The Rio Conventions Pavilion (RCP) commenced on Tuesday, 1 December 2015, at the 21st session of the Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC COP21) in Paris, France. It convened under the theme “Biodiversity and Ecosystems: Meeting the Climate Challenge,” hosted by the Convention on Biological Diversity (CBD) Secretariat.

Seven sessions were held including on: forest and landscape restoration in reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks (REDD+); land-based climate mitigation: current and future contributions to protecting and restoring ecosystems; cooperation, a valuable commodity: a leaders’ dialogue; afforestation and agricultural conversion of naturally non-forest ecosystems; and experiences on the implementation of ecosystem-based approaches to climate change. The day closed with a summary of the key messages.

MORNING SESSION

David Ainsworth, CBD Secretariat, opened the session, highlighting the potential of realizing synergies between the three Rio Conventions – CBD, UNFCCC and the UN Convention to Combat Desertification (UNCCD).

María Amparo Martínez Arroyo, Director General, National Institute of Ecology and Climate Change, Mexico, outlined the role of ecosystem-based adaptation in addressing both climate change and biodiversity, and of adaptation and biodiversity within Intended Nationally Determined Contributions (INDCs). She further stressed the importance of including indigenous communities in this process and stated that Mexico needs to draw on synergies to facilitate biodiversity mainstreaming.

Pyunghwa Yoon, Deputy Director, Korea Forest Service, looked back on progress made at CBD COP12, referencing the Pyeongchang Roadmap 2020 for the enhanced implementation of the Aichi Biodiversity Targets. She recognized the need to build upon these successes and draw on linkages between biodiversity and climate change in the process of moving forward.

BIODIVERSITY AND ECOSYSTEMS: MEETING THE CLIMATE CHALLENGE: David Cooper, Deputy Executive Secretary, CBD Secretariat, noted the effect of climate change on biodiversity loss, underscoring that climate change cannot be addressed in isolation as it impacts many other sectors. He highlighted initiatives that address these concerns and contribute...
towards meeting the goals of slowing and halting biodiversity loss, keeping within the 2°C limit, and achieving other human development goals.

THE GLOBAL PARTNERSHIP ON FOREST AND LANDSCAPE RESTORATION – SCALING-UP ACTIONS ON THE GROUND: Miguel Calmon, International Union for Conservation of Nature (IUCN), said forest and landscape restoration recognizes that “just planting trees” is insufficient, and that the land should provide a wide range of goods and services. He described landscape restoration as an interdisciplinary approach and a continuous process.

ACHIEVING LAND DEGRADATION NEUTRALITY: PROMOTING FOREST AND LANDSCAPE RESTORATION: Victor Castillo, UNCCD, introduced the land degradation neutrality (LDN) concept, based on sustainable land management, and forest and landscape restoration. He underscored that local communities’ needs should be central to restoration.

OUTCOMES OF THE WORLD FORESTRY CONGRESS AND THE FOREST AND LANDSCAPE RESTORATION MECHANISM: Speaking on behalf of the UN Food and Agriculture Organization (FAO), Cooper emphasized messages from the XIV World Forestry Congress, held in September 2015, inter alia: working at the landscape level; demonstrating the multiple benefits of reforestation, including the importance of food security to attract investment; and emphasizing the role of planning and governance, including on land tenure.

In the ensuing discussion, participants addressed the importance of location-appropriate restoration and the need to invest in research on native plantation species.

FOREST AND LANDSCAPE RESTORATION IN REDD+

FOREST RESTORATION IN BRAZIL: Rebecca Mant, UN Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC), outlined the REDD+ Policy Assessment Center (REDD-PAC) project’s work on modeling the potential impacts of Brazil’s new Forest Code on emission reductions, biodiversity, preservation of mature forests, and land use change under different scenarios.

RESTORATION IN INDONESIA: Nirarta ‘Koni’ Samadhi, World Resources Institute (WRI) Indonesia, spoke on Indonesia’s approach to landscape-based restoration, outlining the country’s approach to restoration involving agricultural intensification, agroforestry, and forest restoration.

Responding to an audience question on peatland destruction in Indonesia and how this influences carbon stocks, Samadhi noted that numbers are not currently available.

