

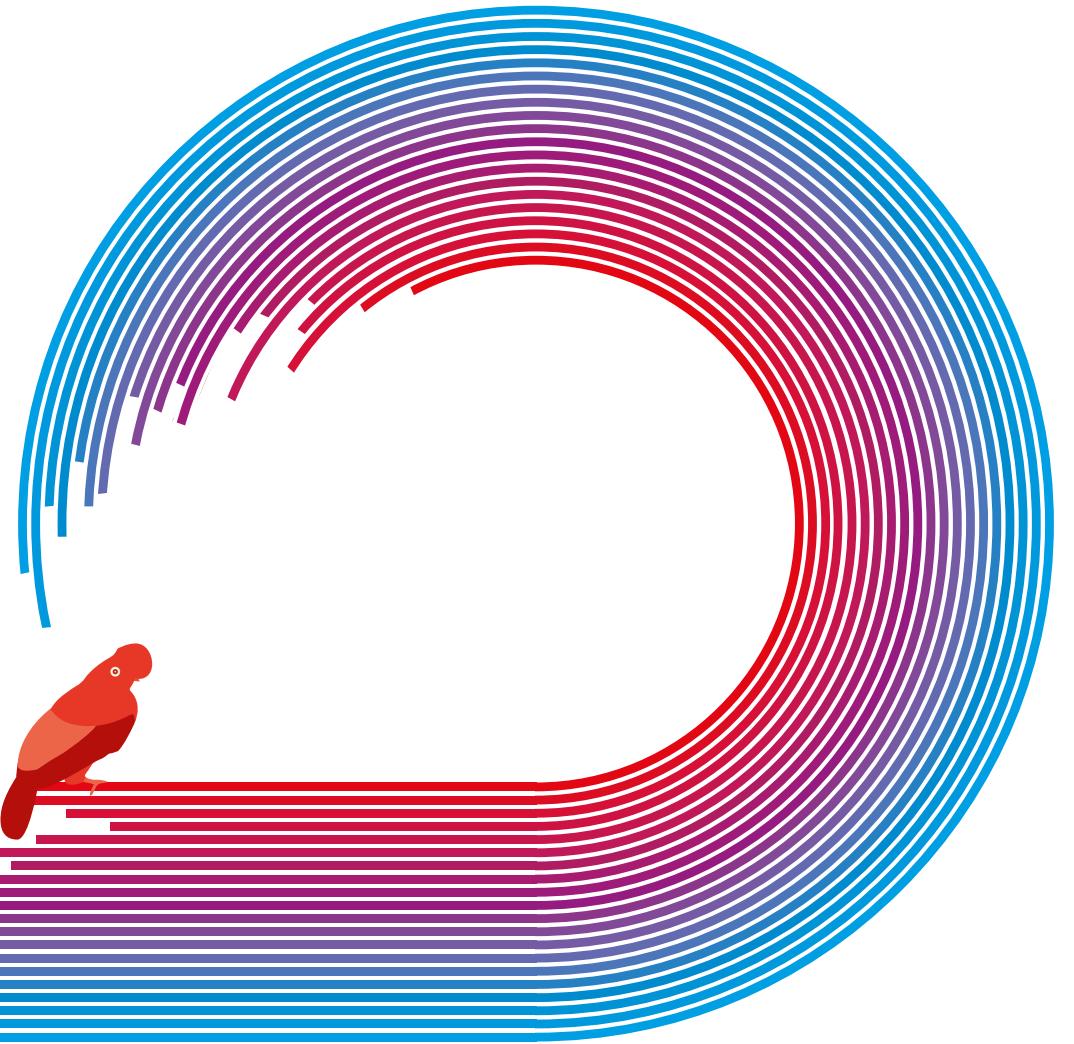
LIMA COP20 | CMP10

UN CLIMATE CHANGE CONFERENCE 2014

International Symposium,
Lima 2014

**BIODIVERSITY AND
CLIMATE CHANGE**
**CONTRIBUTIONS FROM
SCIENCE TO POLICY
FOR SUSTAINABLE
DEVELOPMENT**

Lima, 27th and 28th of November 2014



LIMA COP20 | CMP10

UN CLIMATE CHANGE CONFERENCE 2014



This event is co-organized by the Peruvian Ministry of Environment (MINAM), the National Council for Science, Technology and Technological Innovation (CONCYTEC) and the Secretariat of the Convention on Biological Diversity (CBD), in collaboration with the Inter-American Institute for Global Change Research (IAI) and the German Cooperation - implemented by GIZ through its ProAmbiente programme - and with the participation of the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC).

