumption pathways to achieve desired policy objectives.

Tom Lovejoy, Heinz Center for Science, Economics and the Environment, emphasized the need for radical restoration in an era of unprecedented global change. Lovejoy highlighted changing species ranges due to climate change, noting the “minor ripples” occurring presently and the “alarming” signals beginning to be seen, including major tree mortality in North American coniferous forests and massive coral reef bleaching.

On the science of radical restoration, Lovejoy underscored that traditional concepts from conservation ecology, like secondary succession, will not necessarily work in the future. He noted a report, “Revisiting Leopold,” which discusses managing for continuous change under conditions of uncertainty, indicating the importance of thinking about protected areas as anchors for larger conserved areas outside of parks.

Harini Nagendra, Ashoka Trust for Research in Ecology and the Environment, shared Indian experiences addressing the drivers of biodiversity change and conservation, mainly in the regions of the Eastern Himalayas and Western Ghats. Due to the increasing rates of urbanization, she stressed land use change as one of the greatest sources of pressure on biodiversity conservation and climate change adaptation. Highlighting the benefits of increasing community activism in protecting the environment, she underscored that future research should improve understanding of the correlation between social and ecological aspects.

Responding to an audience question on how to integrate traditional indigenous and western scientific knowledge, Nagendra described how traditional knowledge is already informing western science. She said increasing community ownership can prevent illegal species trade, highlighting community engagement in sustainable bamboo management to secure long-term income from its sale.

ADVANCING THE PRACTICE OF VULNERABILITY ASSESSMENT FOR EBA TO CLIMATE CHANGE

Opening the session, Neville Ash, UN Environment Programme (UNEP), called for examining the synergies between the Rio Conventions, noting that EBA is a cross-cutting issue. He recalled that the concept was first defined in the context of the CBD, highlighting that adaptation is also a mandate of the UN Convention to Combat Desertification and the UN Framework Convention on Climate Change.

Valinavho Khavhagali, Department of Environmental Affairs (DEA), South Africa, reported on the evolution of biodiversity vulnerability assessments in South Africa, to address and link problems identified in previous national climate change studies and Millennium Ecosystem Assessments. He emphasized linkages between the three



Preeti Soni, UNDP

Rio Conventions, describing how climate change increases ecosystem and livelihoods vulnerability, desertification and results in biodiversity loss and forest quality reduction in South Africa. He added climate change threatens ecosystems and has the potential to: undermine sustainable development and economic growth; increase poverty; and delay or prevent the realization of the Millennium Development Goals.

Preeti Soni, UN Development Programme (UNDP), presented India’s experiences in EBA and conducting climate change vulnerability assessments. Reflecting on the case of Madhya Pradesh, she highlighted the value of incorporating the perceptions of local communities. Despite positive aspects of the approach, she observed some challenges, including: limited formal recognition; financial constraints; and community and political pressures. In conclusion, Soni said proactively streamlining EBA into climate change adaptation projects is crucial for the India’s National Adaptation Plan.

Caroline Petersen, UNDP, presented a project on EBA in mountain ecosystems in Uganda, Nepal and Peru, noting specific challenges in those ecosystems, including landslides and glacial melting. She highlighted the refinement of EBA methodologies, looking at predicted climate change impacts on ecosystem services for livelihoods, and health and safety.

Petersen discussed challenges faced in the project sites, including: forest fires; flash floods; drought; increased water scarcity; landslides; and soil erosion. She underscored the livelihood impacts of these problems and described nature-based interventions for adaptation to change, such as wetland restoration, water conservation and reforestation. Identifying monitoring and evaluation challenges, she said measuring projects’ impact on ecosystem services is difficult within short project time-scales.



Caroline Petersen, UNDP



Panel Moderator Neville Ash, UNEP, discusses the effectiveness of EBA.

ARE WE DEVELOPING A GROWING BODY OF CONVINCING EVIDENCE ON THE EFFECTIVENESS OF EBA

Neville Ashe, UNEP, noted that EBA has a long history, including through the practices of indigenous peoples. While calling for improved monitoring efforts and strengthened scientific underpinnings of EBA, he stressed that there is enough knowledge to put EBA into practice.

Nik Sekhran, UNDP, described Incan adaptation to rainfall variation in the Andes through terrace building to prevent erosion and flooding. Sekhran observed that past adaptation methods might not be applicable given different socioeconomic circumstances today. He also highlighted ecosystem restoration considerations in the Seychelles, noting that functionality tests, such as water consumption, are used to determine whether to use native or alien tree species in the existing forests.

Marc Spiekermann, Federal Environment Ministry (BMU), Germany, said the EBA component of the adaption portfolio is gaining importance in the BMU. He encouraged the establishment of pilot projects, as well as new networks for EBA research.

Trevor Sandwith, IUCN, underscored limited current capacity to cope with unprecedented global challenges. He suggested preemptive solutions to avoid inadequate adaptation policies and concluded calling for further cooperation to avoid doing “too little too late.”

Xola Mkefe, DEA, South Africa, said “biodiversity is the foundation of life.” He provided several examples of how ecosystem degradation and dysfunction negatively effect traditional livelihoods and stressed that EBA is a tool to guide ecosystem restoration and conservation. He also reported on successful water sector programmes using EBAs and focusing on women and youth.

During discussions, Moderator Peterson noted the gap between science, policy and implementation, and asked panelists how to design experimental learning projects. In

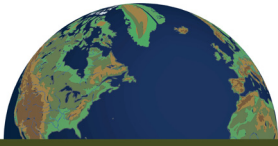
response, Sandwith said well controlled experiments are not possible in disaster situations. He recognized the utility of a precautionary approach in terms of project finance and investment, which would require that project design be based on experience and lessons learned.

SCIENCE-POLICY INTERFACE FOR COLLABORATIVE MANAGEMENT OF INTERNATIONAL WATERS

Jackie Alder, UNEP, with Nicole Glineur, Global Environment Facility (GEF), presented the main outcomes of the GEF International Waters Science Conference 2012, a three-day conference attended by 200 participants. After clarifying that much of the science used and generated by GEF International Waters projects is embedded in Transboundary Diagnostic Analyses, Alder highlighted key findings saying, *inter alia*, that: scientific engagement in project design needs to be optimized; communities of practice offer a bridge to scientific integration; scientists should “inform” choices instead of “advocate,” while policymakers should discuss policy failures. Moreover, Alder noted the fragmentation of water management at the international level, suggesting the need for a holistic vision.

In regards to the future of the GEF Scientific and Technical Advisory Panel, Alder said prioritizing research on three fronts was recommended: global assessment of the deterioration of water quality and ecosystem status; methods and guidelines for valuation of water related ecosystem services; and global architecture for data aggregation and modeling of water systems.

During discussions, participants debated a range of issues, including: the lack of knowledge about the impact of groundwater trends on biodiversity; enforcement of environmental impact assessments; spatial planning in large marine ecosystems and open oceans; and ways of understanding social political factors that determine people’s behavior, which affect management practices.



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RIO CONVENTIONS PAVILION HIGHLIGHTS: WEDNESDAY, 10 OCTOBER 2012

The Rio Conventions Pavilion (RCP) continued on Wednesday, 10 October, with participants discussing the theme “Natural Solutions: Protected Areas (PAs) Meeting Biodiversity Targets and Adapting to Global Change.” The day consisted of four panel sessions on: working towards the Aichi Targets - how PAs contribute; PAs as natural solutions to climate change and other global challenges; PAs for marine conservation, blue carbon and sustainable fisheries; and opportunities for mainstreaming PAs into policies and programmes. The day concluded with a CBD LifeWeb Initiative cocktail event opened by CBD Executive Secretary Bráulio Ferreira de Souza Dias.



Participants listen to Patrick Halpin, Duke University, discuss the Global Ocean Biodiversity Initiative.

WORKING TOWARDS THE AICHI TARGETS: HOW PAs CONTRIBUTE

Panel Moderator Kathy MacKinnon, World Commission on Protected Areas (WCPA), introduced the session. Sarat Babu Gidda, CBD Secretariat, provided a brief overview of the history of PAs. As a landmark, he highlighted the agreement by 180 countries to a binding programme on PAs at the 7th CBD Conference of the Parties (COP), in Kuala Lumpur, Malaysia, in 2004. He concluded stressing the need to transform CBD COP 11 decisions into concrete action on the ground and emphasized that national plans of action should inform budget decisions.

Charles Besançon, CBD Secretariat, explained CBD’s role in convening donor roundtables, allowing governments to present their proposals for meeting biodiversity targets to donor agencies. He described how the LifeWeb Initiative’s

clearinghouse mechanism has already facilitated the allocation of EUR 200 million from donors to PA projects. Looking forward, Besançon underscored the need to broaden and strengthen donor support and develop strategic partnerships with business and foundations.

Colleen Corrigan, UNEP World Conservation Monitoring Centre, presented “The Protected Planet Report 2012,” which tracks progress and trends towards the Aichi Targets and assesses improvements in management and governance. Among the key findings, Corrigan emphasized that on the terrestrial side only 12.7% of the 17% PA coverage target has been met, and on the marine side only 4% of the 10% PA coverage target has been achieved. She commended the recent change in share of governance mechanism type, with 13.5% of PAs under co-management and nearly 10% governed by indigenous and local community conserved territories and areas (ICCAs).



Panel Moderator Kathy MacKinnon, WCPA



Colleen Corrigan, UNEP World Conservation Monitoring Centre

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Stephen Woodley, IUCN

Stephen Woodley, IUCN, provided an overview of progress on the IUCN global standard on areas of significance for biodiversity conservation. He said the fundamental question to understand is why, despite the increase of PAs, there are still high rates of biodiversity loss. Woodley encouraged further research and contributions to the establishment of a global database, being built in partnership with the LifeWeb Initiative.

Bas Verschuuren, IUCN, presented on sacred natural sites and their contribution to the Aichi Targets. He defined sacred natural sites as “areas of land or water having special spiritual significance to peoples and communities,” and showcased how the inclusion of sacredness into conservation debates improves not only ecosystem services but also social resilience. He concluded drawing attention to the Sacred Natural Sites Initiative.

Ashish Kothari, Kalpavriksh and ICCAs Consortium, explained how ICCAs are effectively working towards meeting various Aichi Targets. While commending the IUCN for officially including ICCAs as a PA governance type, he also stressed massive gaps in this recognition. He stated that most ICCAs are not yet identified or documented, and face threats by forces of “development, commercialization and cultural change.” He suggested three ways for governments to legally recognize ICCAs: as part as their PA system; as part of other conservation systems, such as biodiversity law; and land reform legislation.

Piero Genovesi, IUCN, noted the rapidly growing threat of invasive species to native species, food security, water access and human health. In regards to the threat to PAs, he underscored several challenges including lack of funding,



Bas Verschuuren, IUCN

and insufficient legal and institutional support. Genovesi said that working together is necessary to meeting Aichi Target 9 (invasive alien species prevented and controlled) and highlighted the “best practice book.” He argued that prevention is the most important measure to combat invasive species.

PAS AS NATURAL SOLUTIONS TO CLIMATE CHANGE AND OTHER GLOBAL CHALLENGES

Moderator Charles Besançon, CBD Secretariat, introduced the session. Kathy MacKinnon, WCPA, presented on PAs as natural mitigation and adaptation solutions, helping people cope with climate change and desertification. Looking ahead, she stressed the need to: protect more and larger areas; improve governance; and restore degraded habitats within and around PAs. MacKinnon estimated restoration costs to be “as little as US\$ 23 billion per year.”

Nic Bax, Commonwealth Scientific and Industrial Research Organization, Australia, discussed the implications of climate change for biodiversity conservation in Australia. Using long-term scenarios developed by statistical models, he outlined recommendations including: reassessing biodiversity objectives; creating management strategies to deal with robust uncertainty; planning for biodiversity change at landscape scales; expanding PA networks to accommodate significant ecological changes; managing interactions between biodiversity and changing land and water use; and adapting biodiversity conservation institutions to cope with new challenges.

Pramod Krishnan, UNDP, discussed PA governance in India, noting the impacts of climate change on India’s ecosystems, which comprise four biodiversity hotspots, ten bio-geographic zones and 256 forest types. Krishnan noted



The crowded RCP plenary on PAs Day.

institutional, knowledge and community challenges to India's PA governance, and called for applying IUCN classification of PAs to India's national parks and wildlife sanctuaries. He discussed impacts of climate change on India's ecosystem functionality, including: shifts in ecosystem types; proliferation of invasive species; coral bleaching; habitat fragmentation; and increasing man-animal conflicts.

Julia Miranda Londoño, Director, National Parks System, Colombia, emphasized the main actions to protect natural parks in Colombia, noting that the Colombian Constitution recognizes the right of indigenous people to use natural resources. She reported improvement in monitoring systems and ecosystem restoration, and concluded announcing that more funding is being allocated to deal with natural disasters.

Rob Prosper, Parks Canada, said the real power behind PAs is the public conservation ethic and discussed the Parks Canada vision to connect hearts and minds to a stronger understanding of the essence of Canada. He emphasized cooperation and joint management with indigenous communities. Prosper highlighted North American collaboration on climate change, identifying six roles of PAs and wilderness in addressing climate change: conserving biodiversity; protecting ecosystem services; connecting landscapes; capturing and storing carbon; building knowledge; and inspiring people.

Bruce Jefferies, Secretariat of the Pacific Regional Environment Programme (SPREP), reported on a study in Upland Central Savaii, the largest island of Samoa, that aims to: enhance local biodiversity; survey fauna and flora; and deliver the synthesized information to local communities. Jefferies also announced the 9th Pacific Island Conference on Nature Conservation and PAs will convene in November 2013.

During discussions, participants questioned how PAs can best deliver and how to improve the connection between low-level management and high-level policymaking. Panelists agreed that the involvement of local communities is fundamental to address both issues.

PAS FOR MARINE CONSERVATION, BLUE CARBON AND SUSTAINABLE FISHERIES

Panel Moderator Kristina Gjerde, IUCN, introduced the session. Carel Drijver, WWF Netherlands, stated that healthy oceans are central to guaranteeing livelihoods for half of the world's population. He noted the case of Bonaire National Marine Park, in the Netherland Antilles, as an example of the importance of marine protected areas (MPAs) and emphasized "participatory stakeholder approaches" to marine conservation.

Olivier Hasinger and Dorothee Herr, IUCN, highlighted coastal blue carbon and MPAs as an opportunity to mitigate climate change. Hasinger drew attention to the distribution of carbon in coastal ecosystems, especially in living biomass, and



Nenenteiti Teariki-Ruatu, Ministry of Environment, Lands and Agricultural Development, Kiribati

highlighted the sequestration potential of these ecosystems as 40 times greater than that of tropical forests. He noted high loss rates of tidal marshes, mangroves and sea grass wetlands.

Cliff Marlessy, Locally Managed Marine Areas (LMMA) Indonesia Network, noted the LMMA project supports coastal communities to manage coastal resources. He identified a number of issues addressed by LMMA, including decreasing numbers and species of fish. He noted that benefits encourage local community participation and highlighted that, when communities collect their own data, they understand these benefits much more clearly.

Nenenteiti Teariki-Ruatu, Ministry of Environment, Lands and Agricultural Development, Kiribati, emphasized the benefits of large-scale MPAs. She discussed the Phoenix Islands Protected Area (PIPA) project in Kiribati, which serves as a model for the Pacific region and other small island developing states, recognizing the need to protect areas with lower species diversity that have high ecosystem robustness. She illustrated PIPA's ecological and biological uniqueness and highlighted the problem of overfishing and invasive species.

Patrick Halpin, Duke University, provided an overview of the CBD process for describing ecologically or biologically significant marine areas (EBSAs). After highlighting the evolution of this process, he noted that EBSAs are not MPAs, but a global inventory informed by multiple criteria developed from biogeographic, biological and physical data. He noted the role of CBD in providing capacity building through regional workshops, and the contributions of the Global Ocean Biodiversity Initiative in supporting the EBSA inventory.

Jorge Jimenez, MarViva Foundation, discussed scientific findings from studies in the thermal dome of the Eastern Pacific where the North Equatorial Current meets the Equatorial Counter Current. He emphasized the dome's distinctive habitat, including dolphins, migrating leatherback turtles and blue whales, noting protecting the area conserves endangered species. He underscored management challenges such as the size of the area, which includes high seas and economic exclusive zones of five countries.

During discussions, panelists acknowledged that progress protecting and conserving critical areas requires a common understanding on the interactions between terrestrial PAs and MPAs. Participants also agreed that success depends on strong commitment by, as well as an understanding of what MPAs mean to, local communities. Panelists also considered the need for an international legal framework to close loopholes in extra-territorial areas beyond national jurisdictions and addressed the free rider problems associated with over-fishing.



Panel Moderator Kristina Gjerde, IUCN



L-R: Panel Moderator Kristina Gjerde, IUCN; Olivier Hasinger, IUCN; Cliff Marlessy, LMMA Indonesia Network; Carel Drijver, WWF Netherlands; Patrick Halpin, Duke University; Nenenteiti Teariki-Ruatu, Ministry of Environment, Lands and Agricultural Development, Kiribati; and Jorge Jimenez, MarViva Foundation

OPPORTUNITIES FOR MAINSTREAMING PAS INTO POLICIES AND PROGRAMMES

Purifacio Canals, Network of Managers of MPAs in the Mediterranean (MedPAN), discussed key tasks for improving MPA management in the Mediterranean, including: creating new coastal and open sea MPAs; improving ecological coherence of MPAs; demonstrating benefits of MPAs to all stakeholders; and improving governance and management effectiveness. She explained how MedPAN facilitates exchanges between MPA managers and provides support to them by employing strategies for science, communication, capacity building and sustainable funding.

Russell Mittermeier, President, CI, reported on initiatives scaling up PAs, such as the Big Ocean Network and Global Partnership for Oceans. He noted that, unlike other sectors, biodiversity conservation occurs at the local level, which increases the importance of local communities. Underscoring the need for continuous funding mechanisms, Mittermeier highlighted the Critical Ecosystem Partnership Fund as an important initiative, saying that already US\$ 142 million dollars were granted. He concluded emphasizing PAs are the most efficient tool to combat biodiversity loss.

Nik Sekhran, UNDP, discussed PAs and climate change adaptation in Namibia. Noting Namibia's climate change vulnerability, Sekhran demonstrated the negative impacts of predicted rainfall patterns on livelihoods, wildlife, and agriculture and livestock, which in turn will affect the country's foreign exchange revenues. He noted PAs are a good option for climate change adaptation, as income generated by PAs in the

tourism sector contribute to development. He recommended moving towards a landscape approach, which would require management agreements among local governments to allow better connection between PAs.

Jamison Ervin, UNDP, provided a comprehensive overview of the costs to achieve Aichi Biodiversity Target 11 (PAs increased and improved) stating that US\$ 130 billion are needed to protect terrestrial biodiversity and US\$ 5 billion for marine biodiversity. She underscored that, despite high costs to achieve the target, the benefits for society are much higher. Ervin highlighted that valuation and monitoring mechanisms are key to addressing potential financial gaps.

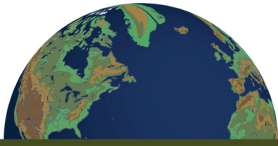
Alexander Belokurov, WWF International, presented the Global Initiative for PAs and Climate Change Adaptation funded by the European Union, with project locations in Madagascar, Columbia, and the Philippines. Seeking to arrive at scientifically sound and practical recommendations useful to a variety of stakeholders, he noted the project engages in: biological and vulnerability assessment under different climate scenarios; development of PA adaptation measures and a system to prioritize measures; and communication of these measures to local communities.

MacKinnon, presented on behalf of Trevor Sandwith, IUCN, noting a fundamental challenge for PAs is how to deal with conflicting interests among stakeholders. She emphasized the importance of the upcoming IUCN World Parks Congress, to be held in Sydney, Australia, in 2014.

In response to questions, Ervin noted that costs of MPAs are lower as they do not involve land acquisition. Panelists stressed further showcasing the financial benefits of PAs.



Participants at the RCP.



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RIO CONVENTIONS PAVILION HIGHLIGHTS: THURSDAY, 11 OCTOBER 2012

The Rio Conventions Pavilion (RCP) continued on Thursday, 11 October, convening for Tree Diversity Day. The day began with a keynote speech by M.S. Swaminathan, M.S. Swaminathan Research Foundation. During the morning, a panel also convened on tree diversity - its role in CBD programmes for agriculture and forest biodiversity and synergies with other global conventions. In the afternoon, panels convened on: benefits of diversifying and restoring landscape mosaics in the tropics by harnessing tree diversity; diversity for development - human benefits from tree diversity for food, health and nutrition; climate change and biodiversity - interfacing mitigation and adaptation; maintaining diversity from genes to landscapes through conservation and sustainable use; and a synthesis session.



L-R: CBD Executive Secretary Braulio Ferreira de Souza Dias; Robert Nasi, CGIAR; Ravi Prabhu, ICRAF; and Pablo Eyzaguirre, Bioversity, sign MOUs for agroforestry partnerships.

TREE DIVERSITY AT THE INTERFACE OF THE THREE RIO CONVENTIONS

Meine Van Noordwijk, World Agroforestry Centre (ICRAF), introduced Tree Diversity Day with a dialogue recital from "The Lorax," by Dr. Seuss. He highlighted that tree diversity lies at the nexus of the Rio Conventions, noting the important role of trees in landscapes and microclimates, and in mitigating climate change impacts. He explained trees: shape vegetation; form habitats; are long lived and adapt slowly resulting in vulnerability; and provide important ecosystem services. He stressed tree diversity unites the Aichi Biodiversity Targets and connects people to biodiversity.

A keynote address was given by M.S. Swaminathan, M.S. Swaminathan Research Foundation. He presented on agroforestry in the context of the CBD, saying that agroforestry

is a "science by itself and has to maintain its identity." After a brief historical overview, he stressed the importance of agroforestry to overcoming nutritional challenges. Swaminathan highlighted multiple benefits of agroforestry, including combatting climate change through carbon sequestration.

Swaminathan also noted opportunities to avoid natural catastrophes, such as soil erosion, and stressed that agro-aqua farming with seawater is not receiving enough attention. He highlighted a seawater-farming project and a genetic garden of halophytes, or salt-tolerant plants, in India, as having improved productivity without ecological harm. He also discussed his new book "From Green to Evergreen Revolution."

Participants noted the importance of microbiological diversity to discussions about tree diversity and sustainable forestry, as well as the issue of renewable energy, including wind, solar, biomass and biogas.



Tree Diversity Day Moderator Caroline Neeley, ICRAF



M.S. Swaminathan, M.S. Swaminathan Research Foundation

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L-R: Robert Nasi, CGIAR; Sergio Zelaya, UNCCD Secretariat; Balakrishna Pisupati, NBA, India; Ivonne Higuero, UNEP; Santiago Carrizosa, UNDP; Oudara Souvannavong, FAO; and Heikki Taivainen, Finnish Environment Institute.

TREE DIVERSITY: ITS ROLE IN CBD PROGRAMMES AND FOREST BIODIVERSITY AND SYNERGIES WITH OTHER GLOBAL CONVENTIONS

Robert Nasi, CGIAR, said “forests and trees bind the Rio Conventions,” highlighting that CGIAR has long collaborated on: promoting equitable sharing of biodiversity benefits; supporting biodiversity conservation; and supporting productive landscapes for food security, poverty eradication and sustainable development.

Neil Pratt, CBD Secretariat, highlighted the increasing importance of agroforestry for biodiversity resilience, in particular for coping with changing environmental conditions. He recalled that CBD parties have long recognized the importance of agroforestry.

Sergio Zelaya, UNCCD Secretariat, called for rethinking forests, looking beyond rainforests to dry-land forests, which do not receive enough conservation attention. He stressed the goal of building a land-degradation neutral world and achieving zero-net land degradation by 2030.

Ivonne Higuero, UNEP, reported on UNEP’s work on the Aichi Biodiversity Targets, looking at different sectors, including forests, to understand how to recognize natural capital in policies.

Balakrishna Pisupati, National Biodiversity Authority (NBA), India, said India has focused on agroforestry practices for local community benefits and stressed the need to capture successful experiences in order to replicate them.

Santiago Carrizosa, UNDP, said tree diversity and the UNDP have a “bright future.” He emphasized the unique position of UNDP to promote biodiversity principles in development policies.

Oudara Souvannavong, FAO, stressed that biodiversity and tree diversity conservation is a dynamic solution to address uncertainty, variability and change. He noted sound forest management has long relied on tree diversity, including genetic diversity, as a buffer to changes in environmental and management conditions, which can be important during the life cycle of species.

Heikki Taivainen, Finnish Environment Institute, highlighted the evolution of Finnish forest conservation programmes, and mentioned the role of the Tropical Resources Institute, based in Helsinki, as a channel for mainstreaming agroforestry practices.

Nasi, Ravi Prabhu, ICRAF, Pablo Eyzaguirre, Bioversity, and CBD Executive Secretary Dias then signed two memorandums of understanding (MOU), one between the CBD Secretariat and ICRAF and another between the CBD Secretariat, Bioversity International, the Center for International Forestry Research (CIFOR), ICRAF and the International Centre for Tropical Agriculture as partners in the CGIAR Research Programme 6 on Forests, Trees and Agroforestry. Executive Secretary Dias welcomed the MOUs, underscoring the importance of CGIAR’s practical on-the-ground knowledge. The ceremony closed with partners welcoming the agreement and promising to convey the urgent need to implement CBD objectives.



Peter Bridgewater, UK, asks a question to the panel.



Robert Nasi, CGIAR

BENEFITS OF DIVERSIFYING AND RESTORING LANDSCAPE MOSAICS IN THE TROPICS BY HARNESSING TREE DIVERSITY

Judy Loo, Bioversity International, introduced the panel and spoke about genetic diversity studies and mapping in South America, an area with highly diverse tree species. She noted knowledge gaps, including lack of documentation on distribution of tree species and limited understanding about reproduction of many tree species. She highlighted the Mapping Forest Genetic Resources (MAPFORGEN) project, which evaluates the conservation status of and threats to tree species.

Roeland Kindt, ICRAF, explained vegetation maps and their contribution to guiding tree-planting efforts. Emphasizing the importance of choosing “the right trees for the right place,” he stressed the prominence of vegetation maps as decision-support tools for species selection to improve sustainability.

Santiago Carrizosa, UNDP, discussed a Colombian project, addressing the threats of unsustainable land-use and conversion to high yield coffee schemes. He explained that the project aims to harness social, economic and environmental benefits from sustainable coffee landscapes through carbon sequestration, coffee certification and the promotion of financial sustainability through green credit lines.

Kaoru Ichikawa, UN University-Institute of Advanced Studies, presented the International Partnership for the Satoyama Initiative, saying it aims to facilitate international cooperation on social-ecological production landscapes and seascapes (SEPLS). She noted tree diversity in SEPLS in the tropics provides multiple benefits, including protection of endangered species and increased habitat connectivity.

Raman Sukumar, India Institute of Science, discussed diversifying and restoring landscape mosaics in the Western Ghats, India, through incentive-based models involving local communities. He presented a recent report of the Western Ghats Ecology Expert Panel that examined ecological sensitivity and landscapes, with a focus on vegetation and land use. He explained the benefits of restoring landscape mosaics in the Western Ghats, include increased ecological resilience, adaptive capacity and climate change mitigation through carbon sequestration.

BIODIVERSITY FOR DEVELOPMENT: HUMAN BENEFITS FROM TREE DIVERSITY FOR FOOD, HEALTH AND NUTRITION

Ramni Jamnadas, ICRAF, introduced the panel and discussed the benefits of agroforestry for livelihoods. She highlighted the functions of tree diversity, including: fruits; firewood; medicine; income; sawn wood; fodder; and ecosystem services. She underscored the “future of trees are on farms,” noting the need for high quality planting material. She emphasized the importance of fruits for improved nutrition and health, saying fruit production is very low in many developing countries, in part due to lack of improved, high-yield varieties.

Amy Ickowitz, ICRAF, described a study on trees and child nutrition in Africa that suggests a positive relationship between tree coverage and two nutritional measures, dietary diversity and increased fruit and vegetable consumption, among 140000 sampled children in 21 African countries. She noted no relationship was found between tree coverage and a third nutritional measure, animal source foods.

Hugo Lamers, Bioversity International, highlighted community biodiversity management (CBM), a process level approach, which aims to ensure local community ownership over their natural resources. He said farmers are key partners in implementing CBM and discussed examples linking local communities with higher policymaking levels, such as the case of the Western Ghats, India.

Navin Sharma, ITC India, discussed “bioeconomy: from sustenance to value creation,” noting that the bioeconomy is fast growing and has large revenue potentials. Focusing on the biodiesel sub-sector, Sharma observed that in contrast to the US, Brazil, the EU and China, India has unique biodiesel targets, allowing for “various” crop sources, rather than specifying only a few. Sharma also illustrated a “value ladder” that points to scaling from volume to value with intellectual property at the top of the ladder.

During discussions, participants underscored the continued insufficient return of conservation benefits to local communities, particularly in schemes involving access and benefits sharing (ABS) rules.

CLIMATE CHANGE AND BIODIVERSITY: INTERFACING MITIGATION AND ADAPTATION

Eike Luedeling, ICRAF, introduced the panel and noted that climate change affects all elements of landscapes. He discussed how trees contribute to mitigation and specifically adaptation, through: micro-climate effects benefiting people, animals and crops; rainbow water effects, closing the hydrological cycle by recycling water through terrestrial evapotranspiration; and enhancing soil fertility and reducing livelihood risks. Reflecting on international climate change negotiations, he observed in discussion on reducing emissions from deforestation and forest degradation in developing countries (REDD) difficulty in defining forests, and highlighted the evolution of ideas from REDD to agriculture, forestry and land use.

