

DECLARATION FROM THE "SCIENTIFIC CYBERINFRASTRUCTURE FOR BIODIVERSITY" WORKSHOP IN COLOMBIA.

Bogota, June 28, 2018.

At the workshop held in Bogotá between June 26 and 28, 2018, a panel of experts from the Science, Technology and Innovation (STI) system of Colombia (Listed in Annex 1), with the assistance of a panel of independent international experts (Listed in Annex 2), carried out an analysis of the current situation and designed a strategy to develop and promote a scientific cyberinfrastructure in Colombia for the analysis of scientific data, especially biological, genomic and socioeconomic data. This scientific cyberinfrastructure is fundamental to understand and protect Colombia's biodiversity as well as to develop the country's bioeconomy through the responsible use of these resources.

Colombia is one of the most biodiverse countries in the world. This is important not only for the natural heritage of the country and the conservation of unique species in the world, but also to improve people's well-being, social equality, a sustainable development, and peace. The members of the "BRIDGE Colombia" Network from the United Kingdom work with the members from Colombia to contribute in the progress of the Colombian bioeconomy through projects and collaboration programs, supporting activities for capacity building and knowledge exchange between Colombia and the United Kingdom.

A scientific cyberinfrastructure is a "technological and sociological" ecosystem with a scientific scope that facilitates data services, particularly data generation, storage, management, analysis, visualization and transfer. From its basic premise, a scientific cyberinfrastructure is designed to facilitate remote collaboration and virtual organisations. A cyberinfrastructure not only consists of an advanced set of computational tools, but is also comprises people with the technical skills necessary to execute and share those tools and resources in a sustainable, secure and interoperable way.

The main objective of this cyberinfrastructure is to facilitate the generation of indispensable knowledge to take advantage of Colombia's natural and agricultural diversity in a sustainable manner. The promotion and maintenance of ecosystem services to help in the progress of the bioeconomy of Colombia is vital. This scientific cyberinfrastructure in Colombia seeks to democratise equitable, fair, and coordinated access to computational resources and relevant scientific data sets.

During the workshop, the participants identified the user needs in the national STI system and the resources that are currently available, and consequently identified 5 priorities for Colombia that need to be developed in a coordinated and equitable manner:

- Availability and provisioning of computational infrastructure
- Training
- Data access and availability
- Stakeholders engagement
- Funding

During the workshop, the participants also designed a draft strategy with the necessary steps to advance in each of the priorities mentioned above.

As such, the participants have agreed to form the Colombian Consortium of Cyberinfrastructure for Biodiversity (C3Biodiversidad; Consorcio Colombiano de Ciberinfraestructura para la Biodiversidad), open to any stakeholder interested in the development of a scientific cyberinfrastructure in Colombia, and initially formed by the participants of the panel of experts.

The Colombian Consortium of Cyberinfrastructure for Biodiversity aims to produce the following products for dissemination:

- The present statement about its objectives and constitution,
- A strategy or white paper for the dissemination of the conclusions of the workshop in policy-making institutions, especially in Colombia and the United Kingdom,
- Instruments for the coordination of the consortium using social networks (Slack, WhatsApp, Twitter @C3Biodiversidad, etc.)
- An informative note for dissemination in the national media, especially from Colombia and the United Kingdom,
- An article in an international scientific journal

This statement was discussed and agreed by the panel of experts during the final session of the workshop, in Bogotá, on June 28, 2018.

ANEXO 1: Experts from the STI system in Colombia

- Alejandro Caro, Agrosavia
 - Andrés Pinzón Velasco, UNAL
 - Camilo Corchuelo Rodríguez, University Santo Tomás
 - Carlos Ramírez, RENATA
 - Cesar Orlando Díaz, University de Bogotá Jorge Tadeo Lozano
 - Dairo Escobar, SiB Colombia - Instituto Humboldt
 - Daniel Fernando López, Instituto Humboldt
 - Dany Molina, BIOS
 - Diego Rincón, University Católica de Colombia
 - Emiliano Barreto, UNAL
 - Gastón Lyons, University de los Andes
 - Javier Correa Álvarez, University EAFIT
 - John Jaime Riascos, CENICAÑA.
 - Jorge Duitama, University de los Andes
 - Jorge William Arboleda Valencia, BIOS
 - Juan David Pineda Cárdenas, University EAFIT
 - Juan Manuel Anzola, Corpogen
 - Juan Pablo Mallarino, University de los Andes
 - Julio Marín Duarte, Agrosavia
 - Laura Natalia González García, University de los Andes
 - Leroy Mwanzia, CIAT
 - Luz Miriam Díaz, RENATA
 - Marco Cristancho Ardila, University de los Andes
 - María Camila Martínez, CENICAÑA.
 - Nelson Enrique Arenas Suárez, University de Cundinamarca
 - Patricia Jaramillo, RENATA
 - Paula Reyes, Agrosavia
 - Raúl Ramos Pollán, University de Antioquia
 - Romain Guyot , IRD / University Autónoma de Manizales
 - Tomás Viloria Lagares, University de Los Llanos
 - Yesid Cuesta Astroz, University de Antioquia
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ANEXO 2: International experts

- Robert Davey, Earlham Institute
- Jose De Vega, Earlham Institute
- Federica Di Palma, Earlham Institute
- Graham Etherington, Earlham Institute
- Jaime Erazo, Earlham Institute
- Narcis Fernandez, Aberystwyth University
- Alice Minotto, Earlham Institute
- Monica Munoz Torres, Ohio State University
- Anyela Valentina Camargo Rodríguez, NIAB