SYMPOSIUM BACKGROUND

The Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC) have identified that biodiversity contributes to the mitigation of and adaptation to climate change. Carbon dioxide may be removed from the atmosphere through natural ecosystem conservation and restoration, reducing emissions from deforestation and the degradation of forests and oceans.

Furthermore, the conservation and sustainable use of vulnerable ecosystems like the Amazon Rainforest or Andes Mountains may help reduce major impacts of climate change, such as floods, tsunamis, and disease, based on the key role that ecosystems play in the global carbon cycle and in adapting to climate change. Additionally, it is important to note that ecosystems provide a wide range of environmental services that are essential for human well-being and for the achievement of the Millennium Development Goals and future Sustainable Development Goals.

There is also ample evidence about the impacts of climate change on biodiversity. Moreover, according to the Millennium Ecosystem Assessment, climate change (including impacts from land use change) is likely to become one of the most significant drivers of biodiversity loss by the end of the century.

Nevertheless, we still know little about how nature functions and how interactions with a changing climate will impact upon the way that natural ecosystem processes and services function.



In this context, scientific research is vital in order to develop sound conservation and adaptation policies. Similarly, to cope with these challenges it will be necessary to develop networks of researchers to accelerate the exchange of information and collaboration on ecosystem functions and dynamics.

This issue is of great importance for Peru, a megadiverse country that is highly vulnerable to climate change - not only due to structural factors such as poverty and inequality, but also due to the potential impacts of climate change on vital ecosystems such as the Amazon rainforest and Andean glaciers. Peru presents the following features recognized by the United Nations as factors in vulnerability to climate change: (i) low, arid and semi-coastal areas; iii) areas exposed to floods, drought and desertification; iv) fragile mountainous ecosystems; v) disaster-prone areas; vi) areas with high urban atmospheric pollution; vii) highly dependent on income generated by the production and use of fossil fuels economies.

The Latin American region in general includes some of the most biologically diverse areas of the world, as well as ecosystems (Andes, Amazonia) that are highly sensitive to climate change, but that are also considered “assets” for adaptation to climate change. Several regional and global research promotion initiatives are of significant relevance for decision-making information systems: What are the trends, cross-interpretations, methodologies, challenges, knowledge gaps and further research needs about how climate change impacts biodiversity, and the implications for ecosystem services and human beings?

Within the framework of this scientific analysis we will present the new National Biodiversity Strategy and Action Plan to 2021, which prioritizes actions to address existing knowledge gaps in order to answer many of the questions related to biodiversity and the important role it plays in the mitigation of climate change.



GENERAL OBJECTIVE

To establish a multi-disciplinary dialog within the scientific community on the interrelationship between biodiversity and climate change (CC), in order to highlight the impacts of CC on biodiversity and the contribution of conservation and sustainable use of biodiversity in CC mitigation. The main reflections of this dialogue will be communicated to policy makers in the public and private sectors to better understand the value of biodiversity, and estimate its contribution, in the context of CC.



SPECIFIC OBJECTIVES

- i** Present and discuss the results of ongoing projects at the international level on the following priority topics:
 - a.** Biodiversity and carbon flux in tropical ecosystems
 - b.** Impact of climate change on biodiversity and its measurement
 - c.** Impact of the interactions between climate change and direct anthropogenic threats on biodiversity
 - d.** Ecosystem-based solutions and other approaches to cope with climate change
- ii** Propose relevant reflections and proposals for research and innovation to policy makers in the public and private sectors that contribute to the recognition of the value of biodiversity and the integration of scientific results in policy making regarding sustainable development in the context of CC.

RESULTS

For COP 20 and to foster synergies between the conventions, the outcome of this event will be the proposal of a Declaration that identifies the requirements and scientific contributions necessary for the recognition of biodiversity in the context of climate change, as related to the AICHI TARGETS (5, 10, 11, 15, and 16). The establishment of a regional platform for the exchange of scientific information and promotion of collaborations will be evaluated.