Tim Christophersen, UNEP, underscored lack of attention to restoration in wider landscapes under REDD+. On CBD agriculture initiatives, he emphasized avoiding duplication of other UN programmes. He outlined three opportunities to enhance synergies among stakeholders, including: financing through the Green Climate Fund; increasing private sector interest in linking financial and ecological resilience; and deriving innovative solutions to the increased pressure on natural resources.



A participant at the Rio Conventions Pavilion addresses the panel.



L-R: Eike Luedeling, ICRAF; Tim Christophersen, UNEP; Hesti Lestari Tata, Ministry of Forestry, Indonesia; and P.P. Bhojvoid, FRI, India

Hesti Lestari Tata, Ministry of Forestry, Indonesia, reported that peatlands are legally protected in Indonesia. She noted the benefits of growing native peatland species, such as jelutong, on farms include increased farm income from seeds and seedlings, and increased the export volume and value of jelutong latex.

P.P. Bhojvoid, Forest Research Institute (FRI), India, explained the multiple benefits of trees for local communities and supported the use of agroforestry to combat climate change. He underscored the value of indigenous knowledge in order to avoid reductionist approaches to conservation.

Responding to questions, Luedeling emphasized that farmers grow profitable species and that subsidies are required to get them to grow those that do not directly benefit them. Christophersen suggested Kenya could benefit from planting timber forests rather than importing lumber from the Democratic Republic of the Congo.

MAINTAINING DIVERSITY FROM GENES TO LANDSCAPES THROUGH CONSERVATION AND SUSTAINABLE USE

Manuel Guariguata, CIFOR, introduced the panel and called for coherent thinking about how to manage complex landscapes. He said it is easy to define targets, but it is much more complex to determine “how” to achieve those targets.

Juliana Santilli, University of Brasilia, Brazil, discussed legal instruments affecting agroforestry and agro-biodiversity. Recalling the pioneering role of the International Treaty on

Plant Genetic Resources (ITPGRFA) in establishing an ABS mechanism, she noted recognition in the ITPGRFA of farmer’s rights and their capacity to promote conservation *in situ*. She highlighted the growing importance of conservation, under the UN Educational, Scientific and Cultural Organization, of intangible cultural heritage. On seeds law, she noted that new legislation might be detrimental to small producers, due to compliance challenges.

Guariguata noted most forests are managed by governments and welcomed increasing participation by local communities and indigenous peoples. He listed challenges for multi-use forests, including: technical and managerial capacities differ across forest products and market opportunities; local communities and small-scale operators struggle to adjust their practices to meet official regulations; and spatial planning for long-term production is usually disregarded.

Terence Sunderland, CIFOR, presented the results of six years of research by CIFOR and partners based on a “long term consultative approach,” which aimed to redefine landscape approaches. He discussed the “ten commandments” of their new landscape approach, *inter alia*: adaptive management; multi-functionality; multi-stakeholder; negotiated and transparent change; clarification of rights and principles; and participatory and user-friendly monitoring.

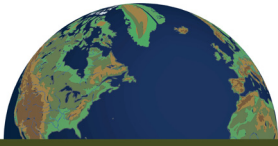
R. Ganesan, Ashoka Trust for Research in Ecology and the Environment, discussed lessons learned from monitoring tree diversity and estimating ecosystem services values in India. He recommended restoring tree diversity using participatory approaches, beginning with understanding and enhancing the role of tree diversity in livelihoods.

TREE DIVERSITY DAY SYNTHESIS SESSION

Reflecting on Tree Diversity Day, Robert Nasi, CIFOR, emphasized there is no one-size fits all solution. Meine Van Noordwijk, ICRAF, said the Rio Conventions are “tree conventions,” noting the approaches highlighted at Tree Diversity Day are all integrated solutions. He called for a more active dialogue between scientists and policymakers.



Hesti Lestari Tata, Ministry of Forestry, Indonesia



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RIO CONVENTIONS PAVILION HIGHLIGHTS: FRIDAY, 12 OCTOBER 2012

The Rio Conventions Pavilion (RCP) continued on Friday, 12 October, convening for Livelihoods Day. The event consisted of five panels, including: raising awareness on linkages between biodiversity and livelihoods; interactive breakout session with project developers and international experts; interactive breakout session on key learning and challenges with regard to transversal issues covering a whole landscape approach; walking the talk from forests to coastlines - implementation of gender sensitive policies in programmes and projects; and the Biodiversity for Development Initiative.



CBD Executive Secretary Braulio Ferreira de Souza Dias addressed Livelihoods Day.

RAISING AWARENESS ON LINKAGES BETWEEN BIODIVERSITY AND LIVELIHOODS

Moderator Jane Smart, IUCN, welcomed participants to Livelihoods Day. CBD Executive Secretary Braulio Ferreira de Souza Dias underscored biodiversity is crucial for poverty reduction and stressed that “now is the time for implementation and half measures will not be enough.”

Executive Secretary Dias emphasized that meeting the needs of present and future generations requires incorporation of biodiversity into economic and social policies. He highlighted that the poor depend on biodiversity for: food; medicine; water; fuel; and building materials and shelter.

Bernard Giraud, President, Livelihood Venture, presented the business model of the Livelihoods Venture, noting the fund currently has five large-scale projects. He noted the novelty of this fund is the creation of a “field organization network” responsible for sharing experiences, including with companies.

Biswajit Roy Chowdhury, Nature Environment and Wildlife Society, underscored that ecosystem vulnerability is a matter of human rights. He discussed a Livelihoods’ sponsored project in the Sundarban area, India, where 20,000 villagers are involved in ecosystem preservation, being paid, for example, for collecting seeds.



L-R: Moderator Jane Smart, IUCN; Bernard Giraud, President, Livelihood Venture; Julien Calas, FFEM; Olivier Hasinger, IUCN; Ramsar Convention Deputy Secretary General Nick Davidson; Biswajit Roy Chowdhury, Nature Environment and Wildlife Society; Manoj Kumar, Naandi Foundation; and Meine Van Noordwijk, ICRF

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Biswajit Roy Chowdhury, Nature Environment and Wildlife Society

Manoj Kumar, Naandi Foundation, presented the Valley Araku project, India, which sponsors farmer enrollment in the Coffee Board's Price Stabilization Fund, guaranteeing stable incomes in times of instability. He noted the project also expects to plant at least six million fruit trees. He highlighted the collection and dissemination of knowledge from previous generations, allowing a connection with future generations.

Ramsar Convention Deputy Secretary General Nick Davidson called for an improved knowledge base on the value and loss of wetlands. He stressed the value of natural ecosystems, highlighting the forthcoming "The Economics of Ecosystems and Biodiversity" Study for water and wetlands. Noting that conversion of wetlands significantly reduces provision of ecosystem services, he underscored the rapid decline in wetlands and called for focusing on conservation, due to the high costs and partial success of wetlands restoration.

Julien Calas, Fonds Français pour l'Environnement Mondial (FFEM), emphasized linking biodiversity with income generation and discussed a Guatemalan project. He highlighted the project links livelihoods with protected areas (PAs), indigenous communities and access to ecosystem services.

Meine Van Noordwijk, World Agroforestry Centre (ICRAF), noted that land classification, such as the distinction between forests and agroforestry, has significant impacts on types of governance, recognition and "ownership" rights. He said implementation challenges stem mostly from governance conflicts and lack of recognition, rather than limited financial capacity. He stressed the application of the concept of "co-investment," which shares financial responsibility and benefits among various stakeholders, rather than "commodification" of nature and "compensation."



Ramsar Convention Deputy Secretary General Nick Davidson



Julien Calas, FFEM

During discussions, Giraud said "awareness comes with action" and also emphasized the importance of women to guarantee livelihoods, affirming that they are a "matter of social force."

INTERACTIVE BREAKOUT SESSION WITH PROJECT DEVELOPERS AND INTERNATIONAL EXPERTS

Moderator Jean-Pierre Renaud, Livelihoods Venture, introduced the panel. Rosa Vidal, Pronatura Sur, Mexico, highlighted a Mangrove plantation project in Chiapas, which is expected to scale up to 600 hectares. She noted difficulties stemming from distinct social and ecosystem conditions, and in allocating resources.

Habiba Ali, Sosai, Nigeria, discussed a tree-planting project in a highly deforested area in northern Nigeria. She described mobilizing the community to sell stoves, with two trees, preferably fruit bearing, being planted per sale. On community empowerment, she highlighted the active engagement of women in the projects and estimated at least 10,000 stoves will be distributed by the end of 2013.

Ismaila Sall, Oceanium, Senegal, underscored the progress of the Oceanium Initiative, saying the goal was to change the mindset of locals to recognize environmental values. He said movie broadcasting and result-oriented approaches are two examples of engagement techniques, which increased trust between locals and project managers.

Salifou Ouedraogo, SOS Sahel, Burkina Faso, discussed a pilot project addressing the low survival rate of planted trees with large-scale tree planting. He explained a "contractual reforestation" approach, using incentives for planters if trees survive past two years. The success of this scheme increased the



Meine Van Noordwijk, ICRAF

survival rate of trees to 70%. As keys to success, Ouedraogo stressed organizing communities and highlighting economic and social benefits of the environment to stakeholders.

Olivier Langoisseux, Bina, Indonesia, used the example of Central Java noting the problems of monocultures, water scarcity and youth unemployment. He said a cooperative is identifying “local champions” among farmers and developing agro-services in order to facilitate collective market access.

Gabriel Sarasin, Réseau Africain des forêts modernes, Democratic Republic of the Congo, discussed the Model Forest, which was first presented at the UN Conference on Environment and Development, in Rio de Janeiro, Brazil, in 1992. He said the model originated in Canada, where forest issues were characterized by conflicts between the forest industry and communities.

He attributed the success of the conflict resolution model on a long-term process, providing platforms for representation of diverse stakeholders, including industry, government and civil society. He reported this model has been applied 60 times throughout the world, sharing knowledge through a common network.

INTERACTIVE BREAKOUT SESSION ON KEY LEARNING AND CHALLENGES WITH REGARD TO TRANSVERSAL ISSUES COVERING A WHOLE LANDSCAPE APPROACH

Moderator Giraud introduced the panel. Beria Leimona, ICRAF, presented a movie on and spoke about shared-benefits agreement-based community and industry collaboration experiences in Indonesia. She noted one incentive for community engagement in watershed area conservation, in their project, is access to electricity provided by the collaborating hydroelectric power company. She said electrification increases the productivity of the community, for example by illuminating the village at night.

Bambang Suprayogi, Yagasu, Indonesia, reported on experiences in Indonesia, which aim to provide short-term returns to local communities in terms of food security. He stressed engaging people by providing tangible benefits.

Amos Wekeza, ICRAF, provided information about a Kenyan project, which organizes local farmers to address agro-forestry issues. He said the project encourages adoption of sustainable development and sustainable forest management practices, with farmers benefiting from increased productivity and regenerated land.

Timm Tennigkeit, Camide Unique, Germany, observed that monitoring is difficult in many parts of the world, explaining that while long-term monitoring is necessary to target interventions, often monitoring is not scientifically robust. Reflecting on the project described by Wekeza, he said this project illustrates that villagers are interested in engaging in monitoring. He stressed that this model is applicable to biodiversity, and called for exploring synergies between monitoring by scientists, governments and communities.

Alou Keita, CAMIDE, Mali, reported on microfinance projects mobilizing resources from emigrants to France, which has now evolved to 19 funds. Created in 1998, he said the key to success was “community base management,” which includes locals in the process.

Ini Damien, Alinea, Burkina Faso, discussed her experiences empowering women in Burkina Faso through a project that mobilized 6,000 women and promoted land ownership. Noting the challenge of high illiteracy rates, she said four dimensions were prioritized: cultural; environmental; economic; and social.

Assefa Tofu, World Vision, Ethiopia, noted the Humbo Ethiopia Assisted Natural Regeneration project, which encompasses 2,728 hectares, was the first African project to be issued carbon credits by the United Nations Framework Convention on Climate Change Clean Development Mechanism.

WALKING THE TALK FROM FORESTS TO COASTLINES: IMPLEMENTATION OF GENDER SENSITIVE POLICIES IN PROGRAMMES AND PROJECTS

Moderator Natasha McQuaid, CBD Secretariat, introduced the panel, emphasizing gender sensitive policies to successfully achieve the Aichi Biodiversity Targets.

Vivienne Solis, Coope Solidar, underscored the role of women in small scale fishing communities, such as in marine PAs. She emphasized that small-scale fishing communities recognize fishing as a way of life, strongly integrated into culture and identity, and noted the vulnerability of fisheries. She said access to land and marine resources are important to women, whose knowledge and experience should be recognized. She stressed empowerment enables them to address issues that matter to them, such as: health and social security; education; land rights; and childcare.

Andrea Quesada, Women’s Environment and Development Organization (WEDO), described the current status of gender in reducing emissions from deforestation and forest degradation in developing countries, the role conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+). Building on the experience of the REDD+ Social and Environmental Standards initiative, she emphasized capacity building as fundamental to incorporating gender and social standards capable of responding to country-specific requirements.

Kanti Risal, Nepal Stakeholder Forest Management Platform, presented a study evaluating impacts of community forestry on households and livelihoods across Nepal. She explained the conceptual focus of the impact assessment included: improving access to livelihood assets for women; increasing the voice of women; supporting changing “rules of the game” that have favored elites and males; and developing evidence-based interventions. She suggested that community forest management has positive impacts on all aspects of tree management, increasing tree diversity, tree productivity and biodiversity.

Archana Godbole, Applied Environmental Research Foundation (AERF), presented participatory conservation experiences in India. She focused on energy and biodiversity emphasizing AERF’s “ground approach” to capacity building.



Andrea Quesada, WEDO



L-R: Vivienne Solis, Coope Solidar; Andrea Quesada, WEDO; Kanti Risal, Nepal Stakeholder Forest Management Platform; and Archana Godbole, Applied Environmental Research Foundation.

She encouraged the expansion of experiences such as management of oil-seed collection women to help build their entrepreneurial capacity.

During discussions, McQuaid asked the audience to share their experiences with gender mainstreaming and what facilitated or hindered that process. One participant noted that having a female president helps the recognition of women. Another shared observations from his involvement with biodiversity projects, including positive engagement of women harvesting seedlings for pharmaceutical companies in Nepal, and cultural barriers discouraging engagement in activities believed to negatively impact women's reproductive ability.

From the audience, Sergio Zelaya, UNCCD Secretariat, noted the importance of recognizing women's role in natural resource management and livelihoods provisions. Responding to his question about recommendations for a more coherent policy approach, Quesada recommended bringing NGO and grassroots voices into discussions.



Sergio Zelaya, UNCCD Secretariat

BIODIVERSITY FOR DEVELOPMENT INITIATIVE

Moderator Didier Babin, CBD Secretariat, introduced the panel and highlighted the development of a common website with different partners, focusing on biodiversity and human well-being, and biodiversity for poverty eradication and development.

Sameer Punde, AERF, India, and Suneetha Subramanian, UNU-IAS, presented the draft study "Development of Poverty-Biodiversity Indicators and Their Eventual Application," noting the challenge of capturing complexity with a limited set of indicators. Saying the study uses the "drivers, pressures, state, impact, and responses" framework, Punde defined poverty-biodiversity indicators as measures that demonstrate the direct contribution of biodiversity trends to changes in peoples' livelihoods.

He highlighted that the study assesses existing initiatives and indicators for poverty and biodiversity in 11 existing indicator frameworks, using criteria such as: sensitivity; scale; relevance; and scientific validity. He said the review found that only one organization, the World Bank, has proposed, but not yet developed, poverty-biodiversity indicators.

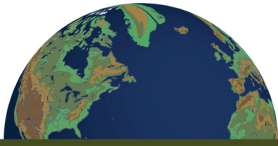
Subramanian said the report then outlines a strategy developing poverty-biodiversity indicator parameters, including: diversity of resources; functioning of ecosystem services; livelihood activities dependent on biological resources and ecosystems; cultural diversity; equity; and cross-sectoral linkages.

She highlighted desired qualities of poverty-biodiversity indicators: SMART targets; mix of stand-alone and composite indicators relevant to poverty alleviation and biodiversity conservation; interlinked indicators; amendable for implementation and scaling; and be cost effective, such as by building on existing socioeconomic and biophysical datasets.

Subramanian outlined recommendations for developing poverty-biodiversity indicators, including the need to consider scale, simplify linkages by focusing on key questions to be answered, develop a conceptual framework based on local circumstances, and collaborate with stakeholders.

Jérôme Petit, European Commission, discussed the EU 2020 Biodiversity Strategy, focusing on EU contributions to averting global biodiversity loss by: reducing harmful subsidies and impacts of European consumption patterns; increasing funding for biodiversity assistance; and seeking biodiversity cooperation, including ratifying and implementing the Nagoya Protocol. He highlighted Europe Aid's activities, including: investing in saving habitats and productive landscapes; mainstreaming biodiversity in all cooperation sectors; and facilitating biodiversity policy development at the local, national and international levels.

Bernard Giraud, Livelihoods Venture, closed the session affirming that to reach scale, simplicity is needed. He stressed the importance of trust-building, balancing short- and long-term benefits, community ownership and capacity building of project developers as key to guaranteeing successful biodiversity and development projects.



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RIO CONVENTIONS PAVILION HIGHLIGHTS: SATURDAY, 13 OCTOBER 2012

The Rio Conventions Pavilion (RCP) convened on Saturday for “20/20 Talks: 20 Presentations on 20 Targets.” The sessions included 20 presentations on the 20 Aichi Biodiversity Targets, interspersed with panel sessions on the strategic biodiversity goals. Speakers discussed how to address the underlying causes of biodiversity loss, reducing direct pressures on biodiversity and promoting sustainable use, improving biodiversity status, enhancing benefits to all from biodiversity and ecosystem services, and enhancing implementation.



The dais during the session on “Targets 11-13 and Strategic Goal “C.”” L-R: Vandana Shiva, Navdanya Research Foundation for Science, Technology and Ecology; Trevor Sandwith, IUCN; and Russ Mittermeier, President, Conservation International (CI)

TARGETS 1-4 AND STRATEGIC GOAL “A”

Moderator David Ainsworth, CBD Secretariat, opened the 20/20 Talks. CBD Executive Secretary Braulio Ferreira de Souza Dias introduced the debate emphasizing the importance of valuing biodiversity. He underscored the Aichi Biodiversity Targets are the main international framework for global action. Dias noted the privileged role of the CBD Secretariat in helping to identify “win-win” solutions and promoting partnerships among various stakeholders.

On Target 1 (Awareness increased), Tim Hirsch, Global Biodiversity Information Facility, said it is the simplest yet most difficult target. He asked participants to leave negotiating jargon and acronyms behind and focus on their own passions in conveying why biodiversity is important to the public. He emphasized careful communication and called

for distinguishing between the various values of biodiversity. Hirsch underscored the utility of direct results to practitioners combating biodiversity loss and called for sharing those results in knowledge-base websites.

On Target 2 (Biodiversity values integrated), Pavan Sukdev, GIST Advisory Group, explained that both “quantity” and “variability” matter for biodiversity, noting “The Economics of Ecosystems and Biodiversity” study. He emphasized valuation is a human institution and said capturing the ecosystem value does not necessarily mean price attribution. Highlighting the Green Accounting for Indian States and Union Territories Project, he underscored the challenge of imperfect data and stressed using multiple biodiversity valuation strategies, including through legislation, regional plans and certification.



Tim Hirsch, Global Biodiversity Information Facility



Pavan Sukdev, GIST Advisory Group

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Katia Karousakis, Organization for Economic Co-operation and Development

On Target 3 (Incentives reformed), Katia Karousakis, Organization for Economic Co-operation and Development, highlighted incentives as “a toolkit” used by governments to promote biodiversity conservation. She emphasized eliminating harmful subsidies and providing positive incentives, *inter alia*: taxes on ground water extraction, pesticide and fertilizer use; fees for hunting, fishing and access to national parks; subsidies to promote biodiversity; payments of ecosystem services; biodiversity offsets; and tradable permits, such as individually transferable fisheries quotas.

On Target 4 (Sustainable consumption and production), Ibrahim Thiaw, Director, Division of Environmental Policy Implementation, UNEP, highlighted the annual capture of 110-130 million tonnes of fish, degradation of one billion hectares of agricultural land, and post-harvest loss of 40% of food products. Calling for more attention to waste, he noted the 10-Year Framework Programme (10-YFP) on Sustainable Consumption and Production (SCP) adopted at the UN Conference on Sustainable Development (UNCSD), in Rio de Janeiro, Brazil, in June 2012. He emphasized the importance of engaging consumers in ecological footprint reduction.

Speakers addressed Strategic Goal “A” (Addressing the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society) and responded to questions by participants. Panelists emphasized: reforming global governance systems to prevent piracy of high seas resources; promoting SCP patterns in a globalized world; supporting marine protected areas (MPAs) enforcement by



Ibrahim Thiaw, Director, Division of Environmental Policy Implementation, UNEP

small island developing states (SIDS); recognizing “healthy” forms of privatization, such as improving local communities’ rights and access to resources; and improving subsistence farmers’ yields and storage capacities.

TARGETS 5-10 AND STRATEGIC GOAL “B”

On Target 5 (Habitat loss halved or reduced), Tim Christophersen, UNEP, quoted Lester Brown saying “saving civilization is not a spectator sport.” He noted every three seconds one hectare of forests disappears and commended Costa Rica, Brazil and Bhutan for significant reduction in deforestation. He noted the project “Global Forest Watch 2.0” and emphasized the importance of decoupling population growth from deforestation, which already happened.

On Target 6 (Sustainable management of marine living resources), Serge Garcia, FAO, noted concern about the direction of South East Asian fishing practices and called for restocking the biomass of EU fisheries. Providing a cost-benefit analysis, he recommended a systemic approach in national policy frameworks and suggested solutions including: financing safety nets; reducing pressure on fish stocks; applying ecosystem-based approaches; employing smarter economics; enforcing laws; and promoting good governance.

On Target 7 (Sustainable agriculture, aquaculture and forestry), Peter Kenmore, FAO, discussed pollination, aquaculture and pest control. He stressed that achieving sustainable development, including sustainable agriculture, requires empowering people who have local and indigenous



L-R: Patricio Arturo Bernal, UNESCO; Serge Garcia, FAO; Peter Kenmore, FAO; Melesha Banhan, Antigua and Barbuda; and Tim Christophersen, UNEP



Patricio Arturo Bernal, UNESCO

knowledge. He emphasized focusing on local active research processes and noted aquaculture risks if a holistic ecosystems view is disregarded. He highlighted that India has increased food productivity while reducing pesticide use by two thirds in the last 20 years.

On Target 8 (Pollution reduced), Patricio Arturo Bernal, UNESCO, stressed that reducing pollution is important for the preservation of both human and ecological health. Recalling Rachel Carson's "Silent Spring," he emphasized emissions reductions achieved by national legislation, such as declining sulfur dioxide emissions in California since 1962. He underscored the interconnectedness of ecosystems and called for defining site- and ecosystem- specific "critical loads," the maximum pollutant deposition levels that do not cause long-term harm to ecosystems.

On Target 9 (Invasive alien species prevented and controlled), Melesha Banhan, Antigua and Barbuda, said invasive alien species is a critical problem in most countries. She discussed the impacts of invasive species in the Caribbean region, including on the agricultural and tourism sectors. She highlighted challenges allocating government funding to protect biodiversity from invasive species and noted regional initiatives addressing this challenge, such as the Mitigating the Threat of Invasive Alien Species in the Insular Caribbean framework.

On Target 10 (Pressures on vulnerable ecosystems reduced), David Obdura, Coastal Oceans Research and Development in the Indian Ocean East Africa, underscored that maintaining the ecosystem functions of coral reefs preserves their recovery ability and increases resilience to climate change and other stresses, such as pollution, overfishing, predation, diseases, acidification and bleaching. He recommended the use of

early warning systems to monitor ecosystems and called for a "fundamental change" in economic systems to reduce ecological footprints.

The speakers discussed Strategic Goal "B" (Reducing the direct pressures on biodiversity and promote sustainable use). Panelists and participants addressed mitigating Aichi Target impacts on the private sector and assisting small-scale operators with regulatory change. They highlighted: bottom-up fishing-industry approaches to address invasive species in the Caribbean; the opening of arctic fisheries due to climate change; and the Intergovernmental Panel on Biodiversity and Ecosystem Services as a global structure to address invasive species. On achieving Target 5, Christophersen noted REDD+ and the UNCSD outcomes on green economy, underscoring the challenge is implementation of existing plans.

TARGETS 11-13 AND STRATEGIC GOAL "C"

On Target 11 (PAs increased and improved), Trevor Sandwith, IUCN, recalled agreement on PAs at CBD COP 10 in Nagoya, Japan, noting they are "doing quite well." He emphasized the need for skilled people and institutions that can cope with increasingly complex problems, such as climate change. Highlighting work by IUCN and the World Commission on PAs, he stressed PAs should facilitate equitable governance and social assessment and emphasized the "learning by doing" approach.

On Target 12 (Extinction prevented), Russ Mittermeier, President, Conservation International (CI), underscored the species extinction crisis. He listed threats to species, including: large-scale monoculture agriculture; slash-and-burn agriculture; large-scale hydroelectric projects; hunting; species trade; invasive species; and climate change. He recommended: using science-based strategic prioritization; identifying high priority sites; focusing on mega-diversity countries such as Brazil and Indonesia; and focusing on hot spots such as Madagascar, with large numbers of endangered species.

On Target 13 (Genetic diversity maintained), Vandana Shiva, Navdanya Research Foundation for Science, Technology and Ecology, recalled her experiences during 25 years of biodiversity conservation. She underscored monoculture constraints, especially corn, canola, soya and wheat, on food security. She said the "monoculture of the mind" inhibits valuing biological diversity and noted India's history of great crop diversity, such as the growth of 200 rice varieties. She stressed that commodities are not food, but the source of malnutrition.

The speakers discussed Strategic Goal "C" (Improving the status of biodiversity by safeguarding ecosystems, species and genetic diversity). Responding to questions, Sandwith said



Melesha Banhan (Antigua and Barbuda)



Vandana Shiva, Navdanya Research Foundation for Science, Technology and Ecology

the categorization of PAs revealed the need for getting the issue of governance types right. Mittermeier commended early efforts by Brazil on species assessment and their success in species protection. Shiva said CBD parties must live up to their agreements and shift policies from those supporting genetically modified organisms to biodiversity protective agriculture practices. She stressed policy change can only happen when democratic forces equal undemocratic ones.

TARGETS 14-16 AND STRATEGIC GOAL “D”

On Target 14 (Ecosystems and essential services safeguarded), Carlos Manuel Rodriguez, CI, explained



Carlos Manuel Rodriguez, CI

linkages between the Aichi Targets. Beyond financial resources, he emphasized the need for policy planning and broader political engagement by government ministers, particularly those responsible for finance and agriculture. He highlighted successful experiences in Costa Rica combating deforestation.

Rodriguez urged eliminating perverse incentives, creating positive incentives and building new institutional frameworks to achieve Target 14.

On Target 15 (Ecosystems restored and resilience enhanced), Sasha Alexander, Society for Ecological Restoration, noted that while some countries have the capacity to achieve the target, political will and long-term commitment are required. He discussed the contribution of restoration outcomes to combating desertification and land degradation, as well as to climate change mitigation and adaptation. He concluded ecosystem restoration creates jobs and livelihoods in harmony with nature.

On Target 16 (Nagoya Protocol in force and operational), Pierre du Plessis, Centre for Research Information Action in Africa, recalled that the third objective of the CBD (sharing the benefits arising from the utilization of genetic resources in a fair and equitable way) is key for CBD implementation. He said the failure to address this objective is one reason the 2010 targets have not been achieved. He highlighted Target 16 is an opportunity to drive the transition towards alternative “green” development pathways, along with more equitable North-South relations.



Pierre du Plessis, Centre for Research Information Action in Africa

The speakers discussed Strategic Goal “D” (Enhancing the benefits to all from biodiversity and ecosystem services). Du Plessis emphasized the rights based approach as prerequisite for sustainable resource management. He underscored that “since people are destroying biodiversity, they must be part of the solution.” Rodriguez attributed Costa Rica’s success in simultaneously restoring ecosystems and achieving economic growth to addressing perverse incentives and transforming institutions.

TARGETS 17-20 AND STRATEGIC GOAL “E”

On Target 17 (NBSAPs adopted as policy instrument), Caroline Petersen, UNEP, noted national biodiversity strategy and action plan (NBSAP) capacity building workshops to facilitate drafting of NBSAPs. She highlighted a study recommending that new NBSAPs focus on specific targets and on-the-ground action. She described the NBSAP of South Africa as exemplary, addressing biodiversity across entire landscapes through land-use planning and decision-making. She lauded the launch of the NBSAP Forum to share knowledge and experiences in the development of NBSAPs.

On Target 18 (Traditional knowledge respected), Joji Carino, Tebtebba Foundation - Indigenous Peoples’ International Centre for Policy, Research and Education, underscored that indigenous and local communities are found in “hotspot areas” because they conserve biodiversity. She emphasized the maintenance of traditional knowledge and customary sustainable use requires, *inter alia*: respect for and noninterference in indigenous practices; free and prior consent for third party projects on indigenous territory; and full and effective participation at all levels.