MITIGATION THROUGH ENHANCEMENT OF FOREST CARBON STOCKS – HOW FAR ARE COUNTRIES WILLING TO GO?: Rebecca Mant, speaking for Lera Miles, UNEP-WCMC, highlighted that developing countries have stated intentions to restore circa 141 million hectares of land, noting these intentions are conditional, pending financial support for forest-related mitigation. She further underscored that significant opportunities exist to narrow emissions.

LAND-BASED CLIMATE MITIGATION: CURRENT AND FUTURE CONTRIBUTIONS TO PROTECTING AND RESTORING ECOSYSTEMS

CONTRIBUTIONS OF THE AICHI BIODIVERSITY TARGETS TO LAND-BASED CLIMATE MITIGATION: Paul Leadley, Université Paris-Sud, and, member, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Multidisciplinary Expert Panel, stated that the report on the Aichi Biodiversity Targets to land-based climate change mitigation addressed targets on: halving biodiversity loss (Target Five); sustainably managing agriculture, aquaculture and forestry for ensuring biodiversity conservation (Target Seven); conserving at least 17% of terrestrial and inland water, and 10% of coastal and marine areas (Target 11); and enhancing ecosystem resilience and the contribution of biodiversity to carbon stocks (Target 15). He said that to achieve the goals on biodiversity, climate change and human development simultaneously, thinking “outside the box” is required. He cited possible approaches, including intensifying sustainable agriculture, promoting healthy diets, reducing food waste and fossil fuel consumption.

INTEGRATED INSIGHTS ON LAND-BASED MITIGATION FROM SCENARIOS AND MODELS: Detlef van Vuuren, PBL Netherlands Environmental Assessment Agency, described different energy scenarios and their impact on current global warming trends. Focusing on the potential of bioenergy options, he discussed the potential
implication of these options on land use change and emissions. He recommended: pursuing climate change mitigation hand-in-hand with biodiversity conservation; avoiding deforestation; being careful with bioenergy application; and reducing consumption by increasing efficiency.

**PROJECTED IMPACTS OF CLIMATE CHANGE AND LAND-BASED CLIMATE MITIGATION ON MAMMAL ABUNDANCE AND EXTINCTION RISK:** Carlo Rondinini, Sapienza University of Rome, spoke on the current trends in biodiversity decline and outlined the need for a stepwise shift to change these trends. He highlighted consumption change as an alternative pathway to reduce both emissions and biodiversity decline.

In the ensuing discussion, participants addressed topics including: tropical deforestation, noting a decline in deforestation in Brazil and an increase in deforestation in Indonesia; bioenergy; whether the presented scenarios are realistic or optimistic; whether future models would include pathways to achieve the Sustainable Development Goals (SDGs); and tradeoffs between using land for agriculture and bioenergy.

**COOPERATION, A VALUABLE COMMODITY: A LEADERS DIALOGUE**

Edward King, journalist and producer, moderated the session, organized by the Global Environment Facility (GEF), which focused on how stronger cooperation could accelerate the development and deployment of climate-positive solutions at scale.

Naoko Ishii, CEO and Chairperson, GEF, identified three megatrends vis-à-vis population growth, middle class growth, and urban growth. Calling for a focus on the drivers of environmental degradation, she emphasized the need for systemic change in energy, city and food systems, respectively, noting that these provided the motivation for the GEF’s commodities programme.

Referring to his country’s natural resources, Rolando de Barros Barreto, Minister of Environment, Paraguay, referred to a “democratic dialogue” with Argentina, Brazil and Uruguay, on sharing environmental knowledge and production methods.

Marco Albani, Director, Tropical Forest Alliance 2020 (TFA 2020), speaking on sustainable production, called for moving from commitments to implementation, including: new “fresh” finance; landscape-level certification; further engagement of consumers, companies and countries; and improved data to verify impacts on the ground.

Francesco Tramontin, Mondelēz International, described the desire to carry commodity commitments forward by investing more in farming communities, citing Mondelēz’s approach to address deforestation in supply chains as an example.

Michael Jenkins, President and CEO, Forest Trends, noted the significant shift in approach to address deforestation, moving from a focus on illegal deforestation to focusing on agriculture as a driver. He further stated to address these challenges effectively, companies, civil society and multilateral actors all need to work together.

The ensuing discussion covered: facilitating sustainable development in Paraguay, including the role of bioenergy; identifying opportunities and challenges in making global commodity supply chains sustainable; using public money to strengthen the weakest link in supply chains; and measuring the impacts of actions, versus whether the actions are actually happening.