For MINAM and the National Agenda it is expected that the following will be accomplished:

- a.** Recognition of the critical problems in the relationship between biodiversity and climate change that require scientific research and analysis to strengthen environmental policies in Peru. Analysis of how these problems can be monitored, assessed and reported into current national strategies on biodiversity and climate change, the Environmental Research Agenda 2013-2021, and productive sectors
- b.** Lay the foundation for a national network for the observation of climate change with a focus on its impact on biodiversity and its relation to existing international initiatives.
- c.** Establish guidelines to create an observatory for environmental research.

SECTION 1 SCIENTIFIC MEETING



from 8:00 AM to 6:30 PM,
Thursday 27th November

Organization of the programme

In developing the agenda of the Symposium we have considered the results of a UNFCCC workshop on high-carbon reservoirs ecosystems, that was held in 2013¹, recommendations from the 18th meeting of the SBSTTA of the Convention on Biological Diversity, and the “gaps in knowledge and data” identified by several sections of the IPCC’s Fifth Assessment Report (2014).

For instance, under key uncertainties, we will address carbon budgets, sequestration and storage, the extent of high-carbon ecosystems and their links with biodiversity, cumulative emissions, direct impacts of climate change on biodiversity, thresholds to resilience, threats, historical changes, methodologies for monitoring and modelling; techniques to cope with mitigation and adaptation, cooperation and training requirements. At the end of the meeting we will do a brainstorming exercise to discuss in greater detail the state of the art, remaining questions, cooperation, training and exchange.

Scientific advisory organizing group: Tim Baker (U. Leeds, UK), Ken Young (U. Austin, Texas, USA), Ulrich Kuch (U. Frankfurt, Germany), Juan Carlos Riveros (WWF, Peru), Lily Rodríguez (Uni-Bonn and GIZ).

¹ UNFCCC. (2014). *Report on the workshop on technical and scientific aspects of ecosystems with high-carbon reservoirs not covered by other agenda items under the Convention.* document FCCC/SBSTA/2014/INF.1

🕒 TIME	🔄 ACTIVITIES
8:00 - 8:30	Registration
8:30 - 9:00	Opening and Word of Welcome Sonia González Molina, <i>Director-General for Environmental Research and Information, Ministry of the Environment</i> ----- Gisella Orjeda, <i>President of the National Council for Science, Technology and Technological Innovation (CONCYTEC)</i> ----- David Cooper, <i>Principal Officer, Science, Assessment and Monitoring Division, CBD Secretariat</i>
9:00 - 10:30	Keynote Lecture <ul style="list-style-type: none"> ▪ Biodiversity and climate change: GBO4; CBD programmes of work, Aichi Biodiversity Targets, challenges. ▪ Summary of Climate Change and Biodiversity in the Three IPCC Working Groups (AR5) and Synthesis Report. Thelma Krug, IPCC.. ----- Question and Answer Session (Q&A)
10:30 - 10:45	Presentation of the Methodology of the Symposium
☕ 10:45 - 11:00	Coffee Break

TIME	ACTIVITIES
11:00 - 12:30	<p>THEME 1: BIODIVERSITY AND CARBON FLUX IN TROPICAL ECOSYSTEMS</p> <p>Tim Baker, U. of Leeds, United Kingdom. “The importance of biodiversity for carbon cycling in lowland tropical forests and swamps”</p> <hr/> <p>Kristell Hergoualch, CIFOR, Peru. “Description of peat swamp forests and their degradation: A comparison between the two peat-richest tropical countries Indonesia and Peru”</p> <hr/> <p>Yadvinder Mahli, University of Oxford, United Kingdom. “Ecosystem function and carbon dynamics along an Andes-Amazonian transect”</p> <hr/> <p>Question and Answer Session (Q&A)</p>
12:30 - 2:00	<p> Break for Lunch</p>
2:00 - 4:00	<p>THEME 2: IMPACT OF CLIMATE CHANGE ON BIODIVERSITY AND ITS MEASUREMENTS</p> <p>Euridice Honorio, IIAP, Peru. “Monitoring floodplain forests in Amazonia”</p> <hr/> <p>Claus Bässler, Bavarian Forest NP, Germany. “Effects of climate change on a temperate low range mountain Forest (National Park Bavarian Forest), outputs from monitoring”</p> <hr/> <p>Enrique Martínez Meyer, Instituto de Biología, UNAM, Mexico. “Reaches and limitations of ecological niche modeling for climate change analyses”.</p> <hr/> <p>Wendy Foden, Cambridge, United Kingdom /IUCN, Australia. “Climate change vulnerability of the world's birds, amphibians and corals: a trait-based assessment”</p> <hr/> <p>Manuel Maass, Universidad Nacional Autónoma de México / Miguel Equihua, Instituto de Ecología, A.C., Mexico. “Project for Scientific Cooperation on Climate Change and Biodiversity in the Pacific Alliance: Biodiversity Monitoring”</p> <hr/> <p>Question and Answer Session (Q&A)</p>