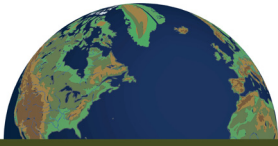
On Target 19 (Knowledge improved, shared and applied), Randall Garcia, National Institute for Biodiversity, discussed information for conservation. He underscored the importance of understanding policy impacts on ecosystems. He also emphasized “translating” information to better integrate local knowledge, incorporate cultural, religious and market values, and address the multiple needs of stakeholders.

On Target 20 (Financial resources from all sources increased), Gustavo Alberto Fonseca, Global Environment Facility, emphasized Target 20’s role in enabling achievement of the other targets. He called for recognizing investment in biodiversity as “an investment in the future,” and said it should not just be a north-south exchange. He stressed mobilizing private sector sources and utilizing funds more effectively. He highlighted the first decrease in official development assistance since 1997 in 2011.

Speakers discussed Strategic Goal “E” (Enhancing implementation through participatory planning, knowledge management and capacity building). In response to a question about the paradox between the enhancement of data and continuous biodiversity degradation, Fonseca emphasized the solution to get out of this “trap” is to value natural capital. Carino stressed the importance of long-term planning, while Peterson highlighted positive schemes in Costa Rica, South Africa and India. One participant underscored the challenge of remaining optimistic and panelists responded that barriers remain a reality, but that citizen’s engagement and promising bottom-up experiences provide hope.



L-R: Gustavo Alberto Fonseca, GEF; Joji Carino, Tebtebba Foundation - Indigenous Peoples’ International Centre for Policy, Research and Education; and Caroline Petersen, UNEP



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RIO CONVENTIONS PAVILION HIGHLIGHTS: MONDAY, 15 OCTOBER 2012

The Rio Conventions Pavilion (RCP) convened on Monday for the Sixth Land Day. The event included an opening session and keynote speech by Vandana Shiva, Founder, Research Foundation for Science, Technology and Ecology, and panel sessions on: playing a win-win game - the implications of drylands restoration for meeting the Aichi Biodiversity Targets; measuring the true economic value of land; and biodiversity as an enabler of sustainable agriculture - alternative production models to bridge the gap between agriculture, food and land policies.



Vandana Shiva (right), Founder, Research Foundation for Science, Technology and Ecology, greets participants after her keynote speech.

OPENING OF SESSION AND KEYNOTE

UN Convention to Combat Desertification (UNCCD) Executive Secretary Luc Gnacadja welcomed participants, calling for constructive debate going beyond “comfort zones” to provide new win-win solutions. He noted that 50 % of the 2020 Aichi Biodiversity Targets involve land degradation and emphasized synergies between achieving CBD biodiversity targets and the ten-year strategy of the UNCCD to move towards a land degradation neutral world. He underscored the need to restore land for ecosystems and communities and stressed focusing on soil improvement first, utilizing traditional knowledge and applying holistic management approaches.

CBD Executive Secretary Braulio Ferreira de Souza Dias recalled the importance of soil conservation to achieving food security, enhancing livelihoods and eradicating poverty. Emphasizing “win-win” opportunities, he said strengthening partnerships is essential to successfully mainstreaming biodiversity into a broader sustainable development agenda.

BMS Rathore, Joint Secretary, Ministry of Environment and Forestry, India, commended cooperation between the UNCCD and CBD, as well as their partnership with IUCN. He underscored addressing the issue of land degradation is crucial to achieving the Aichi Biodiversity Targets. He said that drylands issues affect large numbers of people and impact biodiversity. Stressing developing countries’ focus on poverty, he commended UNCCD’s ten year strategy addressing: living conditions of affected people; conditions of affected ecosystems; and global benefits.

Julia Marton-Lefèvre, Director General, IUCN, argued that when land is sustainably managed there are clear benefits for biodiversity conservation and livelihoods. She noted successful

cases of land conservation, including in India, Senegal and Tanzania, and emphasized IUCN’s commitment to treat nature “as a solution.” She said reversing land degradation is a “tough sell,” but is key for improving food security. She observed that biodiversity conservation is the way to start combating land degradation.

Vandana Shiva, Founder, Research Foundation for Science, Technology and Ecology, emphasized the challenge of removing barriers to soil rejuvenation, ecological farming and sustainable land management (SLM). She said science is being distorted by vested interests and competitive market rationales. Shiva stressed industrial monoculture agriculture causes entropy and pollution, and increases ecological footprints.

She underscored organic farming increases soil nutrition, protects biodiversity and yields higher income for farmers. Responding to questions, Shiva described synthetic biology as reductionist, and called for humility and humanity when dealing with biodiversity conservation. She noted trade and commodification of natural resources fails to account for the multi-functionality of ecosystems.

PLAYING A WIN-WIN GAME: WHAT IS THE IMPLICATION OF DRYLANDS LAND RESTORATION FOR MEETING THE AICHI BIODIVERSITY TARGETS

Moderator Sasha Alexander, Society for Ecological Restoration, introduced the panel. Sakhile Koketso, CBD Secretariat, provided an overview of the main Aichi Biodiversity Targets relating to land management. She noted the Strategic Plan is not just an implement of the CBD, but is applicable to all UN agencies and stakeholders.

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Sakhile Koketso, CBD Secretariat

Koketso recalled that one of the reasons the 2010 targets were not achieved was the failure to address underlying causes of biodiversity loss, especially unsustainable consumption patterns. She highlighted the importance of women and local farmers in promoting biological diversity and encouraged the recognition of traditional knowledge as a pathway towards ensuring food security.

Mary Rowen, USAID, reported USAID spends US\$ 200 million a year on biodiversity conservation, using a threats-based approach focusing on integrated programmes with positive impacts in high biodiversity areas. Emphasizing a biodiversity focus for drylands and land restoration, she highlighted USAID's work on community-based natural resource management.

Rowen noted this type of management involves devolution of property rights and land tenure, and integrated programming that addresses economic, ecological and financial sustainability. She also discussed landscape approaches, which increase resilience for humans and wildlife, and diversification of economic opportunities to adapt to climate variation.

Jones Muleso Kharika, Department of Environmental Affairs (DEA), South Africa, discussed the achievements and prospects of the Development Bank of Southern Africa's Drylands Fund



Jones Muleso Kharika, DEA, South Africa

in South Africa. He stressed the importance of partnerships and bottom-up approaches in order to address land degradation and poverty alleviation. He emphasized the inclusion of civil society and private sector as critical to accomplishing UNCCD's goals in South Africa and called for more focus on communities and measurable impacts.

Pablo Manzano, IUCN, noted achieving sustainable development targets requires: adjusting national accounting; eliminating harmful subsidies; and fostering sustainable production and consumption. He stressed that human activity should allow for ecosystem connectivity, especially on drylands, and for the prevention of species decline and extinction.

Manzano noted the potential of drylands and open lands to increase carbon stocks through increasing biodiversity, for which he recommended employing genetic diversity of domestic plants and animals, and protecting traditional knowledge. He observed markets are a source of resource mobilization.

During discussion, Axel Paulsch, Institute for Biodiversity, presented the "SLM" programme, which is a decision support system to inform drylands decision making. He



L-R: Sakhile Koketso, CBD Secretariat; Jones Muleso Kharika, DEA, South Africa; Mary Rowen, USAID; Moderator Sasha Alexander, Society for Ecological Restoration; and Pablo Manzano, IUCN.



Pablo Manzano, IUCN

noted an ongoing project in the Tarim River basin, China, and highlighted the potential of academic research to inform policy-making.

Responding to audience questions, panelists emphasized the importance of partnerships, that address national priorities, and policy harmonization on the ground in order to efficiently employ aid resources.

HOW DO WE MEASURE THE TRUE ECONOMIC VALUE OF LAND

Johannes Förster, Helmholtz Centre for Environmental Research, introduced the panel. Rejoice Mabudafhasi, Deputy Minister for Water and Environmental Affairs, South Africa, presented a cost benefit analysis of the global environmental crisis, suggesting global efforts and partnerships are needed. She called for adequate funding of the UNCCD.

Mabudafhasi said an integrated approach to sustainable development is needed, addressing: economic opportunities; population growth; food security; water quality and access; over exploitation of natural resources; and ecosystem degradation. Observing “women are custodians of the environment,” she noted South Africa engages women and local communities’ in ecosystem monitoring and data collection, such as through training in water quality testing.

Mark Schauer, Economics of Land Degradation (ELD) Secretariat, noted ELD is a global initiative focusing on national economic costs of inaction to prevent land degradation. He emphasized the need for a framework capable of providing a common language between science and the private sector. Schauer highlighted the lack of awareness and current data as key challenges for decision makers. Noting the importance of the private sector, he stressed the need to showcase good investment opportunities for combating land degradation.



A participant at the Rio Conventions Pavilion.

Simone Quatrini, The Global Mechanism, presented challenges faced by the ELD initiative, which aims at: comparing the costs of land degradation to the costs of adopting SLM practices; building capacity and improving data access for developing countries; and developing tools for policymakers to empower sustainable land use decision making. He discussed progress made by interdisciplinary working groups on: estimating the total economic value of the costs of, and social loss from, land degradation; accounting for trade-offs between populations; and valuing ecosystem services.

Jones Muleso Kharika, DEA, South Africa, stressed that understanding the costs of inaction is fundamental for addressing the problem of land degradation. He emphasized that, with updated information, policies can be more adequately implemented and underscored the need to focus on national priorities. He suggested that “sticks” are not necessarily the best solution for developing countries, particularly in the event of natural disasters.

During discussions, Quatrini called for involving youth groups in the consultation process of the ELD initiative. On quantifying ecosystem values, he explained the intention is to provide qualifiers to the discussions and improve dialogues with ministers of finance and the private sector.

Quatrini stressed valuation is different from privatization, “it is trying to express the real economic value of land and ecosystems, including all different valuation aspects.” Kharika said, ecosystems are not only diverse, but are functional, and urged attention to complex environmental, social and cultural interactions.

BIODIVERSITY AS AN ENABLER OF SUSTAINABLE AGRICULTURE: HOW CAN ALTERNATIVE PRODUCTION MODELS BRIDGE THE GAP BETWEEN AGRICULTURE, FOOD AND LAND POLICIES

Moderator Jan McAlpine, Director, UN Forum on Forests (UNFF), introduced the session. Noting its relationship with the UN, Rami Abu Salam, International Fund for Agricultural Development (IFAD), explained that IFAD is scaling up “multiple win” approaches for sustainable agriculture intensification, focusing on the value of natural assets. He highlighted opportunities to drive green growth and the need to leverage climate finance. He also emphasized the importance of projects involving irrigation to reduce crop loss, which impacts livelihoods.

Mathew John, International Federation of Organic Agricultural Movements (IFOAM), explained how livelihoods



Mathew John, IFOAM

benefit from, and food security and nutritional value are increased by, sustainable utilization of biodiversity. Sharing experiences from Kurumbas and Irulas in India, he highlighted local communities’ ability to sustain themselves without monetization, but through traditional practices and cultural rituals. He stressed community-based agriculture

requires adequate land rights and respect for traditional seed bank preservation practices. He emphasized organic agriculture is based on four principles: health; ecology; fairness; and care.



L-R: Pernilla Malmer, Stockholm Resilience Centre, Stockholm University, Sweden; Mathew John, IFOAM; Rami Abu Salam, IFAD; Moderator Jan McAlpine, Director, UNFF; and James Aronson, Centre d'Ecologie Fonctionnelle et Evolutive, France.

Pernilla Malmer, Stockholm Resilience Centre, Stockholm University, Sweden, discussed resilience and agricultural biodiversity governance. She stressed the importance of these topics, due to the increasing complexity of the relationships between people and nature. Noting the central role of humans in driving ecological change, she underscored the need to facilitate self-organization in an uncertain world, and combine different sources of knowledge in order to guarantee social-ecological resilience. She emphasized cultural and biological diversity are equally important.

James Aronson, Centre d'Ecologie Fonctionnelle et Evolutive, France, presented "restoring natural capital" thinking as: the missing tool for achieving zero net land degradation; a link between the three Rio Conventions; and a way to overcome the false dichotomy that suggests conservation investment excludes investment in economic development. He emphasized that ecological restoration is about improving relationships between nature and culture. Aronson highlighted a case in South Africa's Drakensberg mountain region, where the restoration of natural capital involves local communities and financial support from the water sector.



James Aronson, Centre d'Ecologie Fonctionnelle et Evolutive, France

In discussion, Moderator McAlpine recalled that the benefits of restoration are not antagonistic to development. Malmer emphasized the creation of networks of experts as one potential solution to showcase the benefits of restoration investments. John highlighted the need to remove pressures from the communities by including them in the process.

Salam noted the challenges in developing projects that can address many issues at once, and said this should not be expected. Aronson argued that the real problem is not commodification of ecosystems, but the lack of mechanisms capable of valuing them. He underscored initiatives in Brazil and South Africa as beneficial cases of public-private partnerships.

In closing, Sergio Zelaya, UNCCD Secretariat, moderated a discussion between Land Day's session moderators. Zelaya noted that the panel discussions emphasized commonalities between the 2020 Aichi Biodiversity Targets and UNCCD objectives.

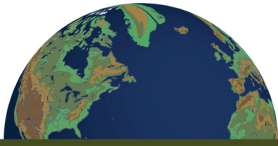
Alexander said clear consensus has emerged on the need for ecological restoration and said engaging communities and NGOs, and accounting for landscape multi-functionality are key. He commended Brazil, Colombia, India and South Africa as regional leaders in ecological restoration.

Förster underscored Deputy Minister Mabudafhasi's message that while the issue of land degradation is critical to the survival of local communities in South Africa, they are also part of the solution, contributing a wealth of knowledge. McAlpine emphasized the idea of seeds, saying that if the seeds of land conservation are planted in the right place and cared for, they will germinate and grow.

Gnacadjia highlighted the need to get investments in land degradation solutions "right." He reemphasized the high costs of land degradation and the risks of inaction, calling for the protection of "precious areas." In conclusion, he welcomed constructive discussions at the Sixth Land Day.



Moderator Jan McAlpine, Director, UNFF



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RIO CONVENTIONS PAVILION HIGHLIGHTS: TUESDAY, 16 OCTOBER 2012

The Rio Conventions Pavilion convened on Tuesday for REDD+ Day. The event included the launch of the “Little Forest Finance Book” and the UN-REDD “Policy Brief on Multiple Benefits.” Panel sessions also convened, including a high-level panel on REDD+, biodiversity and ecosystem services for a green economy, and two others, one on key findings of the new Global Forest Expert Panel (GFEP) assessment and one on REDD+ and biodiversity safeguards - best practices in governance and safeguarding biodiversity.



Andrew Mitchell, Founder and Director, GCP

LAUNCH OF THE LITTLE FOREST FINANCE BOOK

Tim Christophersen, UNEP, announced the launch of the “Little Forest Finance Book” and introduced the panel. He noted the book highlights the different options to scale up forest financing, saying financing is critical to achieving the Aichi Biodiversity Targets and calling for mobilizing the private sector to channel sustained alternative investments in forests.

Henriette Killi Westrin, State Secretary, Ministry of Environment, Norway, hoped the book will stimulate discussions and catalyze finance, in part through verified emissions reductions through the UN Framework Convention on Climate Change’s (UNFCCC) REDD+ mechanism, to



Tim Christophersen, UNEP

protect forests from conversion to other land types. She said increased financing for verified emissions reductions through the REDD+ programme under the UNFCCC will support forests.

Nick Oakes, Global Canopy Programme (GCP), stressed the importance of finance for forests noting tropical forests account for 50% of global terrestrial biodiversity loss. He emphasized access to capital plays a crucial role in “forest friendly development,” including activities that maintain, reduce loss and increase forest cover.

Oakes noted barriers to forest finance, include *inter alia*: collateral requirements; risk-return expectations; accountability in decision making; and revenue generation. Oakes described how the 14 catalysts identified in the book address these barriers to scaling up forest financing.



Henriette Killi Westrin, State Secretary, Ministry of Environment, Norway

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L-R: Tim Christophersen, UNEP; Henriette Killi Westrin, State Secretary, Ministry of Environment, Norway; Nick Oakes, GCP; Carlos Manuel Rodríguez, Vice President, Conservation International; and Andrew Mitchell, Founder and Director, GCP.

Carlos Manuel Rodríguez, Vice President, Conservation International, highlighted that Costa Rica went from 21% to 54% forest cover while tripling income *per capita* and experiencing population growth. He said this was achieved by addressing the catalyzers for forest finance, including introducing forest incentives and subsidies.

Rodríguez emphasized the importance of valuing the ecosystem services provided by forests to justify financing for forest conservation. He noted the complicated discussions at CBD COP 11 about who will pay for implementation, calling for creating national mechanisms following the Costa Rican model.

Andrew Mitchell, Founder and Director, GCP, called for making forests worth more alive than dead, reversing current market failures that treat natural capital costs as externalities. He said the book outlines rules for successful policies and catalysts as incentives to get finance flowing.

Mitchell noted this would reduce the discrepancies between the US\$ 160 trillion global equity and bond markets and the non-existent global ecosystem market. He stressed advanced market mechanisms, with governments contributing pledges to a global fund, could serve as lever and provide missing price signals to investors by providing price floors.

During discussions, Oakes emphasized the catalysts can cope with transboundary impacts of forest degradation and landscape level projects, noting the role of bilateral projects. Mitchell said the design of REDD+ projects are becoming clearer, while highlighting that the methodologies are still complex.



Carlos Manuel Rodríguez, Vice President, Conservation International

HIGH-LEVEL PANEL ON REDD+, BIODIVERSITY AND ECOSYSTEM SERVICES FOR A GREEN ECONOMY

Moderator Ibrahim Thiaw, Director, Division of Environmental Policy Implementation, UNEP, introduced the panel, underscoring the role of forests in the green economy, including providing ecosystem services and low carbon livelihoods. He noted that in 2006 forests contributed US\$ 468 billion to the global economy, in addition to ecosystem services not accounted for using traditional economic measures.

Henriette Killi Westrin, State Secretary, Ministry of Environment, Norway, highlighted that REDD+ is the most cost effective climate change mitigation measure, with positive impacts on biodiversity and ecosystem services. She recalled “The Economics of Ecosystems and Biodiversity” study estimated that the value of global biodiversity and ecosystem services from tropical forests ranges from US\$ 2-5 trillion per year. Westrin expressed hope that developing countries will be given clear and reliable incentives to explore REDD+, which she said will only reach its full potential when it is part of a sustainable development and green economy strategy.

Heru Prasetyo, Deputy Chairman, President’s Delivery Unit for Development Monitoring and Oversight, Indonesia, called for avoiding myopic approaches to carbon, biodiversity and ecosystem services, and taking holistic approaches to reforming how land and resources are used. He expressed concern with the commodification of carbon, resulting in large-scale biofuel projects that are actually destroying forests.

Prasetyo said the value of saving the forests is equally competitive with converting forests to palm oil plantations, when natural resources are valued properly. He underscored if indigenous peoples and safeguards are not properly considered, that REDD+ “is a pathway to hell,” noting that local communities have to be considered as partners in REDD+.

CBD Executive Secretary Bráulio Ferreira de Souza Dias stressed the Aichi Biodiversity Targets will not be achieved by regulatory and command and control approaches alone, without alternative incentive measures. He suggested that REDD+ provides a needed enabling environment providing potential win-win solutions, if implemented right.

Emphasizing the importance of biodiversity safeguards, Dias called for respecting the rights of local communities, “the main custodians of biodiversity.” He recommended exploring synergies between the Rio Conventions, noting ecosystem restoration as one common element.

During discussions, Westrin underscored that the implementation of goals under the CBD and REDD+ should be complementary, and noted different REDD+ safeguards are right for different situations.

Prasetyo said emissions reductions have to be the first goal of REDD+ and described REDD+ safeguard “experiments” to support the large-scale deployment of Indonesia’s REDD+ strategy. From the floor, Pavan Sukdev, GIST Advisory, noted the use of the T-21 model in Indonesia to map scenarios such as REDD+ or development of palm oil plantations.

LAUNCH OF THE UN-REDD POLICY BRIEF ON MULTIPLE BENEFITS

Moderator Tim Christophersen, UNEP, introduced the panel. Valarie Kapos, UNEP-World Conservation Monitoring Center (WCMC), presented the UN-REDD study “REDD+ Beyond Carbon: Supporting Decisions On Safeguards and Multiple Benefits,” addressing REDD+ complexity concerns by providing analytical approaches for evidence-based REDD+ multiple-benefit decisions.

Kapos noted that: mapping ecosystems to identify priority areas informs decisions on biodiversity; finding cost effective solutions allows policy makers to explore different options for REDD+ actions; establishing economic values of multiple benefits, in both non-monetary and monetary terms, enables comprehensive cost-benefit analyses; and applying scenario modeling makes assessments of REDD+ projects’ future impacts possible.

Veerle Vanderveerd, UNDP, emphasized REDD+ requires learning by doing. She stressed the importance of property rights, underscoring that many people lack legal recourse related to the land and natural resources that underpin their livelihoods. She highlighted UNDP actions to build capacity to implement REDD+ safeguards, noting the obstacles that safeguards sometimes present for those developing projects.

On lessons learned, Vanderveerd said the social aspects of sustainable development must be addressed first, developing understanding of what forest conservation means for livelihoods. She emphasized social inclusion of local communities as essential to a system of performance-based payments under REDD+.



Valarie Kapos, UNEP-WCMC

Christophersen stressed that analytical tools assist countries undertaking complex national transformations. He noted that carbon and biodiversity mapping can be used to model land use to identify optimal scenarios. He underscored that REDD+ success is about sustainable land use and cannot be achieved through trade offs.

Christophersen emphasized it is possible to enhance food productivity, to conserve biodiversity and reduce negative environmental and social externalities, but that it takes know-how and planning. He called for countries to adopt far-reaching visions for development and suggested REDD+ is but one vehicle to bring together different sustainable development goals.

In discussions, Vanderveerd agreed that financial support from the international community is needed for capacity building. Kapos added that community monitoring enhances local recognition of REDD+ benefits. Christophersen reported improved coordination with local government agencies when approaching local communities.

KEY FINDINGS OF THE NEW GFEP ASSESSMENT: BIODIVERSITY, FOREST MANAGEMENT AND REDD+

Alexander Buck, International Union of Forest Research Organizations, introduced the panel. Christoph Wildburger, GFEP, presented the assessment report “Understanding the Relationship Between Biodiversity, Carbon, Forests and



L-R: Tim Christophersen, UNEP; Valarie Kapos, UNEP-WCMC; and Veerle Vanderveerd, UNDP.

People: the Key to Achieving REDD+ Objectives,” to be launched along with a summary for policy makers at UNFCCC COP 18 in Doha, Qatar. He discussed key findings, including that biodiversity is important to the ecosystem service provision and resilience of forests.

Wildburger stressed that the complexity of forest systems warrants applying the precautionary principle. He recommended regionally tailored strategies, emphasizing that REDD+ actions have variable impacts, including: on carbon and biodiversity; across different forest types and landscape conditions; and across spatial and time dimensions. He underscored that for REDD+ to be effective, local communities need to be engaged early on, and tenure and property rights need to be clear.

Valerie Kapos, UNEP-WCMC, said a number of different management actions have a role in REDD+ including: protection measures; agricultural practices; impacts of extractive use; restoration and reforestation; and landscape scale planning. She said the study found impacts of management actions are highly variable depending on location, scale of implementation, initial conditions and historical impacts, forest types and the wider landscape context.

Kapos underscored that the greatest and most immediate benefits are those that effectively reduce deforestation and forest degradation, while impacts of actions like restoring forests are seen much more slowly. She said understanding the impacts on carbon and biodiversity are essential for applying safeguards and effective REDD+ actions.

Bhaskar Vira, University of Cambridge, UK, discussed the social and economic context included in the GFEP assessment. He noted the challenge of assessing existing knowledge on the social and economic outcomes of REDD+ projects, since these are relatively new, hence he said the study reviewed existing forest interventions more broadly, drawing lessons for REDD+.

Vira identified four key messages including that: synergies are possible but should not be taken for granted; it is possible to look beyond safeguards towards integration of social objectives; it is important to remember what has been done before in the forest sector; and despite best efforts trade-offs will remain between carbon, biodiversity and social and economic costs.

In discussions, Vira stressed that social objectives are not easily quantified nor can they be compensated in monetary terms. He also emphasized synergies between sustainable land use and REDD+ activities. Responding to a participant, Christine Schmidt, University of Freiburg, Germany, spoke from the floor, cautioning against generalizations and calling for national specific policy option assessments taking into account specific forest types and biodiversity conditions.

One participant questioned the term “sustainable agricultural intensification,” noting that at times sustainability and intensification are not compatible. Kapos agreed there are limits, but noted that sustainable agricultural intensification is a management action in use and was therefore included in the study. Wildburger emphasized the importance of assessments such as the one being launched, due to the complexity of REDD+.

REDD+ AND BIODIVERSITY SAFEGUARDS: BEST PRACTICES IN GOVERNANCE AND SAFEGUARDING BIODIVERSITY - TOWARDS COMMON GUIDANCE BY UNFCCC AND CBD

Patrick Sieber, HELVETAS Swiss Intercooperation, highlighted the policy brief “Best Practices in Governance and Biodiversity Safeguards for REDD+,” an outcome of a joint Swiss-Philippine initiative. Tim Christophersen, UNEP, welcomed the policy brief, noting the importance of joint implementation and cooperation.

Norma Molinyawe, Department of Environment and Natural Resources, the Philippines, emphasized the policy briefs’ key messages will help ensure REDD+ supports the goals of inclusive economic growth. She stressed improving the lives of forest-living peoples and conserving natural resources are essential to REDD+.

Lawrence Ang, Ateneo School of Government, the Philippines, highlighted lessons learned from phase two of the study, emphasizing *inter alia*: REDD+ implementation succeeds when it adds value to overall national forest management strategies and local development goals; effective participation entails ownership of forest governance structures; REDD+ should demonstrate that it facilitates sustainability by providing multiple benefits; and REDD+ payment schemes should form part of an innovative sustainable financing strategy linked to broader performance parameters.

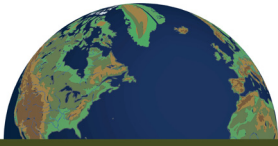
Ang also presented best practice examples from a number of countries, including Costa Rica, Indonesia, Nepal, Kenya and the Philippines, where these lessons are already being implemented. He recommended, *inter alia*, explicitly developing common standards and guidance, and ensuring a transparent, effective and participatory process.

Christopher Duerr, Federal Office for the Environment, Switzerland, emphasized developing countries need more effective, rather than increased, management structures, noting that exploring synergies between UNFCCC and CBD can avoid duplication. He stressed successful safeguards require joint efforts between developed and developing countries and South-South exchanges.

Niranjali Amerasinghe, Center for International Environmental Law, US, underscored that the complexities of REDD+ require attention to impacts on biodiversity and indigenous peoples, and to the issues of governance, trade, agriculture and land use. Amerasinghe emphasized that for REDD+ to be effective, it has to be nationally relevant and systemic issues must be addressed. She suggested participatory monitoring can bring in a wealth of knowledge from local communities whose effective participation is critical to the success of REDD+.

Kelly Hertenweg, Federal Public Service Environment, Belgium, noted the need for coordination within and among government ministries to ensure that benefits of REDD+ beyond carbon are realized. On synergies, she noted that not many negotiators work in both the UNFCCC and CBD processes and stressed that those working on both sides of the REDD+ issues must cooperate.

Bruno Oberle, State Secretary, Federal Office for the Environment, Switzerland, closed the session emphasizing that safeguards are not an obstacle, but rather a reflection that the world is complicated. He said without safeguards reluctance from donors and local communities will “bring the REDD+ train to a stop.”



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RIO CONVENTIONS PAVILION HIGHLIGHTS: WEDNESDAY, 17 OCTOBER 2012

The Rio Conventions Pavilion convened on Wednesday for Ecosystem Restoration Day. The session began with a keynote speech by James Aronson, Society for Ecological Restoration (SER). Panels convened throughout the day on: inspiring action on the ground - the local context; inspiring action on the ground - the national context; and global partnerships for local results. The day concluded with the presentation of the Hyderabad Call for a Concerted Effort on Ecosystem Restoration.



James Aronson, SER

INSPIRING ACTION ON THE GROUND: LOCAL CONTEXT

Sarat Babu Gidda, CBD Secretariat, opened the panel. James Aronson, SER, discussed ecosystem restoration, arguing that it plays a crucial role in all three Rio Conventions. He defined ecological restoration as “the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed.” He called on parties to respect international commitments and work together. He underscored the expansion of the human footprint, noting the destruction of 30% and degradation of 20% of forest landscapes, the 50% reduction in mangroves and the degradation of 75% of coral reefs.

Aronson stressed that ecological restoration is not an “either/or” situation, but should be done in parallel with conservation. He emphasized that restoration is about social, economic, ecological and political factors. Aronson noted “The Economics of Ecosystems and Biodiversity” (TEEB) study saying it is a key contribution for establishing the relationship between ecosystem services and biodiversity. He also underscored the importance of demonstrating that ecological restoration makes economic sense and enhancing the involvement of the private sector.

Moderator Sasha Alexander, SER, introduced the panel. Cristina Maria do Amaral Azevedo, Environmental Secretariat of São Paulo State, Brazil, discussed Brazil’s Atlantic Forest Restoration Pact (AFRP) initiative, a permanent independent and collective partnership between 226 diverse stakeholders. Noting the region is one of five global biodiversity hotspots,

with 383 of Brazil’s 633 endangered species, she described how the AFRP works towards achieving the Aichi Biodiversity Targets.

