

Project ID: CESP2017-0007

Project Title: Regional capacity enhancement to Latin America by establishing Chile node

MID-TERM ACTIVITY REPORT

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Executive summary

For the Chilean Node of GBIF, the period 2017-2019 corresponds to an exploration, organization, knowledge and networking. In this period of time, the Technical Secretariat of the Chilean Node has focused in connecting partners at national level, through a series of bilateral meetings aimed at providing the background that supports the implementation of a National Node, such as those referred to environmental legislation, public policies and international agreements. Partner requirements are also being raised on what aspects should be addressed in the implementation process of the GBIF Chile Node. In parallel, the Chile Node should

coordinate the elaboration and implementation by 2020 of a national strategy to strengthen biological collections.

In this context, Chile applied to Capacity Enhancement Support Programme (CESP) program of GBIF with the project "Regional capacity enhancement to Latin America by establishing Chilean node", and awarded this fund. The project was supported by international partners that have active participation in the GBIF network -GBIF Argentina, GBIF Ecuador, GBIF Spain and SiB Colombia, this project includes the participation of representatives from the Museo Nacional de Historia Natural (National Museum of Natural History, MNHN), Instituto de la Patagonia de la Universidad de Magallanes (Institute of Patagonia of the University of Magallanes), Herbario EIF de la Universidad de Chile (EIF Herbarium of the University of Chile), Sociedad de Botánica de Chile (Chilean Botanical Society), Colección Patricio Sánchez de la Pontificia Universidad Católica de Chile (Patricio Sánchez Collection of the Pontifical Catholic University of Chile), Museo de Zoología de la Universidad de Concepción (Zoology Museum of the University of Concepcion), and Sistema de Biodiversidad de Aysén . SiB Aysén (Biodiversity System of Aysen).

In this first phase of project execution, a mentoring process has been carried out by SiB Colombia and GBIF Spain with some Chilean partners of the project, in order to learn about governance issues and data publishing processes in the international GBIF platform, as well as deepening incentives to the publisher.

This first step has been very important to the formation of a first consortium of national and international partners, in the framework of the implementation of the GBIF Chilean Node, and has also served to specify the requirements of the partners, with a view to organize the second meeting of the project, to be held in April 2018, in Santiago de Chile.

Thanks to the fact that several Node partners visiting SiB Colombia, was possible to evaluate some aspects related with contents addressed during the meeting, the focus and themes, as well as various logistical aspects.

The second chapter of this project will be carried out in Chile, with a workshop focusing on transference of technical skills associated with data publishing using GBIF platform. In order to reach a successful implementation, one of the most important SiB Colombia coordinating team specific recommendation, is to have participants fully prepared in supporting the Chilean Node and replicate this activities and exercises with other national actors, so that the Chilean Node will have a team able to approach these issues and do not lost capabilities.

Contact information

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Introduction

This report is about the mid-term activities at project "Regional capacity enhancement to Latin America by establishing Chile node+

Several components have been evaluated and the most relevant lessons to be considered in the organization of the second project meeting have been rescued. The evaluation was carried out based on comments from partners and project participants, for example, through telephone consultations and Internet surveys.

In this report, readers can find a summary project, which gives an account of the context of the country in which it is developed, a summary of partners and participants, as well as the types of actions planned for the implementation of the project - tutoring and regional meeting.

You can also find the author contact information. You can contact her if necessary.

On the other hand, in the next section, there are a project review, which includes elements such as the start date and the expected duration, a list and description of institutions participating. Training requirements included in proposal were identified by Technical Secretariat and node partners. The project objectives are also included in the same section. Finally, you will find a detailed description of activities carried out.

Included in this report and following the previous section, you will find a brief general description of the communication plan of the project and the activities of the Node in general.

Finally, the evaluation itself is presented, along with some recommendations for the rest of the project's implementation.

The project and its objectives

The project "Regional capacity enhancement to Latin America by establishing Chile's node", seeks to strengthen national capacity to integrate and provide free access to information about Chile's biodiversity.

The Project was presented by the Chilean node of GBIF to GBIF's Capacity Enhancement Support Programme (CESP) in 2017, with the support of GBIF Spain, GBIF Argentina, SiB Colombia and as a regional guest, GBIF Ecuador. The project began in June 2017 and is expected to be completed in June 2018. A fund was awarded for " 20,000, with a Co Funding of " 31,296.

