Leibniz-Gemeinschaft

Objective and Outcomes

of the

Matching Event – Colombia – Leibniz Association
Avenues of Cooperation on
Biodiversity, Agricultural and Land Use Research, Marine Sciences

April 22nd 2015,

Headquarters of the Leibniz Association, Berlin

Objective

Within the scope of the German-Colombian Consultations on Cooperation in Science and Technology, which take place on April 23rd to 24th, 2015 in Berlin, a high-level group of representatives from Colombian research institutions and universities, from funding organizations, and Colombian agencies, gathered with the President of the Leibniz Association and with directors and scientists from member institutions of the Leibniz Association working in the fields of integrative biodiversity research, agricultural and environmental sciences. Beyond the Leibniz Association, also other German partners from universities working in the above-mentioned fields joined the meeting, demonstrating the large potential for a closer cooperation between Colombian and German partners.

The aim of the meeting was to identify **future opportunities for a closer German-Colombian cooperation** in the above-mentioned research fields and to suggest practical forms of cooperation at the working and institutional levels. Beyond the establishment of further direct links between Colombian partners and their counterparts from the Leibniz Association, also general recommendations for closer cooperation between both countries in the field of science and technology were formulated

As a megadiverse country, Colombia ranks among the highest global biodiversity hot spots. Despite long-standing and continuous dedicated efforts in research and development in the above-mentioned fields, large knowledge gaps remain towards a comprehensive and scientifically sound characterization and understanding of its biological resources and ecosystems. Strengthening close bilateral cooperation between Colombian and German R&D institutions in these areas offers tremendous opportunities for new discoveries and mutually synergistic advancements in science for both countries and can also provide for significant contributions towards sustainable environmental and economic development.

Outcomes

The Colombian and German participants in the meeting expressed the willingness of both scientific communities to work together closely to tap the large potential existing in both countries, engaging in an intensified bilateral cooperation. Participants highlighted the need for stronger efforts in basic research, as well as for more and new approaches towards inter- and trans-disciplinary approaches in biodiversity and other areas in environmental research. Several of these fields were also identified as being of importance with a view to the transfer of research results to other societal spheres. The following research fields were highlighted as being of special relevance and mutual interest towards an imminent increase of cooperation:

- ### Development of scientific collections

Advancing the collaboration between Colombian and German collection-based institutions, including natural history museums, living zoological and botanical gardens, microbial resource centres, especially through:

- maintaining and improving collection infrastructures and holdings (quality control, curation standardization, collection management);
- improving collection-based databases / information systems for research and documentation: digitalization, cataloguing, data interoperability;
- advancing in science communication and dialogue with society: exhibitions, collections, outreach, knowledge transfer (towards application, towards society), building information platforms for a wide range of users;
- supporting basic research: promoting taxonomic inventories, biodiversity monitoring, assessing unknown microbial diversity;
- developing new technologies for rapid biodiversity inventories.

- ### Exploring of bio-resources and research on natural products

In the field of bio-resources and research on natural products, the following areas were identified for an intensified cooperation between Colombian and German partners:

- improving the knowledge about the chemical biodiversity of bacteria, fungi and plants;
- synthesizing of potentially bioactive natural products;
- using plant biochemistry, metabolic biology, analyses of plant and fungal natural products and their biological importance, molecular signal processing;
- advancing bio-economy by cooperating on sustainable uses of biological natural resources to produce goods, energy, food and services.

- ### Marine and coastal sciences

A strong potential for further collaboration was also identified by both sides in the field of marine and coastal sciences, especially in the following areas:

- improving the management of coastal areas;
- establishing sustainable fisheries management and maricultures;
- strengthening sustainable use of marine resources.

- ### Climate Change

Participants identified avenues for a stronger cooperation in the field of climate change, placing a special emphasis on transdisciplinary approaches that allow to assess and cope with the diverse challenges posed by climate change. Possible areas include:

- increasing knowledge about impacts of climate change on biodiversity and human well-being;
- developing adaptation strategies of human societies to climate change.

- ### Sustainable landscape management

Providing models and solutions to cope with rapid changes in land use and landscape development in Colombia & Germany, especially by:

- protecting national biodiversity;
- sustaining natural (water) resources;
- developing and applying concepts to deal with conflicting use interests;
- organizing the stable development of urban and rural landscapes.

First follow-up

Participants also discussed practical forms of cooperation at the working and institutional levels. Among other, these include:

- A Leibniz delegation to visit Colombian research institutions and museums;
- developing adequate funding opportunities in Germany (e.g. DFG, BMBF, DFG, DAAD, AvH) and Colombia;
- promoting exchange of professionals and young investigators.