Azevedo said the AFRP mission is to restore 15 million hectares of degraded land in the Brazilian Atlantic Forest by 2050 and to promote: biodiversity conservation; job generation; income opportunities; maintenance and provision of ecosystem services; and improving land ownership. She noted AFRP’s online platform for sharing detailed project information.

Ritesh Kumar, Wetlands International, presented on the ecological restoration of lake Chilika, India. He argued that restoration “needs to make sense to people,” especially in terms of livelihoods. Explaining that the Chilika lake is a hotspot of biodiversity and responsible for the livelihoods of 0.2 million people, he demonstrated the benefits of restoration experiences both in ecological and social terms. He recalled the importance of partnerships, multiple knowledge base systems and management of social transformation as key factors of success.

Angela Andrade, Conservation International, presented experiences from the Rio Blanco Watershed Initiative, Colombia, on ecosystem-based approaches (EBA) to climate change adaptation. She explained high mountain ecosystems are characterized by high vulnerability to climate change, increased land use and forest transformation. She described high mountain ecosystems as candidates for win-win solutions for addressing climate change impacts, and increasing resilience through biodiversity conservation and ecosystem restoration.

Andrade highlighted the six year initiative, which found key enabling conditions of restoration for EBA, include: providing climate change impact vulnerability assessments; developing participatory processes; promoting learning-by-doing activities,

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L-R: Cristina Maria do Amaral Azevedo, Environmental Secretariat of São Paulo State, Brazil; Ritesh Kumar, Wetlands International; Sasha Alexander, SER; James Aronson, SER; Angela Andrade, Conservation International; and Cristo Marais, Department of Environmental Affairs, South Africa.

taking advantage of best available science and traditional knowledge; and including restoration in land use plans and other planning mechanisms.

Cristo Marais, Department of Environmental Affairs, South Africa, provided the South African perspective on restoring biodiversity and ecosystems. He discussed the challenges of land degradation, water scarcity and invasive species in the past 17 years and argued that biodiversity investment can combat poverty.

However, Marais noted the need to increase financial and human resources. As a solution, he proposed unlocking private sector investment in natural management and ecosystem restoration, along with the improvement of primary ecological science.

During discussions, Andrade recommended using vulnerability assessments in watershed area ecosystem restoration projects. Marais noted upstream and downstream impacts in watersheds vary regionally and stressed the important role of water management authorities. Azevedo explained AFRP can scale up efforts through financial support from the private sector and state governments.

Speaking from the floor, David Coates, CBD Secretariat, suggested recognizing opportunities for land restoration in the agricultural sector, and called for paying closer attention to increasing food productivity and restoration opportunities in cities. Aronson differentiated between restoration and rehabilitation, the latter aiming at increasing productivity in production systems and suggested thinking about renewing natural capital to cover the entire spectrum of ecosystems.



Sarat Babu Gidda, CBD Secretariat

INSPIRING ACTION ON THE GROUND: NATIONAL CONTEXT

Ramsar Convention Deputy Secretary General Nick Davidson opened the afternoon session. BMS Rathore, Joint Secretary, Ministry of Environment and Forestry, India, presented on ecosystem restoration using landscape approaches in India. He recalled key figures on India's forests and discussed ecosystem restoration challenges related to balancing conservation and development needs, and said climate change is an aggravating factor.

Rathore highlighted the Green Indian Mission model, which seeks to increase forest quality and cover. He underscored key elements of the landscape approach, including: identification and prioritization of restoration areas; interventions at "scale," addressing drivers of degradation; focus on multiple ecosystems in landscapes; and ecosystems restoration and livelihood support.

Yong Kwon Lee, Korea Forest Service, Republic of Korea, shared knowledge and lessons learned from forest landscape restoration in the Republic of Korea. Focusing on systematic implementation of forest restoration and management, he described how the Republic of Korea was able to triple its forest stocks since 1950, while simultaneously achieving economic growth.

Lee highlighted key elements of the Republic of Korea's success including: political leadership and public participation; sustainable use of forest resources for adaptation to changing



Sasha Alexander, SER

GLOBAL PARTNERSHIPS FOR LOCAL RESULTS



Angela Andrade, Conservation International

environments; and recognition that forests are linked with other landscape resources. He stressed the Republic of Korea is already sharing its experiences with other countries through the Asian Forest Cooperation Organization, working towards the greater goal of “sustainable development for a green Asia.”

Caroline Petersen, UNDP, provided an overview of UNDP work in scaling up national level finance for restoration. She highlighted several projects, including afforestation in Bangladesh and peatland restoration in Belarus. Petersen noted the UNDP-European Commission biodiversity finance project for its role in identifying finance gaps through a bottom-up approach. She concluded presenting the Biodiversity and Ecosystem Services Network, which seeks to build capacity via an online platform capable of bringing together practitioners, scientists and policy-makers, and to provide “easy quick facts” regarding technical and operational guidelines on restoration.

Kristal Maze, South African National Biodiversity Institute, discussed restoration banking of wetlands in South Africa. As the sixth biggest coal producer in the world, she explained South Africa’s challenge is to measure residual impacts and find ways to offset or compensate negative environmental impacts deriving from its coal-mining industry, which critically endanger its wetlands. Providing quality and quantity for the country’s water security, she described wetlands as a critical ecological infrastructure.

Maze underscored the importance of banked credits in the success of South Africa’s rehabilitation programme, which over the last eight years has employed residents to restore over 40,000 hectares of wetlands. She also stressed landscape-scale systematic conservation plans and wetland assessment tools as critical for freshwater ecosystems. She commended the Department of Water Affairs for adopting the integrated framework for the design and implementation of offsets.

During discussions, Kristal Maze welcomed further dialogue on offset risks and advice on how to improve offset metrics. Petersen recalled South Africa’s mapping of biodiversity as a great value for measuring the result of restoration projects. She also noted the disparities between short-term investments and long-term results, highlighting a project in Borneo, which will be monitored for 20 years in partnership with the Malaysian government. Lee stressed how the Republic of Korea, in partnership with the Association of Southeast Asian Nations, is prioritizing green economy and valuing natural assets.

Moderator James Aronson, SER, introduced the panel. Sergio Zelaya, UNCCD Secretariat, stressed that globally over 50% of agricultural land has degraded, and that annually 75 billion tonnes of fertile soil and 12 million hectares are lost due to drought and desertification. He said this puts 27,000 species at risk and negatively affects 1.5-2 billion people, especially women.

Zelaya also drew attention to the rising food, energy and water demands, as well as to the far-reaching impacts of desertification, land degradation and drought, including migration, instability and conflict. Commending the Rio+20 outcome on a “land-degradation neutral world,” he explained achieving this goal requires: stronger partnerships; restoring and rehabilitating more land than is degraded; and sustainable land use in the agriculture, forestry, energy and urban sectors.

Julia Marton-Lefèvre, Director General, IUCN, presented the IUCN goal of restoring 150 million hectares of lost forests and degraded land by 2020, known as “Bonn Challenge.” Highlighting the need for “pragmatic solutions,” she argued restoration could, at the same time, benefit ecosystems and people, affirming that this target is achievable. She called for a shared vision on restoration, highlighting successful cases of leadership and best practices in the Republic of Korea, Costa Rica and Tanzania. She said US\$ 84 billion per year in net benefits could be generated if the Bonn Challenge is achieved.

Ramsar Convention Deputy Secretary General Nick Davidson noted the inter-connectivity of all wetlands and observed a strong link between the focuses of CBD and the Ramsar Convention on global water cycles. He highlighted the new TEEB Study on Water and Wetlands found that natural wetlands provide more ecosystem services value per hectare than other ecosystems. He also observed 50% of the world’s wetlands have been degraded, with an accelerating trend in wetland conversion caused by agricultural impacts and overall land-use change.

Davidson described the Avoid, Mitigate, Compensate Framework under the Ramsar Convention as “a slippery slope” and stressed restoration and rehabilitation are important. He addressed several considerations to be taken into account in a cost-benefit analysis of wetland restoration. He emphasized focusing on multiple services when designing wetland restoration, including the wide variety of benefits they provide to people through their ecosystem services.

Simone Quatrini, The Global Mechanism, presented on financing options for implementing restoration and rehabilitation programmes to address degradation from unsustainable land use practices. Focusing on the viewpoint of



Julia Marton-Lefèvre, Director General, IUCN



L-R: Sergio Zelaya, CBD Secretariat; Ramsar Convention Deputy Secretary General Nick Davidson; James Aronson, SER; Julia Marton-Lefèvre, Director General, IUCN; and Simone Quatrini, The Global Mechanism.

investors, he noted three aspects are important: return; impact; and risk. He highlighted how a new category of investors has been increasingly combining social equity and environmental sustainability, creating innovative financial products.

Quatrini underscored several challenges for investors, including, *inter alia*: increasing awareness of investment impacts; reducing transaction costs on the ground; increasing leadership and coordination in the private sector; and improving common metrics and standards. On the demand side, he emphasized adequate safety nets against the effects of market failures and expertise to navigate complex financial architectures as relevant points to be addressed.

HYDERABAD CALL FOR A CONCERTED EFFORT ON ECOSYSTEM RESTORATION

Sarat Babu Gidda, CBD Secretariat, introduced the session, launching the Hyderabad Call for a Concerted Effort on Ecosystem Restoration, which was welcomed by all panelists. Rebecca Grynspan, Associate Administrator, UNDP, recognized restoration plays a vital role in meeting the inter-linked challenges of the Rio Conventions and requires prioritization based on best available science and traditional knowledge.

Naoko Ishii, CEO, Global Environment Facility (GEF), supported the Hyderabad Call and emphasized the GEF role in supporting parties to achieve the Aichi Biodiversity Targets.

CBD Executive Secretary Braulio Ferreira de Souza Dias welcomed the Hyderabad Call highlighting the win-win opportunities of joining forces by creating partnerships. He said the challenge is to upscale joint efforts.

UNCCD Executive Secretary Luc Gnacadja recalled that out of 1.5 billion people affected by land degradation, 74% are poor or extremely poor. He argued that restoration is about getting investments right.

Secretary General of the Ramsar Convention Anada Tiega said the Ramsar Secretariat is committed to working with the CBD Secretariat and recalled the successful restoration experience of Lake Chilika, in India.

Ibrahim Thiaw, Director, DEPI, UNEP, said restoration contributes to the objectives of the Rio Conventions and the Ramsar Convention on Wetlands. He drew attention to food security, the value of coastal areas and mountain ecosystems.

Julia Marton-Lefèvre, Director General, IUCN, commended the Rio Conventions Pavilion and the Ramsar Convention as important IUCN partners and stressed the Bonn Challenge is an important implementation vehicle for achieving the CBD and UNFCCC objectives.

Rejoice Mabudafhasi, Deputy Minister of Water and Environment, South Africa, said South Africa, as President of the UNFCCC COP 17, is happy to support the Hyderabad Call and highlighted the multiple benefits from healthy ecosystems and ecosystem restoration, including food and water security, job creation and poverty reduction.

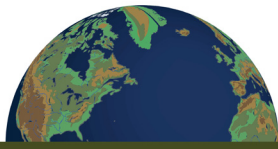
Peter Kenmore, FAO, affirmed that the maintenance of ecosystems and restoration is fundamental to ensuring food security and sustainable development.

Yong Kwon Lee, Korea Forest Service, Republic of Korea, recalled the 20th anniversary of the Rio Conventions and expressed full support for promoting greater synergies among them. James Aronson, SER, welcomed Ecosystems Restoration Day discussions, saying it is exciting to see the energy and commitment of the Rio Conventions Pavilion partners and calling for all to “roll up our sleeves and get to work.”

Panelists then endorsed the Hyderabad Call for a Concerted Effort on Ecosystem Restoration. The Hyderabad Call: acknowledges that ecosystems and biodiversity underpin economic growth, sustainable development and human well-being; recognizes the fast degradation of earth’s ecosystems due to unsustainable development; acknowledges the emerging consensus on the importance of restoration and rehabilitation as conservation alone is no longer sufficient; and recalls the global commitments in the three Rio Conventions and other Multilateral Environmental Agreements (MEAs).

The Hyderabad Call also notes that effective implementation of restoration helps to achieve the CBD Aichi Biodiversity Targets, adaptation and mitigation under the UNFCCC, striving towards zero-net land degradation under the UNCCD, wise use of wetlands under the Ramsar Convention, and achieving the Global Objectives on Forests of the UNFF and the Bonn Challenge. The Hyderabad Call also recognizes that major enabling factors in achieving ecosystem restoration commitments include: political will, leadership and commitment; knowledge dissemination and capacity building; governance, participation and partnerships; and financing, resource mobilization and other incentive mechanisms.

Finally, the document calls upon parties to the Rio Conventions and other MEAs, donor agencies, including the World Bank and regional development banks, private and corporate donors, other relevant international bodies and organizations, indigenous peoples and local community organizations and civil society to make concerted and coordinated long-term efforts to mobilize resources and facilitate the implementation of ecosystem restoration activities.



SUMMARY OF THE 6TH RIO CONVENTIONS PAVILION: 9-18 OCTOBER 2012

The Rio Conventions Pavilion (RCP or the Pavilion) was convened in parallel with the Eleventh meeting of the Conference of the Parties (COP 11) to the Convention on Biological Diversity (CBD), in Hyderabad, India, from 9-18 October 2012. The RCP is designed to raise awareness and disseminate information on best practices and scientific findings on the benefits realized from joint implementation of the three Rio Conventions: the CBD; the UN Framework Convention on Climate Change (UNFCCC); and the UN Convention to Combat Desertification (UNCCD).

Sponsored by the Rio Conventions Secretariats and a number of partners, the programme at the Pavilion focused on daily themes, which included: towards integrated science, assessments and monitoring for the Rio Conventions; protected areas (PAs) as natural solutions to biodiversity targets and global environmental challenges; tree diversity day; livelihoods day; 20/20 talks; sixth land day; reducing emissions from deforestation and forest degradation in developing countries, the role of conservation, sustainable management of forests and enhancement of forest carbon stock (REDD+) day; ecosystem restoration; and towards integrated implementation of the Rio Conventions.



Youth dancers from Slate - the School and Karmanghat High School

Mediterranean. A fifth annex, for Central and Eastern Europe, was adopted during the fourth Conference of the Parties (COP 4) in December 2000.

Pending the UNCCD's entry into force, the INCD met six times between January 1995 and August 1997 to hear progress reports on urgent actions for Africa and interim measures in other regions, and to prepare for COP 1. The UNCCD was adopted on 17 June 1994, and entered into force on 26 December 1996. Currently, it has 194 parties.

UNFCCC: The international political response to climate change began with the adoption of the UNFCCC in on 9 May 1992. The UNFCCC was opened for signature at the Rio Earth Summit. The UNFCCC sets out a framework for action aimed at stabilizing atmospheric concentrations of greenhouse gases to avoid "dangerous anthropogenic interference" with the climate system. The UNFCCC entered into force on 21 March 1994, and now has 195 parties. In December 1997, delegates at COP 3 in Kyoto, Japan, agreed to a Protocol to the UNFCCC that commits industrialized countries and countries in transition to a market economy to achieve emission targets. These countries,

A BRIEF HISTORY OF THE RIO CONVENTIONS AND THE RIO CONVENTIONS PAVILION

The RCP was established as a way of exploring the synergies and opportunities to improve implementation of the three Rio Conventions - the UNCCD, the UNFCCC and the CBD. The Pavilion was launched to raise awareness, and share best practices and scientific findings. Focusing on cross-cutting themes, the Pavilion aims to address the common objective among the three Rio Conventions - to support sustainable development and help achieve the Millennium Development Goals, in particular through the identification of synergies and co-benefits for implementation of the UNCCD, UNFCCC and CBD. This brief history will provide an overview of the Rio Conventions and the Pavilion.

UNCCD: In 1992, the UN General Assembly, as requested by the UN Conference on Environment and Development, adopted resolution 47/188 calling for the establishment of an Intergovernmental Negotiating Committee for the elaboration of a convention to combat desertification in those countries experiencing serious drought and/or desertification, particularly in Africa (INCD). The INCD met five times between May 1993 and June 1994 and drafted the UNCCD and four regional implementation annexes for Africa, Asia, Latin America and the Caribbean, and the Northern

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known under the UNFCCC as Annex I parties, agreed to reduce their overall emissions of six greenhouse gases by an average of 5.2% below 1990 levels between 2008-2012 (the first commitment period), with specific targets varying from country to country. The Kyoto Protocol entered into force on 16 February 2005, and now has 193 parties.

CBD: The CBD was adopted on 22 May 1992, and entered into force on 29 December 1993. The CBD was opened for signature at the Rio Earth Summit. There are currently 193 parties to the Convention, which aims to promote the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources. The COP is the governing body of the Convention.

The CBD includes the Cartagena Protocol on Biosafety, which was adopted 29 January 2000 and entered into force on 11 September 2003, with 163 parties. The Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol, adopted on 15 October 2010, has not yet entered into force. The Nagoya Protocol on Access and Benefit-Sharing was adopted on 29 October 2010, and will enter into force 90 days after its 50th ratification. The Nagoya Protocol aims to establish greater legal certainty for users and providers of genetic resources and help ensure benefit-sharing in particular covering traditional knowledge.

1ST RIO CONVENTIONS PAVILION: The first RCP was launched at CBD COP 10, held from 19-29 October 2010, in Nagoya, Japan. The Pavilion was organized around daily themes, including: linkages between biodiversity, climate change and sustainable land management; the role of protected areas in climate change; indigenous peoples and local communities; forest biodiversity; water, ecosystems and climate change; land day; economics of ecosystems and biodiversity; ecosystem-based approaches for adaptation; and promoting synergies for sustainable development and poverty reduction.

2ND RIO CONVENTIONS PAVILION: The second RCP was convened in parallel with UNFCCC COP 16, which took place from 29 November - 10 December 2010, in Cancun, Mexico. The Pavilion focused on the themes: linking biodiversity, climate change and sustainable land management; the role of protected areas in climate change adaptation and mitigation strategies; indigenous peoples and local communities; forest biodiversity; water, ecosystems and climate change; marine, coastal and island biodiversity; ecosystem-based approaches for adaptation; promoting synergies for sustainable development and poverty reduction; and linking biodiversity, climate change and sustainable land management through finance.

3RD RIO CONVENTIONS PAVILION: The third RCP took place parallel to UNCCD COP 10, held from 10-20 October 2012, in Changwon, the Republic of Korea. The main themes of the Pavilion included: cities and sustainable land management; sustainable forest management and reducing emissions from deforestation and forest degradation in developing countries (REDD); ecosystem-based approaches to climate change; sustainable land and water management; food security and combating hunger; gender; engaging indigenous peoples and local communities; poverty reduction; and synergies for the implementation of the Rio Conventions.

4TH RIO CONVENTIONS PAVILION: The fourth RCP took place in parallel with UNFCCC COP 17, held from 29 November - 8 December 2011, in Durban, South Africa.

Main themes of RCP 4 included: indigenous peoples and local communities; gender; ecosystem-based adaptation; business, economics and synergies; and REDD+.

5TH RIO CONVENTIONS PAVILION: The fifth RCP took place in parallel with the UN Conference on Sustainable Development (UNCSD or Rio+20), which took place from 13-22 June 2012, in Rio de Janeiro, Brazil. The main themes of RCP 5 included: the roads from Rio – 20 years of the Earth Negotiations Bulletin; Africa; indigenous peoples and local communities; ecosystem-based adaptation; oceans; land and global observance of the World Day to Combat Desertification; business; financing sustainable development; gender mainstreaming; cities; and a celebration of the 20th anniversary of the Rio Conventions.

RIO CONVENTIONS PAVILION SUMMARY

The thematic days of the Rio Conventions Pavilion (RCP) are summarized below including: towards integrated science, assessments and monitoring for the Rio Conventions; protected areas (PA) as natural solutions to biodiversity targets and global environmental challenges; tree diversity day; livelihoods day; 20/20 talks; sixth land day; reducing emissions from deforestation and forest degradation in developing countries, the role of conservation, sustainable management of forests and enhancement of forest carbon stock (REDD+) day; ecosystem restoration; and towards integrated implementation of the Rio Conventions.

TOWARDS INTEGRATED SCIENCE, ASSESSMENTS AND MONITORING FOR THE RIO CONVENTIONS

The RCP commenced on Tuesday, 9 October 2012, on the theme “Towards Integrated Science, Assessments and Monitoring for the Rio Conventions.” The event consisted of five panel sessions including: novel science-based approaches to assessing and responding to the biodiversity crisis; how integrated science can support the goals of the Rio Conventions; advancing the practice of vulnerability assessment for ecosystem-based adaptation to climate change; are we developing a growing body of convincing evidence on the effectiveness of ecosystem-based approaches (EBA) to adaptation; and science-policy interface for collaborative management of international waters.

NOVEL SCIENCE-BASED APPROACHES TO ASSESSING AND RESPONDING TO THE BIODIVERSITY CRISIS:

Neil Pratt, CBD Secretariat, opened the RCP, underscoring its purpose to “encourage and support the implementation of the Rio Conventions at the national level.” The panel discussed a number of specific monitoring and data collection initiatives, challenges and next steps.



Neil Pratt, CBD Secretariat

On **monitoring and data collection initiatives**, Georgios Sarantakos, Group on Earth Observations (GEO), presented the GEO Biodiversity Observations Network (BON) Aichi Initiative, which aims to enhance global biodiversity observations by coordinating and developing open data access to enable monitoring of biodiversity status and trends at the national and regional levels.

Linda Krueger, Tropical Ecology Assessment and Monitoring (TEAM) Network, discussed the aims of the TEAM project, including improving current biodiversity indicators to support implementation of policies at the national and global levels, and enhancing international monitoring. Defining TEAM as a “robust information management system,” she highlighted the Wildlife Picture Index and the Forest Resilience Index as two promising initiatives under development.

Jonas Rupp, Conservation International (CI), described CI’s Ocean Health Index as a policy neutral tool, assessing ocean ecosystem health and ecosystem service provision. Rupp listed ten goals for healthy oceans identified in the index, including: food provision; artisanal fishing opportunities; natural products; carbon storage; coastal protection; coastal livelihoods and economies; tourism and recreation; sense of place; clean waters; and biodiversity.

Natalia Pérez-Harguindeguy, Inter-American Institute for Global Change Research, presented results from DiverSus, an interdisciplinary research network, which examined how social actors value ecosystems.

On **challenges**, Krueger noted that methodological differences make global consensus on the best global biodiversity monitoring practices difficult to achieve. She concluded emphasizing that the TEAM data is publicly accessible. Pérez-Harguindeguy underscored the importance of understanding which ecosystem components are critical for different stakeholders.

On **next steps**, Sarantakos emphasized the need to intensify the GEO BON effort to mobilize the entire GEO community, and reported that GEO has assembled a far-reaching network of participating organizations.

CBD Executive Secretary Braulio Ferreira de Souza Dias, called for an integrated global biodiversity monitoring system, providing information on ecosystem trends to developing countries in particular. He recommended up-scaling initiatives by bringing together scientific capabilities and support from governments.



CBD Executive Secretary Braulio Ferreira de Souza Dias emphasizes the importance of monitoring.

CBD Executive Secretary Dias noted that early access to ecosystem data allows for monitoring progress in achieving the Aichi Biodiversity Targets and adjusting actions where needed. However, he called for some caution with regards to: the use of past baselines that undermine a long-term perspective; the use of simplified indexes that may hide trends or problems; and the sensitivity of the parameters and data collection design. He commended parties for having agreed to a multidisciplinary approach during the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) meeting in Panama, including natural and social science experts, which provides important social context for policy makers.

HOW INTEGRATED SCIENCE CAN SUPPORT THE GOALS OF THE RIO CONVENTIONS: Anne Larigauderie, Executive Director, DIVERSITAS, introduced the panel and gave an overview of how biodiversity science evolved. Issues addressed during the session included the evolution of science and modeling, policy relevancy, specific initiatives, radical restoration and traditional knowledge.

On the **evolution of science and modeling**, Moderator Larigauderie noted a paradigmatic shift, highlighting emerging concerns for scientists, including assessing the links between biodiversity and ecosystem services. Paul Leadley, DIVERSITAS and University of Paris, France, presented on using scenario modeling to anticipate, mitigate and adapt to future changes in biodiversity and ecosystem services.



L-R: Natalia Pérez-Harguindeguy, IAI; Jonas Rupp, CI; Linda Krueger, TEAM; and Georgios Sarantakos, GEO

On **policy relevancy**, Larigauderie emphasized the need for policy relevant science. Leadley compared previous scenario models, which focused on impacts, with new assessment scenarios, to be published in the “Global Biodiversity Outlook 4.”

Leadley said the new assessment scenarios: calculate economic costs of biodiversity and ecosystem trends; test impacts of development pathway changes that are “Aichi relevant” to inform policy makers about the consequences of certain policy measures; and suggest technology, decentralized solutions and consumption pathways to achieve desired policy objectives.

On **specific initiatives**, Larigauderie underscored the challenges for the DIVERSITAS Strategic Plan, which aims to identify and address scientific gaps and needs and produce scientific deliverables for stakeholders, outlining three scientific and one political challenge to achieving CBD biodiversity targets. For example, she noted building a longer-term vision and developing a knowledge base composed of various disciplines.

Harini Nagendra, Ashoka Trust for Research in Ecology and the Environment, shared Indian experiences addressing the drivers of biodiversity change and conservation, mainly in the regions of the Eastern Himalayas and Western Ghats. Due to the increasing rates of urbanization, she stressed land use change as one of the greatest sources of pressure on biodiversity conservation and climate change adaptation. Highlighting the benefits of increasing community activism in protecting the environment, she underscored that future research should improve understanding of the correlation between social and ecological aspects.

On **radical restoration**, Tom Lovejoy, Heinz Center for Science, Economics and the Environment, emphasized the need for radical restoration in an era of unprecedented global change. Lovejoy highlighted changing species ranges due to climate change, noting the “minor ripples” occurring presently and the “alarming” signals beginning to be seen. Examples he said include tree mortality in North American coniferous forests and massive coral reef bleaching.

Lovejoy underscored that traditional concepts from conservation ecology, like secondary succession, will not necessarily work in the future. He noted a report, “Revisiting Leopold,” which discusses managing for continuous change under conditions of uncertainty, indicating the importance of thinking about PAs as anchors for larger conserved areas outside of parks.

On **traditional knowledge**, in response to an audience question on how to integrate traditional indigenous and western scientific knowledge, Nagendra described how traditional knowledge is already informing western science. She said increasing community ownership can prevent illegal species trade, highlighting community engagement in sustainable bamboo management to secure long-term income from its sale.

ADVANCING THE PRACTICE OF VULNERABILITY ASSESSMENT FOR EBA TO CLIMATE CHANGE:

Opening the session, Neville Ash, UN Environment Programme (UNEP), called for examining the synergies between the Rio Conventions, noting that EBA is a cross-cutting issue. He recalled that the concept was first defined in the context of the CBD, highlighting that adaptation is also a mandate of the UNCCD and the UN Framework Convention on Climate Change (UNFCCC). The panel presented case studies on the application of EBA in South Africa, India and United Nations Development Programme (UNDP) project in Uganda, Nepal and Peru.



Preeti Soni, UNDP

On **South Africa**, Vhalinavho Khavhagali, Department of Environmental Affairs (DEA), South Africa, reported on the evolution of biodiversity vulnerability assessments in South Africa, to address and link problems identified in previous national climate change studies and Millennium Ecosystem Assessments. He emphasized linkages between the three Rio Conventions, describing how climate change increases ecosystem and livelihoods vulnerability, and desertification. Khavhagali said it also results in biodiversity loss and forest quality reduction in South Africa. He added climate change threatens ecosystems and has the potential to: undermine sustainable development and economic growth; increase poverty; and delay or prevent the realization of the Millennium Development Goals.

On **India**, Preeti Soni, UNDP, presented India’s experiences in EBA and conducting climate change vulnerability assessments. Reflecting on the case of Madhya Pradesh, she highlighted the value of incorporating the perceptions of local communities. Despite positive aspects of the approach, she observed some challenges, including: limited formal recognition; financial constraints; and community and political pressures. In conclusion, Soni said proactively streamlining EBA into climate change adaptation projects is crucial for India’s National Adaptation Plan.

On the **UNDP projects**, Caroline Petersen, UNDP, presented a project on EBA in mountain ecosystems in Uganda, Nepal and Peru, noting specific challenges in those ecosystems, including landslides and glacial melting. She highlighted the refinement of EBA methodologies, looking at predicted climate change impacts on ecosystem services for livelihoods, and health and safety.

Petersen discussed project challenges, including: forest fires; flash floods; drought; increased water scarcity; landslides; and soil erosion. She underscored the livelihood impacts of these problems and described nature-based interventions



Caroline Petersen, UNDP



Panel Moderator Neville Ash, UNEP, discussed the effectiveness of EBA.

for adaptation to change, such as wetland restoration, water conservation and reforestation. She identified monitoring and evaluation challenges, saying measuring projects' impact on ecosystem services is difficult within short project time-scales.

ARE WE DEVELOPING A GROWING BODY OF CONVINCING EVIDENCE ON THE EFFECTIVENESS OF EBA:

This session discussed the history of EBA, implementation of EBA, and specific EBA initiatives. On the *history of EBA*, Neville Ash, UNEP, noted that EBA has a long history, including through the practices of indigenous peoples. Nik Sekhran, UNDP, described Incan adaptation to rainfall variation in the Andes through terrace building to prevent erosion and flooding. Sekhran observed that past adaptation methods might not be applicable given different socioeconomic circumstances today.