The project's founder partners are the National Museum of Natural History of Chile (MNHN), an institution that, through its curatorial areas, houses one of the country's most important biological collections, with more than 600,000 specimens housed in its various areas. The transversal objective of the MNHN is to collect, research, conserve and disseminate Chile's natural heritage.

On the other hand, the Biological Collection Pavilion "Professor Edmundo Pisano" of the Patagonia Institute of the University of Magallanes, has as a natural and basic objective to constitute a reservoir of biological material collected in various sectors and ecosystems of the southern region of Chile, aiming to be a faithful witness of the biodiversity characteristic of the region. The Biological Collections Pavilion has more than 23,000 records organized thematically in a Marine Collection and a Terrestrial Collection.

Another partner is the EIF Herbarium at the University of Chile, founded by Federico Schlegel in 1966. Currently, EIF has about 12,000 specimens entered in the collection, plus another 5,000 in the process of entering; including all of Chile and approximately 60% of its flora, an important part of this collection is the representation of native woody species and forest interest.

For its part, the Chilean Botanical Society is a strategic partner, since it allows the Chilean Node to establish links with the main botanicals and collections of the country.

Another relevant partner of the project is the Patricio Sánchez Collection of the Pontificia Universidad Católica de Chile. This collection was created in 1960 by Professor Patricio Sánchez Reyes, who was professor of Evolutionary Biology at Faculty of Biological Sciences. Prof. Sánchez, motivated by his interest in the study of zoological diversity and -according to his own writing- "to serve as a nucleus for the study of nature in Chile", created the "Sala de Sistemática" (Systematics Hall), today a scientific collection that bears his name. It was initially

intended to house marine invertebrates; however, in recent years other taxonomic groups such as fish, amphibians, reptiles, and small mammals have been incorporated. The botanical section of the collection, which includes a vast representation of seaweed and terrestrial plants from Chile, deserves a special mention.

For its part, the Zoology Museum of the University of Concepción (MZUC-UCCC) is one of the most important in the country. It was created in 1955, with donated material by Ottmar Wilhelm, Jorge Artigas and André Hulot. Since then, it has grown thanks to the contributions of numerous expeditions and the acquisition of existing collections. The material in the museum is used for national and foreign scientific studies, as well as undergraduate and postgraduate theses. At present, this museum has more than half a million specimens representing 14,666 native and exotic species.

Finally, SiB Aysén, Aysén's Biodiversity System, is a multidisciplinary and interregional team that works collaboratively in the country's first Biodiversity Information System . The project, financed by the Regional Government of Aysén through the Regional Innovation Funds, represents a pioneering initiative at national and international level. The Aysén Region is a precursor in many respects, also in compliance with international agreements such as the Convention on Biological Diversity, by creating a unified repository of species information. The platform is intended to be a prototype that could be replicated in other regions, which could eventually be brought together in a national information system.

The project is expected to promote and encourage the movement of biodiversity data in the country and the region, providing specialized knowledge on biological data management, as well as improving its quality, access and use. Additionally, this project will foster collaboration among national and international initiatives related to biodiversity.

The capacity needs identified by Chile, according to the GBIF 2017 Work Program, are:

- The implementation plan for the Chilean GBIF Node, currently under development by the Ministry of Environment, indicates that the Node should be implemented in the period 2018 - 2020. Therefore, the biggest challenge for the Chilean GBIF Node is to successfully achieve the implementation of this project within that period. According to the above, the coordination unit of the Node is preparing the necessary arrangements in order to provide technical and administrative infrastructure that will facilitate the consolidation of a technical and scientific biodiversity data manager community. This community is made up of institutions, projects, and initiatives linked to biodiversity data,

including the Government of Chile, and it should be aligned with national objectives in these matters, as well as accomplishing international commitments.