In closing, Albani highlighted that momentum from UNFCCC COP21 will be important for ensuring business and “conservation” act in concert. Ishii underscored that supply chains are undergoing a paradigm shift, and collaboration is needed to ensure that the desired result is achieved.
AFFORESTATION AND AGRICULTURAL CONVERSION OF NATURALLY NON-FOREST ECOSYSTEMS

Colin Osborne, University of Sheffield, presented on conserving grassy ecosystems to protect biodiversity, while supporting social and economic benefits. He stated that while grasslands are often assumed to be artificial or influenced systems, existing fossilized remains identify their long-term relevance, noting humans first evolved in savanna ecosystems. He highlighted ecosystem services provided by grasslands, including that grasslands house important hydrological systems and supply water for many people, provide pasture and grazing lands for domestic animals, and support tourism due to a high species diversity and the presence of “charismatic animals.” Acknowledging that while grasslands are adapted to frequent disturbances, he emphasized they are still vulnerable to agricultural conversion. Referring to the Bonn Challenge to restore 150 million hectares of the world’s deforested and degraded lands by 2020, Osborne cautioned against only restoring forested lands, noting grassland recovery can take centuries.

Responding to a question on whether ruminants are “friends or foes,” Osborne stated that it is not straightforward, as this can depend on whether to focus on greenhouse gas (GHG) emissions or on land uses.

EXPERIENCES ON THE IMPLEMENTATION OF ECOSYSTEM-BASED APPROACHES TO CLIMATE CHANGE MITIGATION

Sakhile Koketso, CBD Secretariat, moderated the session, describing its focus on non-forest ecosystems and their importance in climate change mitigation.

Cordula Epple, UNEP-WCMC, provided an overview of a study regarding five non-forest ecosystems – peatlands, grasslands/savanna, vegetated coastal ecosystems, tundra, and agro-ecosystems. She compared their global coverage, relative carbon storage, and options for addressing climate change mitigation.

Dorothée Herr, IUCN, focused on carbon in coastal wetland ecosystems identifying reporting, mechanism, and market incentives, respectively, for countries to address mitigation in these areas. She highlighted that for effective national implementation, technical and financial support, linking mitigation and adaptation, and synergizing policies, are needed.

Marcel Silvius, Wetlands International, noted that peatlands are permanent stores of carbon until they are disturbed. He underscored interventions that have taken place to rewet peatlands, which have been largely successful, stating that this shows nature can regenerate if the right conditions exist. He noted that rewetting using ecological approaches is cheaper in both establishment and maintenance compared to hydro-technical facilities. Silvius said future actions include partnering with others to draw on lessons learned and forming a roadmap to accelerate action for peatland restoration.

Vhalainavho Khavhagali, Department of Environmental Affairs, South Africa, highlighted the South African National Climate Change Response Policy, noting important considerations for policies include considering land tenure, biophysical, and land-use planning risks, respectively. He said tradeoffs, such as rapid job creation in the agricultural sector versus sustainable development, should also be considered.

Tim Christophersen, UNEP, commended efforts that led to ecosystem-based approaches being included on the climate change negotiations’ agenda. He underscored the need to support restoration initiatives, and called for a deeper examination of the drivers of biodiversity loss. Christophersen noted that government policies are often inconsistent, highlighting more money is spent on subsidizing deforestation than on REDD+. He lauded the SDGs, stating governments are beginning to realize they cannot continue with non-holistic policies.

Responding to a question on Ireland’s high GHG emissions due to peat harvesting and burning as a “traditional right,” Silvius suggested concentrating peat harvesting in some areas, with other areas dedicated to restoration. He recommended restoration efforts focus on ecosystem services, including improving drinking water quality.

Responding to a question on the influence of planting trees in watersheds and savannas, Khavhagali called for discussing tradeoffs and supporting cross-sectoral approaches.

KEY MESSAGES ON BIODIVERSITY AND ECOSYSTEM RESTORATION: MEETING THE CLIMATE CHALLENGE

David Cooper summarized the day, describing the role of ecosystems in facilitating a “decarbonization” transition. He highlighted the opportunity to build on the experience of REDD+ and the need to balance pressures on land to meet energy and livelihoods demands sustainably. In closing, he stated, “The direction we go in will have large impacts on how we adapt, and if we adapt.”