On *implementation of EBA*, Ash called for improved monitoring efforts and strengthened scientific underpinnings, while stressing that there is enough knowledge to put EBA into practice. Marc Spiekermann, Federal Environment Ministry (BMU), Germany encouraged the establishment of pilot projects, as well as new networks for EBA research.

Trevor Sandwith, IUCN, underscored limited current capacity to cope with unprecedented global challenges. He suggested preemptive solutions to avoid inadequate adaptation policies and concluded calling for further cooperation to avoid doing "too little too late."

During discussions, moderator Petersen noted the gap between science, policy and implementation, asking panelists how to design experimental learning projects. In response, Sandwith said well controlled experiments are not possible in disaster situations. He recognized the utility of a precautionary approach in terms of project finance and investment, which would require that project design be based on experience and lessons learned.

On *specific initiatives*, Sekhran highlighted ecosystem restoration considerations in the Seychelles, noting that functionality tests, such as water consumption, are used to determine whether to use native or alien tree species in the existing forests. Spiekermann said the EBA component of the adaption portfolio is gaining importance in the BMU.

Xola Mkefe, DEA, South Africa, provided several examples of how ecosystem degradation and dysfunction negatively affect traditional livelihoods in South Africa and stressed that EBA is a tool to guide ecosystem restoration and conservation.

SCIENCE-POLICY INTERFACE FOR COLLABORATIVE MANAGEMENT OF INTERNATIONAL WATERS:

Jackie Alder, UNEP, with Nicole Glineur, Global Environment Facility (GEF), presented the main outcomes of the GEF International Waters Science Conference 2012, a three-day conference attended by 200

participants. Alder highlighted key findings saying, *inter alia*, that: scientific engagement in project design needs to be optimized; communities of practice offer a bridge to scientific integration; scientists should "inform" choices instead of "advocate," while policymakers should discuss policy failures. Moreover, Alder noted the fragmentation of water management at the international level, suggesting the need for a holistic vision.

During discussions, participants debated a range of issues, including: the lack of knowledge about the impact of groundwater trends on biodiversity; enforcement of environmental impact assessments; spatial planning in large marine ecosystems and open oceans; and ways of understanding social political factors that determine people's behavior, which affect management practices.

PROTECTED AREAS AS NATURAL SOLUTIONS TO BIODIVERSITY TARGETS AND GLOBAL ENVIRONMENTAL CHALLENGES

On Wednesday, 10 October, the RCP continued on for PAs Day, with participants discussing the theme "Natural Solutions: PAs Meeting Biodiversity Targets and Adapting to Global Change." The day consisted of four panel sessions on: working towards the Aichi Targets - how PAs contribute; PAs as natural solutions to climate change and other global challenges; PAs for marine conservation, blue carbon and sustainable fisheries; and opportunities for mainstreaming PAs into policies and programmes. The day concluded with a CBD LifeWeb Initiative cocktail event.

WORKING TOWARDS THE AICHI TARGETS: THE CENTRAL ROLE OF PAs: Panel moderator Kathy MacKinnon, IUCN World Commission on Protected Areas (WCPA), introduced the session.

The panel discussed a range of issues including the funding of PAs, meeting the Aichi Biodiversity Target on PAs and indigenous peoples and PAs.

On the *funding of PAs*, Sarat Babu Gidda, CBD Secretariat, stressed the need to transform CBD COP 11 decisions into concrete action on the ground and emphasized that national action plans should inform budget decisions. Charles Besançon, CBD Secretariat, explained the role of the CBD in convening donor roundtables, allowing governments to present their proposals for meeting biodiversity targets to donor agencies.

Besançon described how the LifeWeb Initiative's clearinghouse mechanism has already facilitated the allocation of EUR 200 million from donors to PA projects. Looking forward, Besançon underscored the need to broaden and strengthen donor support and develop strategic partnerships with business and foundations. Piero Genovesi, IUCN Species

Survival Commission Invasive Species Specialist Group, underscored several challenges including lack of funding, and insufficient legal and institutional support.

On *achieving the Aichi Biodiversity Targets*, Colleen Corrigan, UNEP-World Conservation Monitoring Centre (WCMC), presented "The



Moderator Kathy MacKinnon, IUCN WCPA



Colleen Corrigan, UNEP-WCMC



Stephen Woodley, IUCN

Protected Planet Report 2012,” which tracks progress and trends towards the Aichi Biodiversity Targets and assesses improvements in management and governance. Among the key findings, Corrigan emphasized that on the terrestrial side only 12.7% of the 17% PA coverage target has been met, and on the marine side only 4% of the 10% PA coverage target has been achieved.

Stephen Woodley, IUCN, provided an overview of progress on the IUCN global standard on areas of significance for biodiversity conservation. He said the fundamental question to understand is why, despite the increase of PAs, there are still high rates of biodiversity loss.

Genovesi noted the rapidly growing threat of invasive species to native species, food security, water access and human health. He said that working together is necessary to meet Aichi Target 9 (invasive alien species prevented and controlled) and highlighted the “best practice book.” He argued that prevention is the most important measure to combat invasive species.

On *indigenous peoples and PAs*, Bas Verschuuren, IUCN, presented on sacred natural sites and their contribution to the Aichi Biodiversity Targets. He defined sacred natural sites as “areas of land or water having special spiritual significance to peoples and communities,” and showcased how the inclusion of sacredness into conservation debates improves not only ecosystem services but also social resilience. He concluded drawing attention to the Sacred Natural Sites Initiative.

Corrigan commended the recent change in share of governance mechanism type, with 13.5% of PAs under co-management and nearly 10% governed by indigenous and local community conserved territories and areas (ICCAs). Ashish Kothari, Kalpavriksh and ICCAs Consortium, explained how ICCAs are effectively working towards meeting



Bas Verschuuren, IUCN



The crowded RCP plenary on PAs Day.

various Aichi Biodiversity Targets. While commending the IUCN for officially including ICCAs as a PA governance type, he also stressed massive gaps in this recognition.

Kothari stated that most ICCAs are not yet identified or documented, and face threats by forces of “development, commercialization and cultural change.” He suggested three ways for governments to legally recognize ICCAs: as part of their PA system; as part of other conservation systems, such as biodiversity law; and as part of land reform legislation.

PAs AS NATURAL SOLUTIONS TO CLIMATE CHANGE AND OTHER GLOBAL CHALLENGES:

Moderator Charles Besançon, CBD Secretariat, introduced the session. The panel discussed a number of case studies and provided recommendations for the future.

Presenting *case studies*, Nic Bax, Commonwealth Scientific and Industrial Research Organization, Australia, discussed the implications of climate change for biodiversity conservation in Australia. Pramod Krishnan, UNDP, discussed PA governance in India, noting the impacts of climate change on India’s ecosystems, which comprise four biodiversity hotspots, ten bio-geographic zones and 256 forest types.

Krishnan noted institutional, knowledge and community challenges to India’s PA governance, and called for applying IUCN classification of PAs to India’s national parks and wildlife sanctuaries. He discussed impacts of climate change on India’s ecosystem functionality, including: shifts in ecosystem types; proliferation of invasive species; coral bleaching; habitat fragmentation; and increasing man-animal conflicts.

Julia Miranda Londoño, Director, National Parks System, Colombia, emphasized the main actions to protect natural parks in Colombia, noting that the Colombian Constitution recognizes the right of indigenous people to use natural resources. She reported improvement in monitoring systems and ecosystem restoration, and concluded announcing that more funding is being allocated to deal with natural disasters.

Rob Prosper, Parks Canada, said the real power behind PAs is the public conservation ethic and discussed the Parks Canada vision to connect hearts and minds to a stronger understanding of the essence of Canada. Prosper highlighted North American collaboration on climate change.

Bruce Jefferies, Secretariat of the Pacific Regional Environment Programme (SPREP), reported on a study in Upland Central Savaii, the largest island of Samoa, that aims to: enhance local biodiversity; survey fauna and flora; and deliver the synthesized information to local communities.

On *recommendations*, Kathy MacKinnon, IUCN WCPA, presented on PAs as natural mitigation and adaptation solutions, helping people to cope with climate change and desertification. Looking ahead, she stressed the need to: protect more and larger areas; improve governance; and restore degraded habitats within and around PAs. MacKinnon estimated restoration costs to be “as little as US\$ 23 billion per year.”

Using long-term scenarios developed by statistical models, Bax outlined recommendations including: reassessing biodiversity objectives; creating management strategies to deal with robust uncertainty; planning for biodiversity change at landscape scales; expanding PA networks to accommodate significant ecological changes; managing interactions between biodiversity and changing land and water use; and adapting biodiversity conservation institutions to cope with new challenges.

Prosper emphasized cooperation and joint management with indigenous communities. He identified six roles of PAs and wilderness in addressing climate change: conserving biodiversity; protecting ecosystem services; connecting landscapes; capturing and storing carbon; building knowledge; and inspiring people.

During discussions, participants questioned how PAs can best deliver and how to improve the connection between low-level management and high-level policymaking. Panelists agreed that the involvement of local communities is fundamental to address both issues.

PAs FOR MARINE CONSERVATION, BLUE CARBON AND SUSTAINABLE FISHERIES: Panel moderator Kristina Gjerde, IUCN, introduced the session. Panelists discussed case studies, the role of the CBD in marine conservation and the benefits of marine conservation.

Presenting *case studies*, Carel Drijver, WWF Netherlands, noted the case of Bonaire National Marine Park, in the Netherland Antilles, as an example of the importance of marine protected areas (MPAs) and emphasized “participatory stakeholder approaches” to marine conservation. Cliff Marlessy, Locally Managed Marine Areas (LMMA) Indonesia Network, said the LMMA project supports coastal communities to manage coastal resources. He identified a number of issues addressed by LMMA, including decreasing numbers and species of fish.

Nenenteiti Teariki-Ruatu, Ministry of Environment, Lands and Agricultural Development, Kiribati, discussed the Phoenix Islands Protected Area (PIPA) project in Kiribati, which serves as a model for the Pacific region and other small island developing states (SIDS). She recognized the need to protect areas with lower species diversity that have high ecosystem robustness, and illustrated PIPA’s ecological and biological uniqueness noting the problem of overfishing and invasive species.

Jorge Jiménez, MarViva Foundation, discussed scientific findings from studies in the thermal dome of the Eastern Pacific where the north equatorial current meets the equatorial counter current. He emphasized the dome’s distinctive habitat, including dolphins, migrating leatherback turtles and blue whales, noting protecting the area conserves endangered species. He underscored management challenges such as the size of the area, which includes high seas and economic exclusive zones of five countries.

On *CBDs role in marine conservation*, Patrick Halpin, Duke University, provided an overview of the CBD process for describing ecologically or biologically significant marine areas (EBSAs). After highlighting the evolution of this process, he noted that EBSAs are not MPAs, but a global inventory informed by multiple criteria developed from biogeographic, biological and physical data. He noted the role of CBD in providing capacity building through regional workshops, and the contributions of the Global Ocean Biodiversity Initiative in supporting the EBSA inventory.

On the *benefits of marine conservation*, Drijver stated that healthy oceans are central to guaranteeing livelihoods for half of the world’s population. Olivier Hasinger and Dorothée Herr, IUCN, highlighted coastal blue carbon and MPAs as an opportunity to mitigate climate change. Hasinger drew attention to the distribution of carbon in coastal ecosystems, especially in soil and sediment as large storage of carbon per soil unit area and the role of living biomass to maintain sequestration function. He highlighted the carbon sequestration rates of these ecosystems as 40 times greater than that of mature tropical forests. He noted high loss rates of tidal marshes, mangroves and sea grass wetlands. Marlessy noted that benefits encourage local community participation and highlighted that, when communities collect their own data, they understand these benefits much more clearly. Teariki-Ruatu emphasized the benefits of large-scale MPAs.

During discussions, panelists acknowledged that progress in protecting and conserving critical areas requires a common understanding of the interactions between terrestrial PAs and MPAs. Participants also agreed that success depends on strong commitment by, as well as an understanding of what MPAs mean to, local communities. Panelists also considered the need for an international legal framework to close loopholes in extra-territorial areas beyond national jurisdictions and addressed the free rider problem associated with over-fishing.



L-R: Panel Moderator Kristina Gjerde, IUCN; Olivier Hasinger, IUCN; Cliff Marlessy, Locally Managed Marine Area Indonesia Network; Carel Drijver, WWF Netherlands; Patrick Halpin, Duke University; Nenenteiti Teariki-Ruatu, Ministry of Environment, Lands and Agricultural Development, Kiribati; and Jorge Jimenez, MarViva Foundation

OPPORTUNITIES FOR MAINSTREAMING PAs INTO POLICIES AND PROGRAMMES:

This panel discussed a range of issues including improving MPA management, financing to scale up PAs, and case studies.

On *improving MPA management*, Purifacio Canals, Network of Managers of MPAs in the Mediterranean (MedPAN), discussed key tasks for improving MPA management in the Mediterranean, including: creating new coastal and open sea MPAs; improving ecological coherence of MPAs; demonstrating benefits of MPAs to all stakeholders; and improving governance and management effectiveness. She explained how MedPAN facilitates exchanges between MPA managers and provides support to them by employing strategies for science, communication, capacity building and sustainable funding.

Nik Sekhran, UNDP, recommended moving towards a landscape approach, which would require management agreements among local governments to allow better connection between PAs. Kathy MacKinnon, IUCN WCPA, presented on behalf of Trevor Sandwith, IUCN, noting a fundamental challenge for PAs is how to deal with conflicting interests among stakeholders.

On *financing to scale up PAs*, Russell Mittermeier, President, CI, reported on initiatives scaling up PAs, such as the Big Ocean Network and Global Partnership for Oceans. He noted that, unlike other sectors, biodiversity conservation occurs at the local level, which increases the importance of local communities. Underscoring the need for continuous funding mechanisms, Mittermeier highlighted the Critical Ecosystem Partnership Fund as an important initiative, saying that already US\$ 142 million dollars were granted. He concluded emphasizing PAs are the most efficient tool to combat biodiversity loss.

Jamie Ervin, UNDP, provided a comprehensive overview of the costs to achieve Aichi Biodiversity Target 11 (PAs increased and improved) stating that US\$ 130 billion are needed to protect terrestrial biodiversity and US\$ 5 billion for marine biodiversity. She underscored that, despite high costs to achieve the target, the benefits for society are much higher. Ervin highlighted that valuation and monitoring mechanisms are key to addressing potential financial gaps.

In response to questions, Ervin noted that costs of MPAs are lower as they do not involve land acquisition. Panelists stressed further showcasing the financial benefits of PAs.

Presenting *case studies*, Nik Sekhran, UNDP, noted Namibia's climate change vulnerability. He demonstrated the negative impacts of predicted rainfall patterns on livelihoods, wildlife, and agriculture and livestock, which in turn will affect Namibia's foreign exchange revenues. He noted PAs are a good option for climate change adaptation, as income generated by PAs in the tourism sector contribute to development.

Alexander Belokurov, WWF International, presented the Global Initiative for PAs and Climate Change Adaptation funded by the EU, with project locations in Madagascar, Columbia, and the Philippines. Seeking to arrive at scientifically sound and practical recommendations useful to a variety of stakeholders, he noted the project engages in: biological and vulnerability assessments for different climate scenarios; development of PA adaptation measures and a system to prioritize measures; and communication of these measures to local communities.



M.S. Swaminathan, M.S. Swaminathan Research Foundation

TREE DIVERSITY DAY

The RCP continued on Thursday, 11 October, convening for Tree Diversity Day. The day began with a keynote speech by M.S. Swaminathan, M.S. Swaminathan Research Foundation. During the morning, a panel also convened on tree diversity - its role in CBD programmes for agriculture and forest biodiversity and synergies with other global conventions. In the afternoon, panels convened on: benefits of diversifying and restoring landscape mosaics in the tropics by harnessing tree diversity; diversity for development - human benefits from tree diversity for food, health and nutrition; climate change and biodiversity - interfacing mitigation and adaptation; maintaining diversity from genes to landscapes through conservation and sustainable use; and a synthesis session.

TREE DIVERSITY AT THE INTERFACE OF THE THREE RIO CONVENTIONS: Meine Van Noordwijk, World Agroforestry Centre (ICRAF), introduced Tree Diversity Day with a dialogue recital from "The Lorax," by Dr. Seuss. He highlighted that tree diversity lies at the nexus of the Rio Conventions, noting the important role of trees in landscapes and micro-climates, and in mitigating climate change impacts. Van Noordwijk explained trees: shape vegetation; form habitats; are long lived and adapt slowly resulting in vulnerability; and provide important ecosystem services. He stressed tree diversity unites the Aichi Biodiversity Targets and connects people to biodiversity.

A keynote address was given by M.S. Swaminathan, M.S. Swaminathan Research Foundation. He presented on agroforestry in the context of the CBD, saying that agroforestry is a "science by itself and has to maintain its identity." After a brief historical overview, he stressed the importance of agroforestry to overcoming nutritional



Peter Bridgewater, UK, asks a question to Swaminathan.



L-R: Robert Nasi, CGIAR; Sergio Zelaya, UNCCD Secretariat; Balakrishna Pisupati, National Biodiversity Authority, India; Ivonne Higuero, UNEP; Santiago Carrizosa, UNDP; Oudara Souvannavong, FAO; and Heikki Taivanen, Finnish Environment Institute

challenges. Swaminathan highlighted multiple benefits of agroforestry, including combatting climate change through carbon sequestration.

Swaminathan also noted opportunities to avoid natural catastrophes, such as soil erosion, and stressed that agro-aqua farming with seawater is not receiving enough attention. He highlighted a seawater-farming project and a genetic garden of halophytes, or salt-tolerant plants, in India, as having improved productivity without ecological harm. He also discussed his new book “From Green to Evergreen Revolution.”

Participants noted the importance of microbiological diversity to discussions about tree diversity and sustainable forestry, as well as the issue of renewable energy, including wind, solar, biomass and biogas.

TREE DIVERSITY: ITS ROLE IN CBD PROGRAMMES FOR AGRICULTURE AND FOREST BIODIVERSITY AND SYNERGIES WITH OTHER GLOBAL CONVENTIONS: This panel discussion included presentations by panelists on the work their organizations have undertaken on tree diversity.

Robert Nasi, Consultative Group on International Agricultural Research (CGIAR), said “forests and trees bind the Rio Conventions,” highlighting that CGIAR has long collaborated on: promoting equitable sharing of biodiversity benefits; supporting biodiversity conservation; and supporting productive landscapes for food security, poverty eradication and sustainable development.

Neil Pratt, CBD Secretariat, noted the increasing importance of agroforestry for biodiversity resilience, in particular for coping with changing environmental conditions. He recalled that CBD parties have long recognized the importance of agroforestry.

Sergio Zelaya, UNCCD Secretariat, called for rethinking forests, looking beyond rainforests to dry-land forests, which do not receive enough attention. He stressed the goal of building a land-degradation neutral world and achieving zero-net land degradation by 2030.

Ivonne Higuero, UNEP, reported on UNEP’s work on the Aichi Biodiversity Targets, looking at different sectors, including forests, to understand how to recognize natural capital in policies.

Balakrishna Pisupati, National Biodiversity Authority, India, said India has focused on agroforestry practices for local community benefits and stressed the need to capture successful experiences in order to replicate them.

Santiago Carrizosa, UNDP, said tree diversity and the UNDP have a “bright future.” He emphasized the unique position of UNDP to promote biodiversity principles in development policies.

Oudara Souvannavong, Food and Agriculture Organization of the UN (FAO), stressed that biodiversity and tree diversity conservation is a dynamic solution to address uncertainty, variability and change. He noted sound forest management has long relied on tree diversity, including genetic diversity,



CBD Executive Secretary Braulio Ferreira de Souza Dias, Robert Nasi, CGIAR, Ravi Prabhu, ICRAF and Pablo Eyzaguirre, Bioversity, sign MOUs for agroforestry partnerships.

as a buffer to changes in environmental and management conditions, which can be important during the life cycle of species.

Heikki Toivonen, Finnish Environment Institute, highlighted the evolution of Finnish forest conservation programmes, and mentioned the role of the Tropical Resources Institute, based in Helsinki, as a channel for mainstreaming agroforestry practices.

The panel concluded with Nasi, Ravi Prabhu, ICRAF, Pablo Eyzaguirre, Bioversity, and CBD Executive Secretary Dias signing two memoranda of understanding (MOUs), one between the CBD Secretariat and ICRAF and another between the CBD Secretariat, Bioversity International, the Center for International Forestry Research (CIFOR), ICRAF and the International Centre for Tropical Agriculture as partners in the CGIAR Research Programme 6 on Forests, Trees and Agroforestry. Executive Secretary Dias welcomed the MOUs, underscoring the importance of CGIAR's practical on-the-ground knowledge. The ceremony closed with partners welcoming the agreement and promising to convey the urgent need to implement CBD objectives.

BENEFITS OF DIVERSIFYING AND RESTORING LANDSCAPE MOSAICS IN THE TROPICS BY

HARNESSING TREE DIVERSITY: Judy Loo, Bioversity International, introduced the panel. Panelists discussed a range of issues including data collection and mapping, international initiatives, and case studies.

On *data collection and mapping*, Loo spoke about genetic diversity studies and mapping in South America, an area with highly diverse tree species. She noted knowledge gaps, including lack of documentation on the distribution of tree species and limited understanding about reproduction of many tree species. She highlighted the Mapping Forest Genetic Resources project, which evaluates the conservation status of and threats to tree species.

Roeland Kindt, ICRAF, explained vegetation maps and their contribution to guiding tree-planting efforts. Emphasizing the importance of choosing “the right trees for the right place,” he stressed the prominence of vegetation maps as decision-support tools for species selection to improve sustainability.

Presenting an *international initiative*, Kaoru Ichikawa, UN University (UNU)-Institute of Advanced Studies, presented the International Partnership for the Satoyama Initiative, saying it aims to facilitate international cooperation on social-ecological production landscapes and seascapes (SEPLS). She noted tree diversity in SEPLS in the tropics provides multiple benefits, including protection of endangered species and increased habitat connectivity.

Presenting *case studies*, Santiago Carrizosa, UNDP, discussed a Colombian project, addressing the threats of unsustainable land-use and conversion to high yield coffee schemes. He explained that the project aims to harness social, economic and environmental benefits from sustainable coffee landscapes through carbon sequestration, coffee certification and the promotion of financial sustainability through green credit lines.

Raman Sukumar, India Institute of Science, discussed diversifying and restoring landscape mosaics in the Western Ghats, India, through incentive-based models involving local communities. He explained the benefits of restoring landscape mosaics in the Western Ghats include increased ecological resilience, adaptive capacity and climate change mitigation through carbon sequestration.

BIODIVERSITY FOR DEVELOPMENT: HUMAN BENEFITS FROM TREE DIVERSITY FOR FOOD, HEALTH AND NUTRITION: Ramni Jamnadas, ICRAF, introduced the panel. Panelists discussed issues including: functions of tree diversity; community biodiversity management (CBM); and the bioeconomy.

On *functions of tree diversity*, Jamnadas highlighted the functions of tree diversity, including: fruits; firewood; medicine; income; sawn wood; fodder; and ecosystem services. She underscored the “future of trees are on farms,” noting the need for high quality planting material. She emphasized the importance of fruits for improved nutrition and health, saying fruit production is very low in many developing countries, in part due to lack of improved, high-yield varieties.

Amy Ickowitz, ICRAF, described a study on trees and child nutrition in Africa that suggests a positive relationship between tree coverage and two nutritional measures, dietary diversity and increased fruit and vegetable consumption, among 140,000 sampled children in 21 African countries. She noted no relationship was found between tree coverage and a third nutritional measure, animal source foods.

On *CBM*, Hugo Lamers, Bioversity International, highlighted CBM, a process level approach, which aims to ensure local community ownership over their natural resources. He said farmers are key partners in implementing CBM and discussed examples linking local communities with higher policymaking levels, such as the case of the Western Ghats, India.

On *bioeconomy*, Navin Sharma, ITC India, discussed “bioeconomy: from sustenance to value creation,” noting that the bioeconomy is fast growing and has large revenue potentials. Focusing on the biodiesel sub-sector, Sharma observed that in contrast to the US, Brazil, the EU and China, India has unique biodiesel targets, allowing for “various” crop sources, rather than specifying only a few.

During discussions, participants underscored the continued insufficient return of conservation benefits to local communities, particularly in schemes involving access and benefits sharing (ABS) rules.

CLIMATE CHANGE AND BIODIVERSITY:

INTERFACING MITIGATION AND ADAPTATION: Eike Luedeling, ICRAF, introduced the panel. The session discussed issues such as the contribution of trees to climate change mitigation and adaptation; REDD; and indigenous peoples and local communities.

On the *contribution of trees to climate change mitigation and adaptation*, Luedeling discussed their contribution through: micro-climate effects benefiting people, animals and crops; rainbow water effects, closing the hydrological cycle by recycling water through terrestrial evapotranspiration; and enhancing soil fertility and reducing livelihood risks.

On *REDD+*, Luedeling reflected on international climate change negotiations, observing the difficulty in defining forests in REDD discussions and highlighted the evolution of ideas from REDD to agriculture, forestry and land use.

Tim Christophersen, UNEP, underscored lack of attention to restoration in wider landscapes under REDD+. On CBD agriculture initiatives, he emphasized avoiding duplication of other UN programmes. He outlined three opportunities to enhance synergies among stakeholders, including: financing through the Green Climate Fund; increasing private sector interest in linking financial and ecological resilience; and deriving innovative solutions to the increased pressure on natural resources.



L-R: Eike Luedeling, ICRAF; Tim Christophersen, UNEP; Hesti Lestari Tata, Ministry of Forestry, Indonesia; and P.P. Bhojvaid, FRI, India

On *indigenous peoples and local communities*, P.P. Bhojvaid, Forest Research Institute, India, explained the multiple benefits of trees for local communities and supported the use of agroforestry to combat climate change. He underscored the value of indigenous knowledge in order to avoid reductionist approaches to conservation.

Hesti Lestari Tata, Ministry of Forestry, Indonesia, reported that peatlands are legally protected in Indonesia. She noted the benefits of growing native peatland species, such as jelutong, on farms include increased farm income from seeds and seedlings, and increased export volume and value of jelutong latex.

Responding to questions, Luedeling emphasized that farmers grow profitable species and that subsidies are required to get them to grow those that do not directly benefit them. Christophersen suggested Kenya could benefit from planting timber forests rather than importing lumber from the Democratic Republic of the Congo.

MAINTAINING DIVERSITY FROM GENES TO LANDSCAPES THROUGH CONSERVATION AND SUSTAINABLE USE: Manuel Guariguata, CIFOR, introduced the panel. This panel discussed a range of issues including: legal instruments; landscape approaches; and tree diversity in India.

On *legal instruments*, Juliana Santilli, University of Brasilia, Brazil, discussed legal instruments affecting agroforestry and agro-biodiversity. Recalling the pioneering role of the International Treaty on Plant Genetic Resources (ITPGRFA) in establishing an ABS mechanism, she noted recognition in the ITPGRFA of farmer's rights and their capacity to promote conservation *in situ*. She highlighted the growing importance of conservation, under the UN Educational, Scientific and Cultural Organization (UNESCO), of intangible cultural heritage. On seeds law, she observed that new legislation might be detrimental to small producers due to compliance challenges.

On *landscape approaches*, Guariguata called for coherent thinking about how to manage complex landscapes. He listed challenges for multi-use forests, including: technical and managerial capacities differ across forest products and market opportunities; local communities and small-scale operators struggle to adjust their practices to meet official regulations; and spatial planning for long-term production is usually disregarded.

Terence Sunderland, CIFOR, presented the results of six years of research by CIFOR and partners based on a "long term consultative approach," which aimed to redefine landscape approaches. He discussed the "ten commandments" of their new landscape approach, *inter alia*: adaptive management; multi-functionality; multi-stakeholder; negotiated and transparent change; clarification of rights and principles; and participatory and user-friendly monitoring.

On *tree diversity in India*, R. Ganesan, Ashoka Trust for Research in Ecology and the Environment, discussed lessons learned from monitoring tree diversity and estimating ecosystem services values in India. He recommended restoring tree diversity using participatory approaches, beginning with understanding and enhancing the role of tree diversity in livelihoods.

Reflecting on Tree Diversity Day, Robert Nasi, CIFOR, emphasized there is no one-size fits all solution. Meine Van Noordwijk, ICRAF, said the Rio Conventions are "tree conventions," noting the approaches highlighted at Tree Diversity Day are all integrated solutions. He called for a more active dialogue between scientists and policymakers.

LIVELIHOODS DAY

On Friday, 12 October, the RCP convened for Livelihoods Day. The event consisted of five panels, including: raising awareness on linkages between biodiversity and livelihoods; interactive breakout session with project developers and international experts; interactive breakout session on key learning and challenges with regard to transversal issues covering a whole landscape approach; walking the talk from



CBD Executive Secretary Braulio Ferreira de Souza Dias addresses Livelihoods Day.



L-R: Moderator Jane Smart, IUCN; Bernard Giraud, President, Livelihood Venture; Julien Calas, FFEM; Olivier Hasinger, IUCN; Ramsar Convention Deputy Secretary General Nick Davidson; Biswajit Roy Chowdhury, Nature Environment and Wildlife Society; Manoj Kumar, Naandi Foundation; and Meine Van Noordwijk, ICRAF

forests to coastlines - implementation of gender sensitive policies in programmes and projects; and the Biodiversity for Development Initiative.