- The proposed workshop will provide an instance for the national scientific community to understand the importance of publishing data generated during research processes, as well as its relevance for the conservation of biodiversity and to respond to the country's commitments regarding open access to information. This instance will also contribute to governmental organizations processes of "Managing and updating databases on biodiversity, as well as developing studies and collecting all available information to determine the country's environmental baseline" [[Law number 19.300 on General Environmental Bases; Articles 38 and 70, letters "j" and "k"](#)].
- To strengthen and build capacities in teams of Ecuadorian and Chilean Nodes, and also in the network of publishers to disseminate information on biodiversity at occurrence level and species checklists, considering data quality, suitability of use, and incentives to publishers.
- To build capacities to develop a national strategy of data mobility and management of biological collections in agreement with data publishers oriented to strengthen baseline information for decision makers and public policy elaboration, also encouraging the scientific community to deliver biological data of public interest.
- Positioning the Chilean Node at a national level as responsible of coordinating the exchange of biodiversity data.
- To coordinate institutions, projects, and initiatives related to biodiversity at the national level, including academy, scientific research centers, museums and State, with the aim of guaranteeing access to biodiversity information.
- To strengthen regional cooperation between GBIF participating members and other centers specialized in management of biological data with regard to mobilization of biodiversity data with respect to their occurrence level and species checklists with respect to their occurrence level and species checklists.
- To progress in development of an accurate baseline biodiversity registry to assess trends, identify priority activities, provide information to guide decision-making, and build public consensus on the conservation and sustainable use of biodiversity. This recommendation emerged in the process of evaluation of Chile's environmental performance in 2016 by the [OECD/ ECLAC](#).

- To incorporate the country, through the Chilean Node, into international collaboration networks. The project will allow exchange of experiences with GBIF Spain, GBIF Colombia, GBIF Argentina, and GBIF Ecuador, providing excellent training to the Chilean Node's team. Thus, the management model and experiences that made possible the successful implementation of those nodes will be available and useful for the implementation of the Chilean node within the period 2018 - 2020. During this period, a national strategy to strengthen biological collections will be developed, a goal included in the National Biodiversity Strategy's Action Plan of Native Species Conservation.

The main objectives of the project are:

- To strengthen collaboration between the emergent Chilean Node and leading international nodes in global biodiversity networks (GBIF Colombia, GBIF Spain, and GBIF Argentina). The creation of a national and international collaboration network will improve Chile's efforts to publish its biodiversity data.
- To perform a visit to the Technical Secretariat of SiB Colombia to discuss the best strategies for successful establishment of Nodes in Chile and Ecuador, and to strengthen the publication of data at national and international level.
- To organize a Workshop in Santiago, Chile, that will allow the exchange of experiences on the publication and use of biodiversity data among five countries.
- To know and use the GBIF data portal, with exercises that show how to search, filter, display, download, and publish data.
- To facilitate the operation of the IPT infrastructure hosted in our institution, increasing the number of occurrences published in the GBIF network.
- To strengthen capacities of Node teams and publisher community in the use of tools to improve data quality. Learn how to use Open Refine (tool used for cleaning biodiversity data), and the use of other data management tools provided by Canadensys (Date parsing and Coordinate conversion).
- To reverse the current scenario in which Chile's activity as a data publisher in international networks is very low, and where other countries publish the greatest amount of Chilean data in GBIF and other networks.
- To consolidate the implementation of the GBIF Chile Node. During 2012, our country was the focus of a previous mentoring project with Costa Rica, which allowed us to connect with the community of publishers, establish an alliance with the MNHN,

diagnose the national situation of biological collections, and integrate our country to the GBIF community. This project is part of the activities already in course by the Chilean Node to establish and consolidate the initiative at national and regional levels. Chile is expected once again to become a GBIF voting country.

Needs for capabilities that have been identified, will be addressed through the following activities:

- Mentoring: A visit to Technical Secretariat of Colombian Biodiversity Information System (SiB Colombia), along with GBIF Spain, will instruct the teams from Chilean and Ecuadorian Nodes in processing and publishing data. On one hand, activities in this visit will focus on learning and documenting the publication process, i.e. describing a dataset using metadata standard, cleaning data with appropriate tools, normalize data using Darwin Core standard, and publishing data on the GBIF network using the GBIF Integrated Publishing Toolkit (IPT). In addition, the visit to SiB Colombia will also focus on learning and understanding the national and regional strategies used by active nodes to carry out successful implementations in their countries.
- Regional workshop organized in Chile, with Ecuador as a guest country, addressed to data publishers, with the instruction of GBIF Spain, SiB Colombia, and GBIF Argentina, on issues of data publication and incentives to the publishers. At the end of the Workshop, participants will be familiar with the process of publishing data of occurrences and species checklists in the GBIF network. Training will focus on: describing a dataset using appropriate metadata standards, cleaning data with appropriate tools, standardizing data using the Darwin Core standard, finalizing the process by publishing datasets in the GBIF network using the Integrated Publishing Toolkit - IPT of GBIF that will be installed in servers of the Ministries of Environment of Chile and Ecuador. This Workshop will increase visibility of biodiversity data collected within the framework of an investigation or from biological collections deposited in a museum or university