TIME	ACTIVITIES
4:00 - 4:20	<p> Coffee Break</p>
4:20 - 5:15	<p>Round table on Health & Climate Change</p> <p>Ulrich Kuch, Uni-Frankfurt, Germany. “Tropical diseases and climate change”</p> <hr/> <p>Panel Discussion. Question and Answer Session (Q&A)</p>
5:15 - 6:30	<p>Round table on Oceans & Climate Change</p> <p>José Muelbert, Director del Instituto de Oceanografía (FURG) (IAI), Brasil. “Variability of Ocean Ecosystems around South America”</p> <hr/> <p>Panel Discussion. Question and Answer Session (Q&A)</p>
<p> DAY 2 from 8:30 AM to 3:30 PM, Friday 28th November</p>	
8:30 - 10:30	<p>THEME 3: IMPACT OF THE INTERACTIONS BETWEEN CLIMATE CHANGE AND DIRECT ANTHROPOGENIC THREATS ON BIODIVERSITY</p> <p>Richard Bodmer, University of Kent / FundAmazonia, United Kingdom. “Impact of Climate Change on Wildlife and Indigenous Communities in Flooded Forests of the Peruvian Amazon”</p> <hr/> <p>Sebastian Herzog, Asociación Armonía / Birdlife International (IAI), Bolivia. “Climate change vulnerabilities of biodiversity in the tropical Andes: priorities for research, climate-smart conservation, and adaptation”</p> <hr/> <p>Arturo Sanchez-Azofeifa, U of Alberta (IAI), Canada. “Tropi-Dry II: Enhancing knowledge exchange for conservation and management of tropical dry forests in the Americas”</p> <hr/> <p>Daniel Ruiz Carrascal, Escuela de Ingeniería de Antioquia, Colombia / IRI (IAI), United States. “Impacts of climate change on the biodiversity of the Tropical Andes: an Andean climate wizard for the analysis of short- to medium-term climate change projections and climatic risks”</p> <hr/> <p>Question and Answer Session (Q&A)</p>

TIME	ACTIVITIES
10:30 - 10:45	Coffee Break
10:45 - 1:15	<p>THEME 4: ECOSYSTEM-BASED SOLUTIONS AND OTHER APPROACHES TO COPE WITH CLIMATE CHANGE</p> <p>Kenneth Young, U. of Austin, Texas, USA. “A socio-ecological perspective on change driven by both social and climatic factors: the Santa River in Peru”</p> <p>Sven Günter, Thünen Institute, Germany. “Conservation in productive landscapes of the neotropics, examples from Costa Rica and Ecuador”</p> <p>Evert Thomas, Biodiversity International, Colombia. “The importance of genetic considerations in ecosystem restoration for enhancing resilience against climate change”</p> <p>Tim Hirsch, GBIF, United Kingdom. “Predicting the impacts of climate change on biodiversity: the need for a global open data infrastructure”</p> <p>Mariana Montoya, WCS Peru. “Integrated territorial management, as a mechanism for mitigation and adaptation to climate change”</p> <p>Ana Lucía Solano, U. del Valle (IAI), Guatemala. “Effective adaptation strategies and Risk Reduction to Global Changes in Small Farmers in Mesoamérica”</p> <p>Question and Answer Session (Q&A)</p>
1:15 - 2:30	Break for Lunch
2:30 - 3:30	<p>Panel on Reflections and Proposals.</p> <ul style="list-style-type: none"> Requirements for research and collaboration Methodological challenges <p>Proposals for the public and private sectors</p>

SECTION 2

SEMINAR “RESEARCH ON BIODIVERSITY AND CLIMATE CHANGE FOR SUSTAINABLE DEVELOPMENT” AND PRESENTATION OF THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN TO 2014 - 2018