RAISING AWARENESS ON LINKAGES BETWEEN BIODIVERSITY AND LIVELIHOODS: Moderator Jane Smart, IUCN, welcomed participants to Livelihoods Day. The panel discussed the links between biodiversity and livelihoods, the Livelihoods Venture, and implementation challenges more broadly.

On *links between biodiversity and livelihoods*, CBD Executive Secretary Braulio Ferreira de Souza Dias underscored biodiversity is crucial for poverty reduction and stressed that “now is the time for implementation and half measures will not be enough.”

Executive Secretary Dias emphasized that meeting the needs of present and future generations requires incorporation of biodiversity into economic and social policies. He highlighted that the poor depend on biodiversity for: food; medicine; water; fuel; and building materials and shelter.

During discussions, Bernard Giraud, President, Livelihoods Venture, said “awareness comes with action” and also emphasized the importance of women in guaranteeing livelihoods, affirming that they are a “matter of social force.”

On the *Livelihoods Venture*, Giraud presented the business model of the Livelihoods Venture, noting the fund currently has five large-scale projects. He noted the novelty of this fund is the creation of a “field organization network” responsible for sharing experiences, including with companies.

Biswajit Roy Chowdhury, Nature Environment and Wildlife Society, underscored that ecosystem vulnerability is a matter of human rights. He discussed a Livelihoods sponsored project in the Sundarban area, India, where 20,000 villagers are involved in ecosystem preservation, being paid, for example, for collecting seeds.

Manoj Kumar, Naandi Foundation, presented the Valley Araku project, India, which sponsors farmer enrollment in the Coffee Board’s Price Stabilization Fund, guaranteeing stable incomes in times of instability. He noted the project also expects to plant at least six million fruit trees. He highlighted the collection and dissemination of knowledge from previous generations, allowing a connection with future generations.

Julien Calas, Fonds Français pour l’Environnement Mondial, emphasized linking biodiversity with income generation and discussed a Guatemalan project. He highlighted the project links livelihoods with PAs, indigenous communities and access to ecosystem services.

On *implementation challenges*, Ramsar Convention Deputy Secretary General Nick Davidson called for an improved knowledge base on the value and loss of wetlands. He stressed the value of natural ecosystems, highlighting the forthcoming “The Economics of Ecosystems and Biodiversity” (TEEB) Study for water and wetlands. Noting that conversion of wetlands significantly reduces provision of ecosystem services, he underscored the rapid decline in wetlands and called for focusing on conservation, due to the high costs and partial success of wetlands restoration.

Meine Van Noordwijk, (ICRAF), noted that land classification, such as the distinction between forests and agroforestry, has significant impacts on types of governance, recognition and “ownership” rights. He said implementation challenges stem mostly from governance conflicts and lack of recognition, rather than limited financial capacity. He stressed the application of the concept of “co-investment,” which shares financial responsibility and benefits among various stakeholders, instead of “commodification” of nature and “compensation.”

INTERACTIVE BREAKOUT SESSION WITH PROJECT DEVELOPERS AND INTERNATIONAL EXPERTS: Moderator Jean-Pierre Renaud, Livelihoods Venture, introduced the panel, which presented case studies from Mexico, Nigeria, Senegal, Burkina Faso, Indonesia and the Democratic Republic of the Congo.

Rosa Vidal, Pronatura Sur, Mexico, highlighted a mangrove plantation project in Chiapas, which is expected to scale up to 600 hectares. She noted difficulties stemming from distinct social and ecosystem conditions, and in allocating resources.

Habiba Ali, Sosai, Nigeria, discussed a tree-planting project in a highly deforested area in northern Nigeria. She described mobilizing the community to sell stoves, with two trees, preferably fruit bearing, being planted per sale. On community empowerment, she highlighted the active engagement of women in the projects and estimated at least 10,000 stoves will be distributed by the end of 2013.

Ismaila Sall, Oceanium, Senegal, underscored the progress of the Oceanium Initiative, saying the goal was to change the mindset of locals to recognize environmental values. He said movie broadcasting and result-oriented approaches are two examples of engagement techniques, which increased trust between locals and project managers.

Salifou Ouédraogo, SOS Sahel, Burkina Faso, discussed a pilot project addressing the low survival rate of planted trees with large-scale tree planting. He explained a “contractual reforestation” approach, using incentives for planters if trees survive past two years. The success of this scheme increased the survival rate of trees to 70%. As key to success, Ouédraogo stressed organizing communities and highlighting economic and social benefits of the environment to stakeholders.

Olivier Langoisseux, Bina, Indonesia, used the example of Central Java noting the problems of monocultures, water scarcity and youth unemployment. He said a cooperative is identifying “local champions” among farmers and developing agro-services in order to facilitate collective market access.

Gabriel Sarasin, Réseau Africain des forêts modernes, Democratic Republic of the Congo, discussed the Model Forest, which was first presented at the UN Conference on Environment and Development, in Rio de Janeiro, Brazil, in 1992. He said the model originated in Canada, where forest issues were characterized by conflicts between the forest industry and communities.

He attributed the success of the conflict resolution model on a long-term process, providing platforms for representation of diverse stakeholders, including industry, government and civil society. He reported this model has been applied 60 times throughout the world, sharing knowledge through a common network.

INTERACTIVE BREAKOUT SESSION ON KEY LEARNING AND CHALLENGES WITH REGARD TO TRANSVERSAL ISSUES COVERING A WHOLE LANDSCAPE APPROACH: Moderator Giraud introduced the panel, which discussed community-industry relationships, case studies, lessons learned.

On *community-industry relationships*, Beria Leimona, ICRAF, spoke about shared-benefits agreement-based community and industry collaboration experiences in Indonesia. She noted one incentive for community engagement in watershed area conservation, in their project, is access to electricity provided by the collaborating hydroelectric power company. She said electrification increases the productivity of the community, for example by illuminating the village at night.

Presenting *case studies*, Bambang Suprayogi, Yagasu, Indonesia, reported on experiences in Indonesia, which aim to provide short-term returns to local communities in terms of food security. He stressed engaging people by providing tangible benefits.

Amos Wekeza, ICRAF, provided information about a Kenyan project, which organizes local farmers to address agroforestry issues. He said the project encourages adoption of sustainable development and sustainable forest management practices, with farmers benefiting from increased productivity and regenerated land.

Alou Keita, Centre d'appui à la microfinance et au développement, Mali, reported on microfinance projects mobilizing resources from emigrants to France, which has now evolved to 19 funds. Created in 1998, he said the key to success was “community based management,” which includes locals in the process.

Ini Damien, Alinea, Burkina Faso, discussed her experiences empowering women in Burkina Faso through a project that mobilized 6,000 women and promoted land ownership. Noting the challenge of high illiteracy rates, she said four dimensions were prioritized: cultural; environmental; economic; and social.

Assefa Tofu, World Vision, Ethiopia, noted the Humbo Ethiopia Assisted Natural Regeneration project, which encompasses 2,728 hectares, was the first African project to be issued carbon credits for forest restoration by the UNFCCC Clean Development Mechanism.

On *lessons learned*, Timm Tennigkeit, Unique Forestry Consultants, Germany, observed that monitoring is difficult in many parts of the world, explaining that while long-term monitoring is necessary to target interventions, often it is not scientifically robust. Reflecting on the project described by Wekeza, he said this project illustrates that villagers are interested in engaging in monitoring. He stressed that this model is applicable to biodiversity, and called for exploring synergies between monitoring by scientists, governments and communities.

WALKING THE TALK FROM FORESTS TO COASTLINES: IMPLEMENTATION OF GENDER SENSITIVE POLICIES IN PROGRAMMES AND PROJECTS: Moderator Natasha McQuaid, CBD Secretariat, introduced the panel, emphasizing gender sensitive policies to successfully achieve the Aichi Biodiversity Targets. The panel discussed women in fishing communities, REDD+, case studies and gender mainstreaming.

On *women in fishing communities*, Vivienne Solis, Coope Solidar, emphasized that small-scale fishing communities recognize fishing as a way of life, strongly integrated into culture and identity, and noted the vulnerability of fisheries. She said access to land and marine resources are important to women, whose knowledge and experience should be recognized. She stressed empowering women enables them to address issues that matter to them, such as: health and social security; education; land rights; and childcare.

On *REDD+*, Andrea Quesada, Women’s Environment and Development Organization, described the current status of gender in REDD+. Building on the experience of the REDD+ Social and Environmental Standards initiative, she emphasized capacity building as fundamental to incorporating gender and social standards capable of responding to country-specific requirements.

Presenting *case studies*, Kanti Risal, Nepal Stakeholder Forest Management Platform, discussed a study evaluating impacts of community forestry on households and livelihoods across Nepal. She explained the conceptual focus of the impact



Moderator Natasha McQuaid, CBD Secretariat



L-R: Vivienne Solis, Coope Solidar; Andrea Quesada, WEDO; Kanti Risal, Nepal Stakeholder Forest Management Platform; and Archana Godbole, Applied Environmental Research Foundation

assessment included: improving women's access to livelihood assets; increasing the voice of women; supporting changing "rules of the game" that have favored elites and men; and developing evidence-based interventions. She suggested that community forest management has positive impacts on tree diversity, tree productivity and biodiversity.

Archana Godbole, Applied Environmental Research Foundation (AERF), presented participatory conservation experiences in India. She focused on energy and biodiversity emphasizing AERF's "ground approach" to capacity building. She encouraged the expansion of experiences such as management of oil-seed collection by women to help build entrepreneurial capacity.

On *gender mainstreaming*, McQuaid asked the audience during discussions to share their experiences with gender mainstreaming and what facilitated or hindered that process. One participant noted that having a female president helps the recognition of women. Another shared observations from his involvement with biodiversity projects, including positive engagement of women harvesting seedlings for pharmaceutical companies in Nepal, and cultural barriers discouraging engagement in activities believed to negatively impact women's reproductive ability.

From the audience, Sergio Zelaya, UNCCD Secretariat, noted the importance of recognizing women's role in natural resource management and livelihoods provisions. Responding to his question about recommendations for a more coherent policy approach, Quesada suggested bringing non-governmental organizations (NGOs) and grassroots voices into discussions.



Sergio Zelaya, UNCCD Secretariat

BIODIVERSITY FOR DEVELOPMENT INITIATIVE:

Moderator Didier Babin, CBD Secretariat, introduced the panel. The panel discussed the draft study "Development of Poverty-Biodiversity Indicators and Their Eventual Application," European biodiversity initiatives and ways to reach scale.

On the *draft study "Development of Poverty-Biodiversity Indicators and Their Eventual Application,"* Sameer Punde, AERF, India, and Suneetha Subramanian, UNU-IAS, noted the challenge of capturing complexity with a limited set of indicators. Saying the study uses the "drivers, pressures, state, impact, and responses" framework, Punde defined poverty-biodiversity indicators as measures that demonstrate the direct contribution of biodiversity trends to changes in peoples' livelihoods.

He highlighted that the study assesses existing initiatives and indicators for poverty and biodiversity in 11 existing indicator frameworks, using criteria such as: sensitivity; scale; relevance; and scientific validity. He said the review found that only one organization, the World Bank, has proposed, but not yet developed, poverty-biodiversity indicators.

Subramanian said the report then outlines a strategy developing poverty-biodiversity indicator parameters, including: diversity of resources; functioning of ecosystem services; livelihood activities dependent on biological resources and ecosystems; cultural diversity; equity; and cross-sectoral linkages.

She highlighted desired qualities of poverty-biodiversity indicators: mix of stand-alone and composite indicators relevant to poverty alleviation and biodiversity conservation; interlinked indicators; amendable for implementation and scaling; and be cost effective, such as by building on existing socioeconomic and biophysical datasets.

Subramanian outlined recommendations for developing poverty-biodiversity indicators, including the need to consider scale, simplify linkages by focusing on key questions to be answered, develop a conceptual framework based on local circumstances, and collaborate with stakeholders.

On *European biodiversity initiatives*, Jérôme Petit, European Commission, discussed the EU 2020 Biodiversity Strategy, focusing on EU contributions to averting global biodiversity loss by: reducing harmful subsidies and impacts of European consumption patterns; increasing funding for biodiversity assistance; and seeking biodiversity cooperation, including ratifying and implementing the Nagoya Protocol.

He highlighted Europe Aid's activities, including: investing in saving habitats and productive landscapes; mainstreaming biodiversity in all cooperation sectors; and facilitating biodiversity policy development at the local, national and international levels.

On *reaching scale*, Bernard Giraud, Livelihoods Venture, closed the session affirming that to reach scale, simplicity is needed. He stressed the importance of trust-building, balancing short- and long-term benefits, community ownership and capacity building of project developers as key to guaranteeing successful biodiversity and development projects.

20/20 TALKS

On Saturday, 13 October, the RCP convened for "20/20 Talks: 20 Presentations on 20 Targets." The sessions included 20 presentations on the 20 Aichi Biodiversity Targets, interspersed with panel sessions on the strategic biodiversity goals. Speakers discussed how to address the underlying causes of biodiversity loss, reducing direct pressures on biodiversity and promoting sustainable use, improving biodiversity status, enhancing benefits to all from biodiversity and ecosystem services, and enhancing implementation.

TARGETS 1-4 AND STRATEGIC GOAL "A":

Moderator David Ainsworth, CBD Secretariat, opened the



Moderator David Ainsworth, CBD Secretariat

20/20 Talks. CBD Executive Secretary Braulio Ferreira de Souza Dias introduced the debate emphasizing the importance of valuing biodiversity. He underscored the Aichi Biodiversity Targets are the main international framework for global action. Dias noted the privileged role of the CBD Secretariat in helping to identify "win-win" solutions and promoting partnerships among various stakeholders.

On Target 1 (Awareness increased), Tim Hirsch, Global Biodiversity Information Facility, said it is the simplest yet most difficult target. He asked participants to leave negotiating jargon and acronyms behind and focus on their own passions in conveying why biodiversity is important to the public. He emphasized careful communication and called for distinguishing between the various values of biodiversity. Hirsch underscored the utility of direct results to practitioners combating biodiversity loss and called for sharing those results in knowledge-base websites.

On Target 2 (Biodiversity values integrated), Pavan Sukhdev, GIST Advisory Group, explained that both "quantity" and "variability" matter for biodiversity, noting "TEEB"



Tim Hirsch, Global Biodiversity Information Facility



Ibrahim Thiaw, Director, Division of Environmental Policy Implementation, UNEP

study. He emphasized valuation is a human institution and said capturing the ecosystem value does not necessarily mean price attribution. Highlighting the Green Accounting for Indian States and Union Territories Project, he underscored the challenge of imperfect data and stressed using multiple biodiversity valuation strategies, including through legislation, regional plans and certification.

On Target 3 (Incentives reformed), Katia Karousakis, Organization for Economic Co-operation and Development, highlighted incentives as "a toolkit" used by governments to promote biodiversity conservation. She emphasized eliminating harmful subsidies and providing positive incentives, *inter alia*: taxes on ground water extraction, pesticide and fertilizer use; fees for hunting, fishing and access to national parks; subsidies to promote biodiversity; payment for ecosystem services (PES); biodiversity offsets; and tradable permits, such as individually transferable fisheries quotas.

On Target 4 (Sustainable consumption and production), Ibrahim Thiaw, Director, Division of Environmental Policy Implementation (DEPI), UNEP, highlighted the annual capture of 110-130 million tonnes of fish, degradation of one billion hectares of agricultural land, and post-harvest loss of 40% of food products. Calling for more attention to waste, he noted the 10-Year Framework Programme on Sustainable Consumption and Production (SCP) adopted at the UN Conference on Sustainable Development (UNCSD or Rio+20), in Rio de Janeiro, Brazil, in June 2012. He emphasized the importance of engaging consumers in ecological footprint reduction.

Speakers addressed Strategic Goal "A" (Addressing the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society) and responded to questions by participants. Panelists emphasized: reforming global governance systems to prevent piracy of high seas resources; promoting SCP patterns in a globalized world; supporting MPAs enforcement by SIDS; recognizing "healthy" forms of privatization, such as improving local communities' rights and access to resources; and improving subsistence farmers' yields and storage capacities.

TARGETS 5-10 AND STRATEGIC GOAL "B": On Target 5 (Habitat loss halved or reduced), Tim Christophersen, UNEP, quoted Lester Brown saying "saving civilization is not a spectator sport." He noted every three seconds one hectare of forests disappears and commended Costa Rica, Brazil and Bhutan for significant reduction in deforestation. He noted the project "Global Forest Watch 2.0" and emphasized the importance of decoupling population growth from deforestation, which already happened.



L-R: Patricio Arturo Bernal, UNESCO; Serge Garcia, FAO; Peter Kenmore, FAO; Melesha Banhan, Antigua and Barbuda; and Tim Christophersen, UNEP

On Target 6 (Sustainable management of marine living resources), Serge Garcia, FAO, noted concern about the direction of South East Asian fishing practices and called for restocking the biomass of EU fisheries. Providing a cost-benefit analysis, he recommended a systemic approach in national policy frameworks and suggested solutions including: financing safety nets; reducing pressure on fish stocks; applying EBA; employing smarter economics; enforcing laws; and promoting good governance.

On Target 7 (Sustainable agriculture, aquaculture and forestry), Peter Kenmore, FAO, discussed pollination, aquaculture and pest control. He stressed that achieving sustainable development, including sustainable agriculture, requires empowering people who have local and indigenous knowledge. He emphasized focusing on local active research processes and noted aquaculture risks if a holistic ecosystems view is disregarded. He highlighted that India has increased food productivity while reducing pesticide use by two thirds in the last 20 years.

On Target 8 (Pollution reduced), Patricio Arturo Bernal, UNESCO, stressed that reducing pollution is important for the preservation of both human and ecological health. Recalling Rachel Carson's "Silent Spring," he emphasized emissions reductions achieved by national legislation, such as declining sulfur dioxide emissions in California since 1962. He underscored the interconnectedness of ecosystems and called for defining site- and ecosystem- specific "critical loads," the maximum pollutant deposition levels that do not cause long-term harm to ecosystems.

On Target 9 (Invasive alien species prevented and controlled), Melesha Banhan, Antigua and Barbuda, said invasive alien species is a critical problem in most countries.



Melesha Banhan, Antigua and Barbuda

She discussed the impacts of invasive species in the Caribbean region, including on the agricultural and tourism sectors. She highlighted challenges allocating government funding to protect biodiversity from invasive species and noted regional initiatives addressing this challenge, such as the Mitigating the Threat of Invasive Alien Species in the Insular Caribbean framework.

On Target 10 (Pressures on vulnerable ecosystems reduced), David Obdura, Coastal Oceans Research and Development in the Indian Ocean East Africa, underscored that maintaining the ecosystem functions of coral reefs preserves their recovery ability and increases resilience to climate change and other stresses, such as pollution, overfishing, predation, diseases, acidification and bleaching. He recommended the use of early warning systems to monitor ecosystems and called for a "fundamental change" in economic systems to reduce ecological footprints.

The speakers discussed Strategic Goal "B" (Reducing the direct pressures on biodiversity and promote sustainable use). Panelists and participants addressed mitigating Aichi Biodiversity Targets' impacts on the private sector and assisting small-scale operators with regulatory change. They highlighted: bottom-up fishing-industry approaches to address invasive species in the Caribbean; the opening of arctic fisheries due to climate change; and the IPBES as a global structure to address invasive species. On achieving Target 5, Christophersen noted REDD+ and the UNCSO outcomes on green economy, underscoring the challenge is implementation of existing plans.

TARGETS 11-13 AND STRATEGIC GOAL "C": On Target 11 (PAs increased and improved), Trevor Sandwith, IUCN, recalled agreement on PAs at CBD COP 10 in Nagoya, Japan, noting they are "doing quite well." He emphasized the need for skilled people and institutions that can cope with increasingly complex problems, such as climate change. Highlighting work by IUCN and the WCPA, he stressed PAs should facilitate equitable governance and social assessment and emphasized the "learning by doing" approach.

On Target 12 (Extinction prevented), Russell Mittermeier, President, CI, underscored the species extinction crisis. He listed threats to species, including: large-scale monoculture agriculture; slash-and-burn agriculture; large-scale hydroelectric projects; hunting; species trade; invasive species; and climate change. He recommended: using science-based strategic prioritization; identifying high priority sites; focusing on mega-diversity countries such as Brazil and Indonesia; and focusing on hot spots like Madagascar, with large numbers of endangered species.



L-R: Vandana Shiva, Navdanya Research Foundation for Science, Technology and Ecology; Trevor Sandwith, IUCN; and Russell Mittermeier, President, CI

On Target 13 (Genetic diversity maintained), Vandana Shiva, Navdanya Research Foundation for Science, Technology and Ecology, recalled her experiences during 25 years of biodiversity conservation. She underscored monoculture constraints, especially corn, canola, soya and wheat, on food security. She said the “monoculture of the mind” inhibits valuing biological diversity and noted India’s history of great crop diversity, such as the growth of 200 rice varieties. She stressed that commodities are not food, but the source of malnutrition.

The speakers discussed Strategic Goal “C” (Improving the status of biodiversity by safeguarding ecosystems, species and genetic diversity). Responding to questions, Sandwith said the categorization of PAs revealed the need for getting the issue of governance types right. Mittermeier commended early efforts by Brazil on species assessment and their success in species protection. Shiva said CBD parties must live up to their agreements and shift policies from those supporting genetically modified organisms to biodiversity protective agriculture practices. She stressed policy change can only happen when democratic forces equal undemocratic ones.

TARGETS 14-16 AND STRATEGIC GOAL “D”: On Target 14 (Ecosystems and essential services safeguarded),



Carlos Manuel Rodriguez, CI

Carlos Manuel Rodriguez, CI, explained linkages between the Aichi Biodiversity Targets. Beyond financial resources, he emphasized the need for policy planning and broader political engagement by government ministers, particularly those responsible for finance and agriculture. He highlighted

successful experiences in Costa Rica combating deforestation. Rodriguez urged eliminating perverse incentives, creating positive incentives and building new institutional frameworks to achieve Target 14.

On Target 15 (Ecosystems restored and resilience enhanced), Sasha Alexander, Society for Ecological Restoration (SER), noted that while some countries have the capacity to achieve the target, political will and long-term commitments are required.

He discussed the contribution of restoration outcomes to combating desertification and land degradation, as well as



Sasha Alexander, SER



Pierre du Plessis, Centre for Research Information Action in Africa

to climate change mitigation and adaptation. He concluded ecosystem restoration creates jobs and livelihoods in harmony with nature.

On Target 16 (Nagoya Protocol in force and operational), Pierre du Plessis, Centre for Research Information Action in Africa, recalled that the third objective of the CBD (sharing the benefits arising from the utilization of genetic resources in a fair and equitable way) is key for CBD implementation. He said the failure to address this objective is one reason the 2010 targets have not been achieved. He highlighted Target 16 is an opportunity to drive the transition towards alternative “green” development pathways, along with more equitable north-south relations.

The speakers discussed Strategic Goal “D” (Enhancing the benefits to all from biodiversity and ecosystem services). Du Plessis emphasized the rights based approach as prerequisite for sustainable resource management. He underscored that “since people are destroying biodiversity, they must be part of the solution.” Rodriguez attributed Costa Rica’s success in simultaneously restoring ecosystems and achieving economic growth to addressing perverse incentives and transforming institutions.

TARGETS 17-20 AND STRATEGIC GOAL “E”: On Target 17 (NBSAPs adopted as policy instrument), Caroline Petersen, UNDP, noted national biodiversity strategy and action plan (NBSAP) capacity building workshops to facilitate drafting of NBSAPs. She highlighted a study recommending that new NBSAPs focus on specific targets and on-the-ground action. She described the NBSAP of South Africa as exemplary, addressing biodiversity across entire landscapes through land-use planning and decision-making. She lauded the launch of the NBSAP Forum to share knowledge and experiences in the development of NBSAPs.

On Target 18 (Traditional knowledge respected), Joji Cariño, Tebtebba Foundation - Indigenous Peoples’ International Centre for Policy, Research and Education,



L-R: Gustavo Alberto Fonseca, GEF; Joji Cariño, Tebtebba Foundation - Indigenous Peoples’ International Centre for Policy, Research and Education; and Caroline Petersen, UNDP

underscored that indigenous and local communities are found in “hotspot areas” because they conserve biodiversity. She emphasized the maintenance of traditional knowledge and customary sustainable use requires, *inter alia*: respect for and noninterference in indigenous practices; free and prior consent for third party projects on indigenous territory; and full and effective participation at all levels.

On Target 19 (Knowledge improved, shared and applied), Randall Garcia, National Institute for Biodiversity, discussed



Randall Garcia, National Institute for Biodiversity

information for conservation. He underscored the importance of understanding policy impacts on ecosystems. He also emphasized “translating” information to better integrate local knowledge, incorporate cultural, religious and market values, and address the multiple needs of stakeholders.

On Target 20 (Financial resources from all sources increased), Gustavo Alberto

Fonseca, GEF, emphasized the role of Target 20 in enabling achievement of the other targets. He called for recognizing investment in biodiversity as “an investment in the future,” and said it should not just be a north-south exchange. He stressed mobilizing private sector sources and utilizing funds more effectively. He highlighted the first decrease in official development assistance since 1997 in 2011.

Speakers discussed Strategic Goal “E” (Enhancing implementation through participatory planning, knowledge management and capacity building). In response to a question about the paradox between the enhancement of data and continuous biodiversity degradation, Fonseca emphasized the solution to get out of this “trap” is to value natural capital. Carino stressed the importance of long-term planning, while Peterson highlighted positive schemes in Costa Rica, South Africa and India. One participant underscored the challenge of remaining optimistic and panelists responded that barriers remain a reality, but that citizens’ engagement and promising bottom-up experiences provide hope.

LAND DAY: LAND DEGRADATION NEUTRALITY – A RESPONSE TO THE 2020 AICHI TARGETS

On Monday, 15 October, the RCP convened for Land Day. The event was opened with a keynote address by Vandana Shiva, Research Foundation for Science Technology and Ecology, and panel sessions on: playing a win-win game - the implications of drylands restoration for meeting the Aichi Biodiversity Targets; measuring the true economic value of land; and biodiversity as an enabler of sustainable agriculture - alternative production models to bridge the gap between agriculture, food and land policies.

OPENING SESSION AND KEYNOTE ADDRESS:

UNCCD Executive Secretary Luc Gnacadja welcomed participants, calling for constructive debate going beyond “comfort zones” to provide new win-win solutions. He noted that 50 % of the 2020 Aichi Biodiversity Targets involve land degradation and emphasized synergies between achieving CBD biodiversity targets and the ten-year strategy of the UNCCD to move towards a land degradation neutral world. He underscored the need to restore land for ecosystems and communities and stressed focusing on soil improvement first, utilizing traditional knowledge and applying holistic management approaches.

CBD Executive Secretary Braulio Ferreira de Souza Dias recalled the importance of soil conservation to achieving food security, enhancing livelihoods and eradicating poverty. Emphasizing “win-win” opportunities, he said strengthening partnerships is essential to successfully mainstreaming biodiversity into the broader sustainable development agenda.

BMS Rathore, Joint Secretary, Ministry of Environment and Forestry, India, commended cooperation between the UNCCD and CBD, as well as their partnership with IUCN. He underscored addressing the issue of land degradation is crucial to achieving the Aichi Biodiversity Targets. He said that drylands issues affect large numbers of people and impact biodiversity. Stressing developing countries’ focus on poverty, he commended UNCCD’s ten year strategy addressing: living conditions of affected people; conditions of affected ecosystems; and global benefits.

Julia Marton-Lefèvre, Director General, IUCN, argued that when land is sustainably managed there are clear benefits for biodiversity conservation and livelihoods. She noted successful cases of land conservation, including in India, Senegal and Tanzania, and emphasized IUCN’s commitment to treat nature “as a solution.” She said reversing land degradation is a “tough sell,” but is key for improving food security. She observed that biodiversity conservation is the way to start combating land degradation.

Vandana Shiva, Founder, Research Foundation for Science, Technology and Ecology, emphasized the challenge of removing barriers to soil rejuvenation, ecological farming and sustainable land management (SLM). She said science is being distorted by vested interests and competitive market rationales. Shiva stressed industrial monoculture agriculture causes entropy and pollution, and increases ecological footprints.

She underscored organic farming increases soil nutrition, protects biodiversity and yields higher income for farmers. Responding to questions, Shiva described synthetic biology as reductionist, and called for humility and humanity when dealing with biodiversity conservation. She noted trade and commodification of natural resources fails to account for the multi-functionality of ecosystems.

PLAYING A WIN-WIN GAME: WHAT IS THE IMPLICATION OF DRYLANDS LAND RESTORATION FOR MEETING THE AICHI BIODIVERSITY TARGETS:

Moderator Sasha Alexander, SER, introduced the panel. The panel discussed the Aichi Biodiversity Targets, implementation of the targets and funding restoration.

On the *Aichi Biodiversity Targets*, Sakhile Koketso, CBD Secretariat, provided an overview of the main Aichi Biodiversity Targets relating to land management. She noted the Strategic Plan is not just an implement of the CBD, but is applicable to all UN agencies and stakeholders.



Vandana Shiva (right), Founder, Research Foundation for Science, Technology and Ecology, greets participants after her keynote speech.



L-R: Sakhile Koketso, CBD Secretariat; Jones Muleso Kharika, Department of Environmental Affairs, South Africa; Mary Rowen, USAID; Moderator Sasha Alexander, Society for Ecological Restoration; and Pablo Manzano, IUCN

Koketso recalled that one of the reasons the 2010 targets were not achieved was the failure to address underlying causes of biodiversity loss, especially unsustainable consumption patterns. She highlighted the importance of women and local farmers in promoting biological diversity and encouraged the recognition of traditional knowledge as a pathway towards ensuring food security.

On **funding restoration**, Mary Rowen, USAID, reported USAID spends US\$ 200 million a year on biodiversity conservation, using a threats-based approach focusing on integrated programmes with positive impacts in high biodiversity areas. Emphasizing a biodiversity focus for drylands and land restoration, she highlighted USAID work on community-based natural resource management.

Jones Muleso Kharika, DEA, South Africa, discussed the achievements and prospects of the Development Bank of Southern Africa's Drylands Fund in South Africa. Pablo Manzano, IUCN, observed markets are a source of resource mobilization.

On **implementation of targets**, Rowen noted this type of management involves devolution of property rights and land tenure, and integrated programming that addresses economic, ecological and financial sustainability. She also discussed landscape approaches, which increase resilience for humans and wildlife, and diversification of economic opportunities to adapt to climate variation.

Kharika stressed the importance of partnerships and bottom-up approaches in order to address land degradation and poverty alleviation. He emphasized the inclusion of civil society and private sector as critical to accomplishing UNCCD goals in South Africa and called for more focus on communities and measurable impacts.

Manzano noted achieving sustainable development targets requires: adjusting national accounting; eliminating harmful subsidies; and fostering sustainable production and consumption. He stressed that human activity should allow for ecosystem connectivity, especially on drylands, and for the prevention of species decline and extinction.

Manzano noted the potential of drylands and open lands to increase carbon stocks through increasing biodiversity, for which he recommended employing genetic diversity of domestic plants and animals, and protecting traditional knowledge.

During discussion, Axel Paulsch, Institute for Biodiversity, presented the SLM programme, which is a decision support system to inform drylands decision making. He noted an ongoing project in the Tarim River basin, China, and highlighted the potential of academic research to inform policy-making.

Responding to audience questions, panelists emphasized the importance of partnerships that address national priorities, and policy harmonization on the ground in order to efficiently employ aid resources.

HOW DO WE MEASURE THE TRUE ECONOMIC VALUE OF LAND: Johannes Förster, Helmholtz Centre for Environmental Research, introduced the panel. The panel discussed approaches to sustainable development, the Economics of Land Degradation (ELD) initiative, and next steps.

On **approaches to sustainable development**, Rejoice Mabudafhasi, Deputy Minister for Water and Environmental Affairs, South Africa, presented a cost benefit analysis of the global environmental crisis, suggesting global efforts and partnerships are needed. She called for adequate funding of the UNCCD.

Mabudafhasi said an integrated approach to sustainable development is needed, addressing: economic opportunities; population growth; food security; water quality and access; over exploitation of natural resources; and ecosystem degradation. Observing "women are custodians of the environment," she noted South Africa engages women and local communities' in ecosystem monitoring and data collection, such as through training in water quality testing.

On the **ELD initiative**, Mark Schauer, ELD Secretariat, noted ELD is a global initiative focusing on national economic costs of inaction to prevent land degradation. He emphasized the need for a framework capable of providing a common language between science and the private sector. Schauer highlighted the lack of awareness and current data as key challenges for decision makers. Noting the importance of the private sector, he stressed the need to showcase good investment opportunities for combating land degradation.

Simone Quatrini, The Global Mechanism, presented challenges faced by the ELD initiative, which aims at: comparing the costs of land degradation to the costs of adopting SLM practices; building capacity and improving data access for developing countries; and developing tools for policymakers to empower sustainable land use decision making. He discussed progress made by interdisciplinary working groups on: estimating the total economic value of the costs of, and social loss from, land degradation; accounting for trade-offs between populations; and valuing ecosystem services.

On **next steps**, Jones Muleso Kharika, DEA, South Africa, stressed that understanding the costs of inaction is fundamental for addressing the problem of land degradation. He emphasized that, with updated information, policies can be more adequately implemented and underscored the need

to focus on national priorities. He suggested that “sticks” are not necessarily the best solution for developing countries, particularly in the event of natural disasters.

During discussions, Quatrini called for involving youth groups in the consultation process of the ELD initiative. On quantifying ecosystem values, he explained the intention is to provide qualifiers to the discussions and improve dialogues with ministers of finance and the private sector.

Quatrini stressed valuation is different from privatization as, “it is trying to express the real economic value of land and ecosystems, including all different valuation aspects.” Kharika said, ecosystems are not only diverse, but are functional, and urged attention to complex environmental, social and cultural interactions.

BIODIVERSITY AS AN ENABLER OF SUSTAINABLE AGRICULTURE: HOW CAN ALTERNATIVE PRODUCTION MODELS BRIDGE THE GAP BETWEEN AGRICULTURE, FOOD AND LAND POLICIES:

Moderator Jan McAlpine, Director, UN Forum on Forests (UNFF), introduced the session. The panel addressed a range of issues including leveraging finance, community-based solutions, and restoring natural capital.

On *leveraging finance*, Rami Abu Salam, International Fund for Agricultural Development (IFAD), explained that IFAD is scaling up “multiple win” approaches for sustainable agriculture intensification, focusing on the value of natural assets. He highlighted opportunities to drive green growth and the need to leverage climate finance. He also emphasized the importance of projects involving irrigation to reduce crop loss, which impacts livelihoods.

On *agricultural biodiversity*, Mathew John, International Federation of Organic Agricultural Movements, explained how livelihoods benefit from, and food security and nutritional value are increased by, sustainable utilization of biodiversity. Sharing experiences from Kurumbas and Irulas, India, he highlighted local communities’ ability to sustain themselves without monetization, but through traditional practices and cultural rituals. John stressed community-based agriculture requires adequate land rights and respect for traditional seed bank preservation practices. He emphasized organic agriculture is based on four principles: health; ecology; fairness; and care.

Pernilla Malmer, Stockholm Resilience Centre, Stockholm University, Sweden, discussed resilience and agricultural biodiversity governance. She stressed the importance of these topics, mainly due to the increasing complexity of the relationships between people and nature.

Noting the central role of humans in driving ecological change, Malmer underscored the need to facilitate self-organization in an uncertain world, and combine different sources of knowledge in order to guarantee social-ecological resilience. She emphasized cultural and biological diversity are equally important.

On *restoring natural capital*, James Aronson, Centre d’Ecologie Fonctionnelle et Evolutive, France, presented “restoring natural capital” thinking as: the missing tool for achieving zero net land degradation; a link between the three Rio Conventions; and a way to overcome the false dichotomy that suggests conservation investment excludes economic development. He emphasized that ecological restoration is about improving relationships between nature and culture. Aronson highlighted a case in South Africa’s Drakensberg mountain region, where the restoration of natural capital involves local communities and financial support from the water sector.

During discussions, moderator McAlpine recalled that the benefits of restoration are not antagonistic to development. Malmer emphasized the creation of networks of experts as one potential solution to showcase the benefits of restoration investments.

Salam noted the challenges in developing projects that can address many issues at once, and said this should not be expected. Aronson argued that the real problem is not commodification of ecosystems, but the lack of mechanisms capable of valuing them. He underscored initiatives in Brazil and South Africa as successful cases of public-private partnerships.

In closing, Sergio Zelaya, UNCCD Secretariat, moderated a discussion between Land Day’s session moderators. Zelaya noted that the panel discussions emphasized commonalities between the 2020 Aichi Biodiversity Targets and UNCCD objectives.

On the *outcomes of Land Day*, Alexander said clear consensus has emerged on the need for ecological restoration and said engaging communities and NGOs and accounting for landscape multi-functionality are key. He commended Brazil, Colombia, India and South Africa as regional leaders in ecological restoration.

Förster underscored Deputy Minister Mabudafhasi’s message that while the issue of land degradation is critical to the survival of local communities in South Africa, they are also part of the solution, contributing a wealth of knowledge. McAlpine stressed that “if the seeds of land conservation are planted in the right place and cared for, they will germinate and grow”.



L-R: Pernilla Malmer, Stockholm Resilience Centre, Stockholm University, Sweden; Mathew John, IFOAM; Rami Abu Salam, IFAD; Moderator Jan McAlpine, Director, UNFF; and James Aronson, Centre d’Ecologie Fonctionnelle et Evolutive, France



L-R: Tim Christophersen, UNEP; Henriette Killi Westrin, State Secretary, Ministry of Environment, Norway; Nick Oakes, GCP; Carlos Manuel Rodríguez, Vice President, CI; and Andrew Mitchell, Founder and Director, GCP

Gnacadjia highlighted the need to get investments in land degradation solutions “right.” He reemphasized the high costs of land degradation and the risks of inaction, calling for the protection of “precious areas.” In conclusion, he welcomed constructive discussions at the sixth Land Day.

REDD+ DAY

On Tuesday, 16 October, the RCP convened for REDD+ Day. The event included the launch of the “Little Forest Finance Book” and the UN-REDD “Policy Brief on Multiple Benefits.” Panel sessions also convened, including a high-level panel on REDD+, biodiversity and ecosystem services for a green economy, and two others, one on key findings of the new Global Forest Expert Panel (GFEP) assessment and one on REDD+ and biodiversity safeguards - best practices in governance and safeguarding biodiversity.

LAUNCH OF THE “LITTLE FOREST FINANCE BOOK:” HIGHLIGHTING THE ROLE OF PRIVATE SECTOR INVESTMENT AND PES IN SUSTAINABLE FOREST MANAGEMENT AND REDD+: Tim Christophersen, UNEP, announced the launch of the “Little Forest Finance Book” and introduced the panel. In addition to the book, the panel discussed leveraging finance, PES, barriers to forest finance, the example of Costa Rica and market mechanisms.

Christophersen noted the book highlights the different options to scale up forest financing, saying financing is critical to achieving the Aichi Biodiversity Targets and calling for mobilizing the private sector to channel sustained alternative investments in forests.

Henriette Killi Westrin, State Secretary, Ministry of Environment, Norway, hoped the book will stimulate discussions and catalyze finance, in part through verified emissions reductions through the UN UNFCCC’s REDD+ mechanism, to protect forests from conversion to other land types.

On *leveraging finance*, Westrin said increased financing for verified emissions reductions through the REDD+ programme under the UNFCCC will support forests.

Nick Oakes, Global Canopy Programme (GCP), stressed the importance of finance for forests noting tropical forests account for 50% of global terrestrial biodiversity loss. He emphasized access to capital plays a crucial role in “forest friendly development,” including activities that maintain, reduce loss and increase forest cover.

Andrew Mitchell, Founder and Director, GCP, called for making forests worth more alive than dead, reversing current market failures that treat natural capital costs as externalities. He said the book outlines rules for successful policies and catalysts as incentives to get finance flowing.

On *barriers to finance*, Oakes noted barriers to forest finance, include *inter alia*: collateral requirements; risk-return expectations; accountability in decision-making; and revenue generation. Oakes described how the 14 catalysts identified in the “Little Forest Finance Book” address these barriers to scaling up forest financing.

During discussions, Oakes emphasized the catalysts can cope with transboundary impacts of forest degradation and landscape level projects, noting the role of bilateral projects. Mitchell said the design of REDD+ projects are becoming clearer, while highlighting that the methodologies are still complex.

On *Costa Rica*, Carlos Manuel Rodríguez, Vice President, CI, highlighted that Costa Rica went from 21% to 54% forest cover while tripling income *per capita* and experiencing population growth. He said this was achieved by addressing the catalysts for forest finance, including the introduction of forest incentives and subsidies.

Rodríguez emphasized the importance of valuing the ecosystem services provided by forests to justify financing conservation. He noted the complicated discussions at CBD COP 11 about who will pay for implementation, and called for developing country parties to create national mechanisms following the Costa Rican model.

On *market mechanisms*, Mitchell noted this would reduce the discrepancies between the US\$ 160 trillion global equity and bond markets and the non-existent global ecosystem market. He stressed advanced market mechanisms, with governments contributing pledges to a global fund, could provide missing price signals to investors by providing price floors.

HIGH-LEVEL PANEL ON REDD+, BIODIVERSITY AND ECOSYSTEM SERVICES FOR A GREEN ECONOMY: Moderator Ibrahim Thiaw, Director, DEPI, UNEP, introduced the panel, underscoring the role of forests in the green economy, including providing ecosystem services and low carbon livelihoods. He noted that in 2006 forests contributed US\$ 468 billion to the global economy, in addition to ecosystem services not accounted for using traditional economic measures. The panel discussed linkages with biodiversity and ecosystem services, PES, REDD+ safeguards, indigenous peoples and local communities.

On *linkages with biodiversity and ecosystem services*, Henriette Killi Westhrin, State Secretary, Ministry of Environment, Norway, highlighted that REDD+ is the most cost effective climate change mitigation measure, with positive impacts on biodiversity and ecosystem services. Heru Prasetyo, Deputy Chairman, President's Delivery Unit for Development Monitoring and Oversight, Indonesia, called for avoiding myopic approaches to carbon, biodiversity and ecosystem services, and taking holistic approaches to reforming how land and resources are used. CBD Executive Secretary Braulio Ferreira de Souza Dias recommended exploring synergies between the Rio Conventions, noting ecosystem restoration as one common element.

On *PES*, Westhrin recalled the TEEB study estimated that the value of global biodiversity and ecosystem services from tropical forests ranges from US\$ 2-5 trillion per year. Prasetyo expressed concern with the commodification of carbon, resulting in large-scale biofuel projects that are actually destroying forests. Prasetyo said the value of saving the forests is equally competitive with converting forests to palm oil plantations, when natural resources are valued properly.

On *REDD+ safeguards*, Prasetyo underscored that, if indigenous peoples and safeguards are not properly considered, REDD+ "is a pathway to hell," noting that local communities have to be considered as partners. Dias emphasized the importance of biodiversity safeguards. He called for respecting the rights of local communities, "the main custodians of biodiversity."

On *incentivizing REDD+*, Westhrin expressed hope that developing countries will be given clear and reliable incentives to explore REDD+, which she said will only reach its full potential when it is part of a sustainable development and green economy strategy. CBD Executive Secretary Dias stressed the Aichi Biodiversity Targets will not be achieved by regulatory and command and control approaches alone, without alternative incentive measures. He suggested that REDD+ provides a needed enabling environment providing potential win-win solutions, if implemented right.

During discussions, Westhrin underscored that the implementation of goals under the CBD and REDD+ should be complementary, and noted different REDD+ safeguards are right for different situations.

LAUNCH OF THE UN-REDD POLICY BRIEF ON MULTIPLE BENEFITS: Moderator Tim Christophersen, UNEP, introduced the panel. Valarie Kapos, UNEP-WCMC, presented the UN-REDD study "REDD+ Beyond Carbon: Supporting Decisions On Safeguards and Multiple Benefits," addressing REDD+ complexity concerns by providing analytical approaches for evidence-based REDD+ multiple-benefit decisions. Panelists discussed the multiple benefits approach and lessons learned.

On the *multiple benefits approach*, Kapos noted that: mapping ecosystems to identify priority areas informs decisions on biodiversity; finding cost effective solutions allows policy makers to explore different options for REDD+ actions; establishing economic values of multiple benefits, in both non-monetary and monetary terms, enables comprehensive cost-benefit analyses; and applying scenario modeling makes assessments of REDD+ projects' future impacts possible.

Christophersen stressed that analytical tools assist countries undertaking complex national transformations. He noted that carbon and biodiversity mapping can be used to model

land use to identify optimal scenarios. He underscored that REDD+ success is about sustainable land use and cannot be achieved through trade offs.

Christophersen emphasized it is possible to enhance food productivity, to conserve biodiversity and reduce negative environmental and social externalities, but that it takes know-how and planning. He called for countries to adopt far-reaching visions for development and suggested REDD+ is but one vehicle to bring together different sustainable development goals.

On *lessons learned*, Veerle Vandeweerd, UNDP, emphasized REDD+ requires learning by doing. She



Veerle Vandeweerd, UNDP

stressed the importance of property rights, underscoring that many people lack legal recourse related to the land and natural resources that underpin their livelihoods. She highlighted UNDP actions to build capacity to implement REDD+ safeguards, noting the obstacles that safeguards sometimes present for those developing projects.

Vandeweerd said the social aspects of sustainable development must be addressed first, developing understanding of what forest conservation means for livelihoods. She emphasized social inclusion of local communities as essential to a system of performance-based payments under REDD+.

In discussions, Vandeweerd agreed that financial support from the international community is needed for capacity building. Kapos added that community monitoring enhances local



Valarie Kapos, UNEP-WCMC

recognition of REDD+ benefits. Christophersen reported improved coordination with local government agencies when approaching local communities.

LAUNCH OF THE NEW GFEP ASSESSMENT: BIODIVERSITY, FOREST MANAGEMENT AND REDD+: Alexander Buck, International Union of Forest Research Organizations, introduced the panel. Christoph Wildburger, GFEP, presented the assessment report "Understanding the Relationship Between Biodiversity, Carbon, Forests and People: the Key to Achieving REDD+ Objectives," to be launched along with a summary for policy makers at UNFCCC COP 18 in Doha, Qatar. Panelists presented findings of the study.

Valarie Kapos, UNEP-WCMC, said a number of different management actions have a role in REDD+, including: protection measures; agricultural practices; impacts of extractive use; restoration and reforestation; and landscape scale planning. She said the study found impacts of management actions are highly variable depending on location, scale of implementation, initial conditions and historical impacts, forest types and the wider landscape context.

Kapos underscored that the greatest and most immediate benefits are those that effectively reduce deforestation and forest degradation, while impacts of actions like restoring

forests are seen much more slowly. She said understanding the impacts on carbon and biodiversity are essential for applying safeguards and effective REDD+ actions.

Bhaskar Vira, University of Cambridge, UK, discussed the social and economic context included in the GFEP assessment. He noted the challenge of assessing existing knowledge on the social and economic outcomes of REDD+ projects, since these are relatively new. Hence, he said the study reviewed existing forest interventions more broadly, drawing lessons for REDD+.

Vira identified four key messages including that: synergies are possible but should not be taken for granted; it is possible to look beyond safeguards towards integration of social objectives; it is important to remember what has been done before in the forest sector; and despite best efforts trade-offs will remain between carbon, biodiversity and social and economic costs.

Wildburger stressed that the complexity of forest systems warrants applying the precautionary principle. He recommended regionally tailored strategies, emphasizing that REDD+ actions have variable impacts, including: on carbon and biodiversity; across different forest types and landscape conditions; and across spatial and time dimensions. He underscored that for REDD+ to be effective, local communities need to be engaged early on, and tenure and property rights need to be clear.

In discussions, Vira stressed that social objectives are not easily quantified nor can they be compensated in monetary terms. He also emphasized synergies between sustainable land use and REDD+ activities. Responding to a participant, Christine Schmidt, University of Freiburg, Germany, spoke from the floor, cautioning against generalizations and calling for national specific policy option assessments taking into account specific forest types and biodiversity conditions.

One participant questioned the term “sustainable agricultural intensification,” noting that at times sustainability and intensification are not compatible. Kapos agreed there are limits, but noted that sustainable agricultural intensification is a management action in use and was therefore included in the study. Wildburger emphasized the importance of assessments such as the one being launched, due to the complexity of REDD+.

REDD+ AND BIODIVERSITY SAFEGUARDS: BEST PRACTICES IN GOVERNANCE AND SAFEGUARDING BIODIVERSITY – TOWARDS COMMON GUIDANCE BY UNFCCC AND CBD: Patrick Sieber, HELVETAS Swiss Intercooperation, highlighted the policy brief “Best Practices in Governance and Biodiversity Safeguards for REDD+,” an outcome of a joint Swiss-Philippine initiative. Tim Christophersen, UNEP, welcomed the policy brief, noting the importance of joint implementation and cooperation.

Norma Molinyawe, Department of Environment and Natural Resources, the Philippines, emphasized the policy briefs’ key messages will help ensure REDD+ supports the goals of inclusive economic growth. She stressed improving the lives of forest-living peoples and conserving natural resources are essential to REDD+.

Lawrence Ang, Ateneo School of Government, the Philippines, highlighted lessons learned from phase two of the study, emphasizing, *inter alia*: REDD+ implementation succeeds when it adds value to overall national forest management strategies and local development goals; effective participation entails ownership of forest governance structures; REDD+ should demonstrate that it facilitates sustainability by

providing multiple benefits; and REDD+ payment schemes should form part of an innovative sustainable financing strategy linked to broader performance parameters.

Ang also presented best practice examples from a number of countries, including Costa Rica, Indonesia, Nepal, Kenya and the Philippines, where these lessons are already being implemented. He recommended, *inter alia*, explicitly developing common standards and guidance, and ensuring a transparent, effective and participatory process.

Christopher Duerr, Federal Office for the Environment, Switzerland, emphasized developing countries need more effective, rather than increased, management structures, noting that exploring synergies between UNFCCC and CBD can avoid duplication. He stressed successful safeguards require joint efforts between developed and developing countries and South-South exchanges.

Niranjali Amerasinghe, Center for International Environmental Law, US, underscored that the complexities of REDD+ require attention to impacts on biodiversity and indigenous peoples, and to the issues of governance, trade, agriculture and land use. Amerasinghe emphasized that for REDD+ to be effective, it has to be nationally relevant and systemic issues must be addressed. She suggested participatory monitoring can bring in a wealth of knowledge from local communities whose effective participation is critical to the success of REDD+.

Kelly Hertenweg, Federal Public Service Health, Food Chain Safety and Environment, Belgium, noted the need for coordination within and among government ministries to ensure that benefits of REDD+ beyond carbon are realized. On synergies, she noted that not many negotiators work in both the UNFCCC and CBD processes and stressed that those working on both sides of the REDD+ issue must cooperate.

Bruno Oberle, State Secretary, Federal Office for the Environment, Switzerland, closed the session emphasizing that safeguards are not an obstacle, but rather a reflection that the world is complicated. He said without safeguards reluctance from donors and local communities will “bring the REDD+ train to a stop.”

ECOSYSTEM RESTORATION

On Wednesday, 17 October, the RCP convened for sessions discussing the theme ecosystem restoration. The session began with a keynote speech by James Aronson, SER. Panels convened throughout the day on: inspiring action on the ground - the local context; inspiring action on the ground - the national context; and global partnerships for local results. The day concluded with the presentation of the Hyderabad Call for a Concerted Effort on Ecosystem Restoration.



James Aronson, SER



L-R: Cristina Maria do Amaral Azevedo, Environmental Secretariat of São Paulo State, Brazil; Ritesh Kumar, Wetlands International; Sasha Alexander, SER; James Aronson, SER; Angela Andrade, CI; and Christo Marais, Department of Environmental Affairs, South Africa

INSPIRING ACTION ON THE GROUND - THE LOCAL CONTEXT: Sarat Babu Gidda, CBD Secretariat, opened the panel. The panel discussed ecological restoration, cooperation, PES and case studies.

On *ecosystem restoration*, James Aronson, SER, discussed ecosystem restoration, arguing that it plays a crucial role in all three Rio Conventions. He defined ecological restoration as “the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed.” He underscored the expansion of the human footprint, noting the destruction of 30% and degradation of 20% of forest landscapes, the 50% reduction in mangroves and the degradation of 75% of coral reefs. Aronson stressed that ecological restoration is not an “either/or” situation, but should be done in parallel with conservation. He emphasized that restoration is about social, economic, ecological and political factors.

Speaking from the floor, David Coates, CBD Secretariat, suggested recognizing opportunities for land restoration in the agricultural sector, and called for paying closer attention to increasing food productivity and restoration opportunities in cities. Aronson differentiated between restoration and rehabilitation, the latter aiming at increasing productivity in production systems and suggested thinking about renewing natural capital to cover the entire spectrum of ecosystems.

On *cooperation*, Aronson argued ecosystem restoration plays a crucial role in all three Rio Conventions. He called on parties to respect international commitments and work together.

On *PES*, Aronson noted the TEEB study saying it is a key contribution for establishing the relationship between ecosystem services and biodiversity. He also underscored the importance of demonstrating that ecological restoration makes economic sense and enhancing the involvement of the private sector.

Presenting *case studies*, Cristina Maria do Amaral Azevedo, Environmental Secretariat of São Paulo State, Brazil, discussed Brazil’s Atlantic Forest Restoration Pact (AFRP) initiative, a permanent independent and collective partnership between 226 diverse stakeholders. Noting the region is one of five global biodiversity hotspots, with 383 of Brazil’s 633 endangered species, she described how the AFRP works towards achieving the Aichi Biodiversity Targets.

Azevedo said the AFRP mission is to restore 15 million hectares of degraded land in the Brazilian Atlantic Forest by 2050 and to promote: biodiversity conservation; job generation; income opportunities; maintenance and provision

of ecosystem services; and improving land ownership. She noted AFRP’s online platform for sharing detailed project information.

Ritesh Kumar, Wetlands International, presented on the ecological restoration of Lake Chilika, India. He argued that restoration “needs to make sense to people,” especially in terms of livelihoods. Explaining that the Chilika Lake is a hotspot of biodiversity and responsible for the livelihoods of 0.2 million people, he demonstrated the benefits of restoration experiences both in ecological and social terms. He recalled the importance of partnerships, multiple knowledge base systems and management of social transformation as key factors of success.

Angela Andrade, CI, presented experiences from the Rio Blanco Watershed Initiative, Colombia, on EBA to climate change adaptation. She explained high mountain ecosystems are characterized by high vulnerability to climate change, increased land use and forest transformation. She described high mountain ecosystems as candidates for win-win solutions for addressing climate change impacts, and increasing resilience through biodiversity conservation and ecosystem restoration.

Andrade highlighted the six year initiative, which found key enabling conditions of restoration for EBA, include: providing climate change impact vulnerability assessments; developing participatory processes; promoting learning-by-doing activities, taking advantage of best available science and traditional knowledge; and including restoration in land use plans and other planning mechanisms.

Christo Marais, DEA, South Africa, provided the South African perspective on restoring biodiversity and ecosystems. He discussed the challenges of land degradation, water scarcity and invasive species in the past 17 years and argued that biodiversity investment can combat poverty.

However, Marais noted the need to increase financial and human resources. As a solution, he proposed unlocking private sector investment in natural management and ecosystem restoration, along with the improvement of primary ecological science.

During discussions, Andrade recommended using vulnerability assessments in watershed area ecosystem restoration projects. Marais noted upstream and downstream impacts in watersheds vary regionally and stressed the important role of water management authorities. Azevedo explained AFRP can scale up efforts through financial support from the private sector and state governments.

INSPIRING ACTION ON THE GROUND - THE

NATIONAL CONTEXT: Nick Davidson, Deputy Secretary General, Ramsar Convention, opened the afternoon session, which focused on national case studies. BMS Rathore, Joint Secretary, Ministry of Environment and Forestry, India, presented on ecosystem restoration using landscape approaches in India. He recalled key figures on India's forests and discussed ecosystem restoration challenges related to balancing conservation and development needs, and said climate change is an aggravating factor.

Rathore highlighted the Green Indian Mission model, which seeks to increase forest quality and cover. He underscored key elements of the landscape approach, including: identification and prioritization of restoration areas; interventions at "scale," addressing drivers of degradation; focus on multiple ecosystems in landscapes; and ecosystems restoration and livelihood support.

Yong-Kwon Lee, Korea Forest Service, Republic of Korea, shared knowledge and lessons learned from forest landscape restoration in the Republic of Korea. Focusing on systematic implementation of forest restoration and management, he described his country was able to triple its forest stocks since 1950, while simultaneously achieving economic growth.

As elements of success, Lee noted: political leadership and public participation; sustainable use of forest resources for adaptation to changing environments; and recognition that forests are linked with other landscape resources. He stressed the Republic of Korea is already sharing its experiences with other countries through the Asian Forest Cooperation Organization, working towards the greater goal of "sustainable development for a green Asia."

Caroline Petersen, UNDP, provided an overview of UNDP work in scaling up national level finance for restoration. She highlighted several projects, including afforestation in Bangladesh and peatland restoration in Belarus. Petersen noted the UNDP-European Commission biodiversity finance project for its role in identifying finance gaps through a bottom-up approach. She concluded presenting the Biodiversity and Ecosystem Services Network, which seeks to build capacity via

an online platform capable of bringing together practitioners, scientists and policy-makers, and to provide "easy quick facts" regarding technical and operational guidelines on restoration.

Kristal Maze, South African National Biodiversity Institute, discussed restoration banking of wetlands in South Africa. As the sixth biggest coal producer in the world, she explained South Africa's challenge is to measure residual impacts and find ways to offset or compensate negative environmental impacts deriving from its coal-mining industry, which critically endanger its wetlands. Providing quality and quantity for the country's water security, she described wetlands as a critical ecological infrastructure.

Maze underscored the importance of banked credits in the success of South Africa's rehabilitation programme, which over the last eight years has employed residents to restore over 40,000 hectares of wetlands. She also stressed landscape-scale systematic conservation plans and wetland assessment tools as critical for freshwater ecosystems. She commended the Department of Water Affairs for adopting the integrated framework for the design and implementation of offsets.

During discussions, Maze welcomed further dialogue on offset risks and advice on how to improve offset metrics. Petersen recalled South Africa's mapping of biodiversity as a great value for measuring the result of restoration projects. She also noted the disparities between short-term investments and long-term results, highlighting a project in Borneo, which will be monitored for 20 years in partnership with the Malaysian government. Lee stressed how the Republic of Korea, in partnership with the Association of Southeast Asian Nations, is prioritizing green economy and valuing natural assets.