From 4:00 PM to 7:30 PM,
Friday 28th November

TIME	ACTIVITIES
4:00 - 4:30	Registration
4:30 - 4:40	<p>Opening and Word of Welcome</p> <p>Sonia González Molina <i>Director-General for Environmental Research and Information, Ministry of the Environment</i></p> <p>José Álvarez Alonso, <i>Director-General for Biological Diversity, Ministry of the Environment</i></p>
4:40 - 5:10	Presentation of the results of the Scientific Meeting
5:10 - 6:20	<p>Panel Discussion</p> <ul style="list-style-type: none"> Gisella Orjeda, <i>President of the National Council for Science, Technology and Technological Innovation (CONCYTEC)</i> Fabiola Muñoz, <i>Executive Director of National Forest and Wildlife Service (SERFOR)</i> David Cooper, <i>Principal Officer, Science, Assessment and Monitoring Division, CBD Secretariat</i> Rocio Lichte, <i>Programme Officer, Adaptation Programme, UNFCCC Secretariat</i> Silke Spohn, <i>Programme Director, ProAmbiente, German Cooperation</i> Carolina Casaretto, <i>Environmental Manager, Perú LNG</i>
6:20 - 6:40	<p>Presentation of The National Biodiversity Strategy to 2021 and Action Plan 2014 - 2018</p> <p>Maria Luisa Silva, <i>United Nations Resident Coordinator in Peru</i> Gabriel Quijandría, <i>Vice Minister of Strategic Natural Resources Development, MINAM</i> Mariano Castro Sánchez-Moreno, <i>Vice Minister of Environmental Management, MINAM</i> Manuel Pulgar Vidal, <i>Minister of the Environment, MINAM</i></p>
6:40 - 7:30	Closing Cocktail

From science to policy:

Contributions from science to cope with climate change

Friday, December 5th 2014 in the Peru Pavilion - COP20

One of the biggest challenges for the scientific world is to provide solid information in order to reduce uncertainties about the future - the more we know about how nature works and reacts to global changes, and how it has worked in the past, the more we will be able to develop sustainable solutions for the mitigation of, and adaptation to climate change at all levels (local, national, regional and global).

This executive meeting, *"From science to policy: Contributions from science to cope with climate change"*, will present the results of the dialogue among scientists and policy-makers that took place at the end of the International Symposium held on the 27th and 28th of November, and will highlight challenges and gaps in the research agenda, information needs from policy-makers, and future networking activities. Results of recent research activities, cutting-edge techniques and methodologies to study species and ecosystem vulnerability, and

scientific inputs to implement mitigation and adaptation to climate change, as well as a research agenda, will be coordinated with sector policy-makers to identify synergies for both the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC).

The IAI-Environet is one such practical solution to these aforementioned challenges: Climate change affects the resilience of dry forest ecosystems. To work towards comprehensive climate change adaptation policies in arid and semi-arid regions of the Americas we need to monitor and understand interactions between forests and their environment. Arturo Sanchez-Azofeifa (IAI) presents an advanced wireless sensor and analytics system designed to collect and analyze environmental data. The Enviro-Net system is already active in several countries and will be installed in Peru in 2015.

Programme of the Event:

HOUR	DETAILS
8:00	Inauguration Braulio Dias, Executive Secretary CBD Christiana Figueres, Executive Secretary of the UNFCCC (TBC)
8:10	IAI-Environet: Sensing our changing environment - Technological tools and Science for smart decision making" Arturo Sanchez-Azofeifa, Inter-American Institute for Global Change Research (IAI)
8:35	From Science to Policy: Political takeaways from the International Symposium Gabriel Quijandría Acosta, Vice Minister of Strategic Natural Resources Development, MINAM
9:00	Scientific takeaways from the International Symposium Dr. Tim Baker, University of Leeds
9:25	Reflection and Discussion of Results Gisella Orjeda, President of the National Council for Science, Technology and Technological Innovation (CONCYTEC) Fabiola Muñoz, Executive Director of National Forest and Wildlife Service (SERFOR) Silke Spohn, Programme Director, Contribution to the environmental objectives of Peru, German Cooperation Pablo Taborga, Quality, Health, Safety & Environmental Manager, Peru LNG
9:55	Closing Remarks Gabriel Quijandría Acosta, Vice Minister of Strategic Natural Resources Development, Ministry of the Environment (MINAM)



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