GLOBAL PARTNERSHIPS FOR LOCAL RESULTS:

Moderator James Aronson, SER, introduced the panel. The panel discussed challenges, solutions, economics and finance.

On **challenges**, Sergio Zelaya, UNCCD Secretariat, stressed that globally over 50% of agricultural land has degraded, and that annually 75 billion tonnes of fertile soil and 12 million hectares are lost due to drought and desertification. He said this puts 27,000 species at risk and negatively affects 1.5-2 billion people, especially women.



L-R: Sergio Zelaya, CBD Secretariat; Ramsar Convention Deputy Secretary General Nick Davidson; James Aronson, SER; Julia Marton-Lefèvre, Director General, IUCN; and Simone Quatrini, The Global Mechanism



CBD Executive Secretary Braulio Ferreira de Souza Dias welcomes the Hyderabad Call. Panel L-R: Rebecca Grynspan, Associate Administrator, UNDP; Naoko Ishii, CEO, GEF; UNCCD Executive Secretary Luc Gnacadja; Secretary General Ramsar Convention Anada Tiega; Ibrahim Thiaw, Director, DEPI, UNEP; Julia Marton-Lefèvre, Director General, IUCN; Peter Kenmore, FAO; Yong Kwon Lee, Korea Forest Service, Republic of Korea; Rejoice Mabudafhasi, Deputy Minister of Water and Environment, South Africa; and James Aronson, SER.

Zelaya also drew attention to the rising food, energy and water demands, as well as to the far-reaching impacts of desertification, land degradation and drought, including migration, instability and conflict. Davidson observed 50% of the world's wetlands have been degraded, with an accelerating trend in wetland conversion caused by agricultural impacts and overall land-use change.

On **solutions**, Zelaya commended the Rio+20 outcome on a "land-degradation neutral world," explaining achieving this goal requires: stronger partnerships; restoring and rehabilitating more land than is degraded; and sustainable land use in the agriculture, forestry, energy and urban sectors.

Julia Marton-Lefèvre, Director General, IUCN, presented the IUCN goal of restoring 150 million hectares of lost forests and degraded land by 2020, known as "Bonn Challenge." Highlighting the need for "pragmatic solutions," she argued restoration could, at the same time, benefit ecosystems and people, affirming that this target is achievable. She called for a shared vision on restoration, highlighting successful cases of leadership and best practices in the Republic of Korea, Costa Rica and Tanzania.

Marton-Lefèvre said US\$ 84 billion per year in net benefits could be generated if the Bonn Challenge is achieved. Davidson described the Avoid, Mitigate, Compensate Framework under the Ramsar Convention as "a slippery slope" and stressed restoration and rehabilitation are important.

On **finance and economics**, Davidson highlighted that the new TEEB Study on Water and Wetlands found that natural wetlands provide more ecosystem services value per hectare than other ecosystems. He addressed several considerations to be taken into account in a cost-benefit analysis of wetland restoration. He emphasized focusing on multiple services

when designing wetland restoration, including the wide variety of benefits they provide to people through their ecosystem services.

Simone Quatrini, The Global Mechanism, presented on financing options for implementing restoration and rehabilitation programmes to address degradation from unsustainable land use practices. Focusing on the viewpoint of investors, he noted three aspects are important: return; impact; and risk. He highlighted how a new category of investors has been increasingly combining social equity and environmental sustainability, creating innovative financial products.

Quatrini underscored several challenges for investors, including, *inter alia*: increasing awareness of investment impacts; reducing transaction costs on the ground; increasing leadership and coordination in the private sector; and improving common metrics and standards. On the demand side, he emphasized adequate safety nets against the effects of market failures and expertise to navigate complex financial architectures as relevant points to be addressed.

HYDERABAD CALL FOR A CONCERTED EFFORT ON ECOSYSTEM RESTORATION: Sarat Babu Gidda, CBD Secretariat, introduced the session, launching the Hyderabad Call for a Concerted Effort on Ecosystem Restoration, which was welcomed by all panelists. Rebeca Grynspan, Associate Administrator, UNDP, recognized restoration plays a vital role in meeting the inter-linked challenges of the Rio Conventions and requires prioritization based on the best available science and traditional knowledge.

Naoko Ishii, CEO, GEF, supported the Hyderabad Call and emphasized the GEF role in supporting parties to achieve the Aichi Biodiversity Targets.

CBD Executive Secretary Braulio Ferreira de Souza Dias welcomed the Hyderabad Call highlighting the win-win opportunities for creating partnerships. He said the challenge is to upscale joint efforts.

UNCCD Executive Secretary Luc Gnacadja recalled that out of 1.5 billion people affected by land degradation, 74% are poor or extremely poor. He argued that restoration is about getting investments right.

Anada Tiega, Secretary General of the Ramsar Convention said the Ramsar Secretariat is committed to working with the CBD Secretariat and recalled the successful restoration experience of Lake Chilika, in India.

Ibrahim Thiaw, Director, DEPI, UNEP, said restoration contributes to the objectives of the Rio Conventions and the Ramsar Convention. He drew attention to food security, the value of coastal areas and mountain ecosystems.

Julia Marton-Lefèvre, Director General, IUCN, commended the RCP and the Ramsar Convention as important IUCN partners and stressed the Bonn Challenge is an important implementation vehicle for achieving the CBD and UNFCCC objectives.

Rejoice Mabudafhasi, Deputy Minister of Water and Environment, South Africa, said South Africa, as President of the UNFCCC COP 17, is happy to support the Hyderabad Call and highlighted the multiple benefits from healthy ecosystems and ecosystem restoration, including food and water security, job creation and poverty reduction.

Peter Kenmore, FAO, affirmed that the maintenance of ecosystems and restoration is fundamental to ensuring food security and sustainable development.

Yong-Kwon Lee, Korea Forest Service, Republic of Korea, recalled the 20th anniversary of the Rio Conventions and expressed full support for promoting greater synergies among them. James Aronson, SER, welcomed Ecosystems Restoration Day discussions, saying it is exciting to see the energy and commitment of the RCP partners and calling for all to “roll up our sleeves and get to work.”

Panelists then endorsed the Hyderabad Call for a Concerted Effort on Ecosystem Restoration. The Hyderabad Call: acknowledges that ecosystems and biodiversity underpin economic growth, sustainable development and human well-being; recognizes the fast degradation of earth's ecosystems due to unsustainable development; acknowledges the emerging consensus on the importance of restoration and rehabilitation as conservation alone is no longer sufficient; and recalls the global commitments in the three Rio Conventions and other Multilateral Environmental Agreements (MEAs).

The Hyderabad Call also notes that effective implementation of restoration helps to achieve the CBD Aichi Biodiversity Targets, adaptation and mitigation under the UNFCCC, striving towards zero-net land degradation under the UNCCD, wise use of wetlands under the Ramsar Convention, and achieving the Global Objectives on Forests of the UNFF and the Bonn Challenge. The Hyderabad Call also recognizes that major enabling factors in achieving ecosystem restoration commitments include: political will, leadership and commitment; knowledge dissemination and capacity building; governance, participation and partnerships; and financing, resource mobilization and other incentive mechanisms.

Finally, the document calls upon parties to the Rio Conventions and other MEAs, donor agencies, including the World Bank and regional development banks, private and corporate donors, other relevant international bodies and organizations, indigenous peoples and local community

organizations and civil society to make concerted and coordinated long-term efforts to mobilize resources and facilitate the implementation of ecosystem restoration activities.

TOWARDS INTEGRATED IMPLEMENTATION OF THE RIO CONVENTIONS

On Thursday, 18 October, the RCP convened to discuss towards integrated implementation of the Rio Conventions. Panels convened during the day on: youth on coastal and marine biodiversity and livelihoods; piloting the development and implementation of national-level joint activities between the Rio Conventions; sharing perspectives on sustainable development; and COP 11 business decisions and Rio Conventions.

YOUTH PANEL ON COASTAL AND MARINE BIODIVERSITY AND LIVELIHOODS: Moderator Simangele Msweli, Go4BioDiv Youth Messenger, South Africa, welcomed the audience to Livelihood Day, which began with a play performed by youth participants expressing instrumentally and vocally that: the most dangerous is the dying of our dreams; natural resource loss threatens livelihood all around the world, causing conflicts between local hierarchies and within families; and we all need to work together to save nature for the future.

Moderator Maya Moure, Go4BioDiv Youth Messenger, Mexico, introduced the panel asking about the main challenges in protecting marine areas. Sudeep Jana, Go4BioDiv Youth Messenger 2010, Nepal observed the need to include local fishing communities in MPAs.

David Sheppard, SPREP, noted several successful initiatives that work because of leadership and partnerships between government and non-government actors, including the Phoenix PA, and the Marshall Island Shark Sanctuary. Sejal Worah, WWF India, noted there is almost no more space for small fisheries, when they are crucial for the protection of biodiversity and marine areas. Terrence Hay-Edie, UNDP, stressed that small and artisan fishery sustainable practices must be part of the solution.

Responding to a youth representative's question on empowerment of communities, Jana said the sense of urgency developed by the current financial crisis has been causing “greater organization” among communities. Hay-Edie noted grants from the Global Compact initiative, which assists local communities to replicate successful experiences of conservation.

Worah said the challenge is to understand how traditional knowledge can be combined with fast changing societies, particularly in great emerging countries. Sheppard stressed the importance of building environmental awareness among youth through strengthened networks.

On linking tradition and culture with science and how to make this work for conservation and sustainable resource use, Hay-Edie noted that an element of economics already exists in traditional practices, such as viewing the ocean as natural capital.

Worah spoke of her experience in empowering traditional communities through science, including mapping areas to claim traditional areas for governance rights, while noting concern about the theft of traditional knowledge.

Another youth representative enquired about how to ensure that projects “deliver on time.” Worah highlighted the need to think about projects “as process” and to allow some flexibility regarding outcomes, since concrete results may occur at later stages of projects. Sheppard said that patience is needed when

working with local communities and advised putting money into small projects and progressively scaling up through networks.

Speaking on inter-generational connectivity, Jana described elders as shepherds helping visiting youth to reconnect with sacred areas and their roots to promote inter-cultural and international exchanges and foster an understanding of traditional livelihoods. Hay-Edie, underscored the importance of a two-way inter-generational connectivity. He said bringing youth into decision-making is enhanced when they can connect with an area by learning of memories and stories from elders.

PILOTING THE DEVELOPMENT AND IMPLEMENTATION OF NATIONAL-LEVEL JOINT ACTIVITIES BETWEEN THE RIO CONVENTIONS:

Veronica Lo, CBD Secretariat, introduced the panel. Dominique Benzaken, IUCN, explained the benefits of EBA studies on islands, due to their common characteristics and challenges, including manageable scale, potential replicability, ecosystem service values and vulnerability. As lessons learned from 35 case studies, she highlighted the need for: NBSAPs, National Adaptation Programmes of Action or equivalent policy measures for implementation of EBA; institutional, technical and financial capacity building; communication and demonstrating effectiveness of EBA; and valuation of ecosystem services.

Melanie Heath, Birdlife International, presented on ecosystem conservation for climate change adaptation in Kenya, Uganda, Rwanda and Burundi. She said EBA is the focus of the work in this region, along with people vulnerability. Despite the need for further clarification on the EBA concept, she stressed it is a cost-effective approach to adaptation and has great potential to be included into national strategies on biodiversity and climate change adaptation. She underscored how different national contexts might impact the results of EBA and encouraged cross-sectorial approaches.

Annelien van Meer, CREM, spoke about the nascent initiative to establish internationally recognized guidelines for sustainable islands economies (GSI), focusing on “planet, people and profit issues” and aiming at bringing together good practices in a flexible way to be adaptable to islands in different contexts. She expressed hope that GSI will serve as a tool to develop sustainable practices, create awareness and even serve as a branding tool for islands.

Peter Herkenrath, UNEP-WCMC, emphasized the importance of reporting for the negotiations process, noting the significant burden, mainly, on least developed countries and SIDS due to insufficient capacity building. In an attempt to overcome this problem, UNEP-WCMC developed the project Integrated Approaches to National Reporting to the Rio Conventions, which creates mechanisms to assist countries’ reporting practices. Citing the key insights from the project, he mentioned the need to increase collaboration on national focal points, enhance mechanism to exchange information at the national level and improve management of environmental data. He also noted the possibility of merging reports for the three Conventions.

Karin Zaunberger, European Commission, spoke about several EU initiatives with small island development states. She highlighted a voluntary scheme for Biodiversity and Ecosystem Services in Territories of the EU Outermost Regions and Overseas Countries and Territories (BEST) and a EU research project EcoAdapt, focusing on ecosystem-based strategies and innovations in water governance networks for adaptation to climate change in Latin American landscapes.

She highlighted that BEST covers a broad geographic and geo-political spectrum, increasing the potential for replication. Concluding, she said sustainable development can be seen as both a huge challenge and opportunity.

SHARING PERSPECTIVES ON SUSTAINABLE DEVELOPMENT: Masayoshi Ushikubo, Director and Chairman, Sanden Corporation, showcased the experience of the Sanden manufacturing company in developing the Akagi Plant through a “neo-natural construction method.” This approach focused on the protection of natural assets, mainly forests, and on ecological education programmes extended to employers. He noted the highest evaluation of this approach by the Japanese Social and Environmental Green Evaluation System.

Guilherme Passos, Anima, Brazil, emphasized that deeply investing in biodiversity is a source of unique competitive advantage. Focusing on the case of the Natura company, he said the company’s early sense of purpose was to reduce its footprint and to create products that promote “well-being/being well.” He urged the public sector to equip themselves with tools that can monitor and build partnerships with the private sector, aiming at solutions to meet the Aichi Biodiversity Targets and sustainable development.

Santosh Deshmukh, Jain Irrigation Systems Ltd., focused on some successful solutions to promote sustainable development in the agricultural business. He highlighted crosscutting initiatives, which are important for the three Rio Conventions, including transformation of wetlands, reduction of water footprint and energy through the promotion of renewable energy.

Rashila Kerai, Holcim, stressed sustainable development and impact management is essential to the company’s success. She explained how Holcim employs lifecycle assessments, material reviews and risk matrices to map key areas and identify issues to set priorities and targets, such as: moving towards less energy intensive production in an energy intensive sector; reducing the CO₂ emissions by 25% by 2015 to a 1990 baseline; and having both comprehensive water risk and biodiversity action plans in place at most of the organizations’ sites. She expressed support for regulations and removal of perverse incentives, but stressed rules must be consistently enforced.

Moderator Griffiths asked panelists what inspired their companies to develop more sustainable policies and how these experiences could be scaled up. Panelists responded saying that considerations of future generations, philosophical and economic reasons, as well as the necessity to survive were motivational factors.

On scaling up, Kerai noted the importance of expanding the understanding of sustainable policies throughout the entire company. Deshmukh highlighted the role of sustainability reporting and expanding sustainable criteria to the full supply-chain. Passos emphasized the importance of fair legislation and the power of Natura’s consultants, seen as micro-entrepreneurs, to impact their communities.

Responding to audience questions on how to deal with “bad guys” in the business community, Kerai noted companies can raise the bar individually or as a group within a sector to increase standards. She also stressed smart legislation to create a level playing field. Passos noted lack of managerial capacity in PA governance and called on government to wisely choose

partnerships with the “good guys” to help them manage PAs. Deshmukh said that working well with bureaucracies is as important as working with local communities.

COP 11 BUSINESS DECISIONS AND THE RIO CONVENTIONS: Moderator Kiruben Naicker, DEA, South Africa introduced the panel. Farid Yaker, UNEP, noted the promising discussions on business and biodiversity. He said UNEP fully supports the development of tools that could reduce the pressure on ecosystems. He also emphasized the need to make consumption and production standards more sustainable in order to prioritize the reduction of human ecological footprint.

Bill Rahill, International Finance Corporation (IFC), spoke about creating value through sustainability looking at performance standards. He stressed that COPs are only of value when implemented. In this respect he noted increased public-private partnerships, significant changes in markets’ engagement given water-energy-food nexus and increased understanding of opportunities.

Noting their wide adoption, Rahill discussed eight performance standards on environmental and social sustainability that the IFC requires from its borrowers, including: assessment and management of environmental and social risks and impacts; labor and working conditions; resource efficiency and pollution prevention; community health, safety and security; land acquisition an involuntary resettlement; biodiversity conservation and sustainable management of living natural resources; indigenous peoples and cultural heritage.

Pavan Sukhdev, GIST Advisory, noted the advancement of the discussion on business and biodiversity saying that governments are currently eager to tackle topics perceived in the past as “difficult.” He noted the importance to concentrate on concrete outcomes of this conference, not necessarily focusing on the official language from the Parties’ decisions. He emphasized that achieving the Aichi Biodiversity Targets is “financing sustainable development” and underscored the importance to evaluate the impact of investments into the environment.

During discussions, panelists debated ways to move forward. Yaker recalled the impacts of goods in policy objectives and was glad to see that green procurement advanced in the COP 11 agenda. He noted that green procurement could not work in isolation, saying that labels and standards need to be put in place, along with taxation and land policies. Rahill mentioned the introduction of a green supply chain standard, stressing the relevance of voluntary standards.

Noting the need to develop standards for corporate actions, Sukhdev stressed corporations should prioritize more than profits and shareholder value, but rather prioritize stakeholder value, including for: local communities; the government; customers; youth; society; and future generations.

One participant raised the question of lost trust and monitoring. Sukhdev suggested encouraging actions to be taken in this decade, which can further engage the private sector given its power to act as real economic drivers.

Veronica Lo, CBD Secretariat, closed the Pavilion at 5:55 pm, thanking RCP partners and highlighting the achievements of the six Pavilions held since CBD COP 10.

A BRIEF ANALYSIS

The admonition to “let’s roll up our sleeves and get to work” during the launch of the Hyderabad Call for a Concerted Effort on Ecosystem Restoration captured the energy of the Rio Conventions Pavilion, which took place from 9-18 October, 2012, on the sidelines of the Eleventh Conference of the Parties (COP 11) of the Convention on Biological Diversity (CBD). The objective of the Rio Conventions Pavilion is to bring the three Rio Conventions – the CBD, the UN Convention to Combat Desertification (UNCCD) and the UN Framework Convention on Climate Change (UNFCCC) – together to explore synergies to advance the joint implementation of the Conventions. This Pavilion addressed a number of themes over nine days, including: integrated science, assessments and monitoring; protected areas; tree diversity; livelihoods; the Aichi Biodiversity Targets; land; REDD+; ecosystem restoration; and towards integrated implementation of the Rio Conventions.

This analysis will focus on the synergies developed at the Rio Conventions Pavilion to advance the agendas of the three Rio Conventions, the overarching theme regarding the challenge of transforming pledges and targets into achievement on the ground, and the future of the Rio Conventions Pavilion.

FROM GRASSROOTS IMPLEMENTATION TO HIGH-LEVEL CALLS

Excitement was palpable in the room as Ecosystems Restoration Day closed with the endorsement of the Hyderabad Call by the Executive Secretaries of the UNCCD and CBD, the Director General of the Ramsar Convention on Wetlands, the CEO of the Global Environment Facility, high-level representatives from the UN Development Programme, the Food and Agricultural Organization of the UN, the UN Environment Programme, the Director General of IUCN and high-level representatives from the Republic of Korea and South Africa.



L-R: Farid Yaker, UNEP; Pavan Sukhdev, GIST Advisory; Bill Rahill, International Finance Corporation; and Kiruben Naicker, DEA, South Africa

The day, which began with local examples of on-the-ground restoration projects, moved to national frameworks for ecosystem restoration and global initiatives. Many felt the day had successfully brought together those working on grassroots implementation with high-level international policy makers to generate the sort of synergies that the Rio Conventions Pavilion is designed for.

RCP theme days provided local examples of on the ground projects, highlighting increased effectiveness and reduced costs stemming from local involvement and “co-investment.” Challenges such as the continued insufficient returns from access and benefits sharing schemes provided a mirror into the CBD negotiations just steps away and pinpointed aspects of what change is needed to mobilize achievement of targets on-the-ground.

The achievement of the Pavilion, however, varied in its successful generation of synergies. While common themes appeared across days, such as the need for information sharing systems and mobilizing sources of finance, some participants lamented the tendency towards silos. “We self-segregate,” said one Pavilion veteran, noting that the youth spoke to other youth, tree people to other tree people, and the private sector was little represented until the final day of the Pavilion. “The bottom line,” one participant noted, “is people do not like to step outside of their comfort zones.”

Other participants noted that the Pavilion was meant to be a space for discussing the “how” of implementation, but had evolved into a format that was much closer to standard COP side events. Another emphasized that the value of the Rio Conventions Pavilion was limited, since most of its audience at CBD COP 11 “are already cooperating and working together on a number of initiatives.” He called for taking the Pavilion “on the road,” citing the World Economic Forum in Davos as a valuable venue.

Despite the challenges, the Rio Conventions Pavilion provided what many participants characterized as an essential space to bring together stakeholders for more in depth conversations about complex issues. One participant characterized the Pavilion as “the space to be” noting the diversity of participants and the focus on practical solutions to the complex question of how to achieve internationally negotiated targets. One of the most engaging debates took place on REDD+ day to discuss the controversies surrounding REDD+ safeguards, when activists, stakeholders and policymakers all ended up in the same room. Another delegate noted the Pavilion provides a home for “homeless” crosscutting issues, such as water, livelihoods and ecosystem restoration, allowing innovative solutions about how to jointly address these issues.

“GETTING IT RIGHT”

CBD Executive Secretary Braulio Ferreira de Souza Dias, early in the Rio Conventions Pavilion, emphasized “implementation, implementation, implementation.” While a number of crosscutting themes turned up throughout the convention, implementation was indeed the overriding one in the Pavilion.

However, several participants emphasized the discussions at the Pavilion went beyond the drive to implement, and tried to efficiently capture experiences and lessons learned from early actions and initiatives. This was particularly echoed on Land Day by UNCCD Executive Secretary Luc Gnacadja who said “it is about getting investments right,” which could sometimes be more fruitful than enlarging funding channels.

While the negotiators at CBD COP 11 had sometimes heated debates about funding the implementation of the Aichi Biodiversity Targets, participants at the Pavilion were discussing initiatives already underway, such as: leveraging novel sources of finance, particularly from the private sector; valuing ecosystem services; national financing strategies and south-south cooperation. One participant suggested the main take away is that “implementation is already happening.”

The “dynamic process” of implementation was illustrated by finance sector participants who described an evolving understanding of opportunities related to improved risk management and widening adoption of sustainability performance standards and requirements for investments in adapting markets. Successful business representatives recognized that “investing in biodiversity is a source of unique competitive advantage,” saying also that that “sustainable production life cycles and reduced footprints are strategic and drive innovation.”

In this perspective, participants called for greater knowledge sharing and exchange of lessons learned by building new knowledge platforms and monitoring systems that could enhance implementation policies. Similarly, there were also calls for translating knowledge into “accessible language,” which could be especially assimilated by the private sector and capable of capturing the value of natural assets. One good example remained “The Economics of Ecosystems and Biodiversity” study, which aims at translating the value of nature into terms understood by the private sector and finance ministries.

Overall, the lesson learned by many participants was that the technocratic language from negotiations must be transposed to the “real world” and, above all, capture social and cultural realities of those who are directly involved with ecosystems. Most importantly, it also has to target economists and policy-makers given their transformative powers.

FROM HYDERABAD TO...

The Rio Conventions Pavilion closes at CBD COP 11 with an uncertain future – there are no immediate plans for convening another one. While the Pavilion was initially not intended as a permanent institution, it grew out of its initial success at CBD COP 10, in Nagoya, Japan. With the celebration of the 20th Anniversary of the Rio Conventions at the UN Conference on Sustainable Development it is natural to reflect whether the Pavilion should continue.

One factor, cited by some, is uneven engagement by the three Rio Conventions in the Pavilion. While the Rio Conventions Pavilion has convened in some form at every COP since CBD COP 10 at Nagoya, in Japan, it will not convene at UNFCCC COP 18 in Doha, Qatar in December. Indeed, one participant also noted the conspicuous absence of any participants from the UNFCCC Secretariat at the Rio Conventions Pavilion in Hyderabad, saying continued success of the Pavilion requires active engagement by all three Conventions.

A number of participants emphasized that the Rio Conventions Pavilion is needed during COPs, as it is a “safe” locus of discussion, in which trust can be built among multiple stakeholders. Moreover, it became space for sharing knowledge and lessons learned in a creative way. A fundamental and, yet, open question is how to measure RCP achievements. One potential measure is the number of concrete outcomes, which in the case of COP 11, included the launch of several initiatives, most notably the Hyderabad Call and the memoranda of understanding signed by the CBD Secretariat and the World Agroforestry Centre.

Nevertheless, one participant noted that while these are “important tangible results, the less visible and measurable creation of partnerships and networks may be even more valuable.” Other participants during 20/20 encapsulated the view that while the challenges of implementation remain a reality, that citizen’s engagement and promising bottom-up experiences provide hope. Noting the synergies created at the Rio Conventions Pavilion one participant suggested leaders in the future might look back saying “that idea was born at the Rio Conventions Pavilion.”

UPCOMING MEETINGS

ITTC-48: The 48th Session of the International Tropical Timber Council (ITTC) and the Associated Sessions of the four Committees (Finance and Administration, Economic Information and Market Intelligence, Forest Industry, and Reforestation and Forest Management) is scheduled to take place in Yokohama, Japan. **dates:** 5-10 November 2012 **location:** Yokohama, Japan **contact:** ITTO Secretariat **phone:** +81-45-223-1110 **fax:** +81-45-223-1111 **e-mail:** itto@itto.or.jp **www:** <http://www.itto.int>

GEF COUNCIL MEETING: The GEF Council meets twice per year to approve new projects with global environmental benefits in the GEF’s focal areas, and provide guidance to the GEF Secretariat and Agencies. **dates:** 12-16 November 2012 **venue:** World Bank Headquarters **location:** Washington DC, US **contact:** GEF Secretariat **phone:** 1 202 473-0508 **fax:** 1 202 522-3240 **e-mail:** secretariat@thegef.org **www:** http://www.thegef.org/gef/council_meetings

UNFCCC COP 18: COP 18 to the UNFCCC and the eighth session of the Conference of the Parties serving as the Meeting of Parties to the Kyoto Protocol (COP/MOP 8), among other associated meetings, are scheduled to take place in Doha, Qatar. **dates:** 26 November - 7 December 2012 **location:** Doha, Qatar **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **e-mail:** secretariat@unfccc.int **www:** <http://www.unfccc.int>

IPBES-1: The first meeting of the IPBES will be hosted by the Government of Germany. The meeting will aim to agree on the remaining rules of procedures for the meetings of the platform, consider other rules of procedure for the platform, elect Bureau and Multidisciplinary Expert Panel members, and agree on the next steps by which the IPBES work programme can become operational as soon as possible. IPBES-1 will be a meeting of Members of the Platform’s plenary, with observers. Regional and stakeholder consultations will take place one day prior to the meeting, on 20 January 2013. **dates:** 21-26 January 2013 **location:** Bonn, Germany **contact:** Makiko Yashiro **e-mail:** Makiko.Yashiro@unep.org **www:** <http://www.ipbes.net/plenary/ipbes-1.html>

UNCCD 2ND SCIENTIFIC CONFERENCE AND CST S-3: The UNCCD 2nd Scientific Conference will be held in Fortaleza, Brazil, during the 3rd special session of the Committee for Science and Technology (CST S-3). The scientific conference will be the main part of the CST session and will consider the theme “Economic assessment of desertification, sustainable land management and resilience of arid, semi-arid and dry sub-humid areas.” **dates:** 4-7 February 2013 **location:** Fortaleza, Brazil **contact:** UNCCD Secretariat **phone:** +49 228 815 2800 **fax:** +49 228 815 2898/99 **e-mail:** secretariat@unccd.int **www:** <http://2sc.unccd.int/home/?HighlightID=111>

GLOSSARY

ABS	Access and Benefits Sharing
CBD	Convention on Biological Diversity
CGIAR	Consultative Group on International Agricultural Research
CI	Conservation International
COP	Conference of the Parties
DEA	Department of Environment Affairs
DEPI	Division of Environment Policy Implementation
EBA	Ecosystem-based approaches
EBSAs	Ecologically or biologically significant marine areas
FAO	Food and Agricultural Organization of the UN
GEF	Global Environment Facility
GSIs	Guidelines for sustainable islands economies
ICCAs	Indigenous and local community conserved territories and areas
ICRAF	World Agroforestry Centre
IFC	International Finance Corporation
IPBES	Intergovernmental Panel on Biodiversity and Ecosystem Services
LMMA	Locally Managed Marine Areas
MEAs	Multilateral Environmental Agreements
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NBSAP	National Biodiversity Strategies and Action Plans
PA	Protected Area
PES	Payment for ecosystem services
RCP	Rio Conventions Pavilion
REDD	Reducing emissions from deforestation and forest degradation in developing countries
SER	Society for Ecological Restoration
SIDS	Small Island Developing States
SLM	Sustainable land management
SPREP	Secretariat of the Pacific Regional Environment Programme
TEEB	The Economics of Ecosystems and Biodiversity
UNCCD	UN Convention to Combat Desertification
UNCSD or Rio+20	UN Conference on Sustainable Development
UNDP	UN Development Programme
UNEP	UN Environment Programme
UNESCO	UN Educational, Scientific and Cultural Organization
UNFCCC	UN Framework Convention on Climate Change
UNFF	UN Forum on Forests
UNU-IAS	UN University-Institute of Advanced Studies
WCMC	World Conservation Monitoring Centre
WCPA	World Commission on Protected Areas