Project activities completed by mid-term

- Organization a technical visit to coordinating team of the Biodiversity information System of Colombia - SiB Colombia.
- Partner selection process among Chile Node participants for visit to the coordinating team of SiB Colombia.

- Visit SiB Colombia -November 2017, with the participation of a delegation of 7 professionals from Chile, 1 from Ecuador and with the Instruction of GBIF Spain and SiB Colombia. (<https://twitter.com/sibcolombia/status/930453700757413888>)
- Generation of a set of training material with topics related to the situation of the participating nodes, computer infrastructure of the nodes, and data quality, publication process and incentives to the publisher.
- Organization of the second meeting of the project to be held in April 2018 in Santiago de Chile.

The activities and products were carried out as programmed in the original project.

Project communications

One key element to the implementation process for the Chilean Node of GBIF is to develop a communication plan to publicize the Node's activities and position it at national and international level.

For this, the Information Technology Office of the Ministry of the Environment is currently developing an informative web page about the Chilean Node, which should be launched in coordination with the workshop to be held on April; at the same time, the Communications and Press Department is designing a logo that identifies the Node. On the other hand, all those activities carried out by the Node, have had media coverage for the preparation of related press releases.

The MMA's web platform is currently available for dissemination of the activities and contents associated with the Node. See below note related to seminar on biodiversity data at the Ministry of Environment: <http://portal.mma.gob.cl/ministro-marcelo-mena-oficializa-seminario-sobre-datos-de-biodiversidad-en-el-ministerio-del-medio-ambiente/>

Also check the GBIF project description page, available at <https://www.gbif.org/project/83351/establishing-a-national-node-for-chile-to-enhance-latin-america-regional-capacity>

Mid-term evaluation findings and recommendations for the remaining project implementation period

As of February 2018, all the activities programmed in the project have been carried out as planned. This is it:

<i>Dates</i>	<i>Item</i>
June - October 2017	Periodic meetings by Skype with training partners to organize the visit to SiB Colombia and for the Regional Workshop in Chile.
November 2017	Training workshop for 4 people of Chile and 1 people of Ecuador in SiB Colombia.
December 2017- March 2018	Preparation of activities, tools and materials for the Regional Workshop in Chile with partners (CO, ES, EC, AR,CL)
January - March 2018	Selection and evaluation of databases and species checklists to be published through the GBIF network.
January - March 2018	Call and selection of participants at regional workshop by nomination or invitation form.
January - March 2018	Logistical coordination in advance of Regional Workshop.

It should be noted that thanks to the interest of the partners and the financial support of the Ministry of the Environment of Chile, Chilean professionals delegation who attended the SiB Colombia increased from 4 to 7 persons.

There is already a list of more than 30 participants for the second project meeting, to be held in April 2018 in Santiago de Chile. The participants' profile focuses mainly on managers of biological collections from all over Chile. On this occasion the meeting will be reinforced by the instruction of GBIF Argentina, GBIF Spain and SiB Colombia. For this meeting, GBIF Ecuador will be guest of honor.

The project in particular and the implementation of the Node in general terms, correspond to tremendously relevant initiatives for the country, in that they will allow the consolidation of a network of institutions, projects and professionals related to biological collections and biodiversity data at the national level; they will also allow the definition of a governance system for the Node and its activities; they will allow for the survey of biological collections as a strategic resource for the country (supporting decision-making)

With regard to the execution of the project and the topics addressed in the first mentoring meeting at SiB Colombia, it can be noted that the participants were very satisfied with the

contents discussed during the meeting and the professionalism, experience and excellent disposition of the instructors. It can also be noted that Chile's academic guests expected more detail in terms of technical training. This last part was not the main objective of the visit, but it demonstrated the interest of these actors in the GBIF Chile Node. This requirement will be addressed extensively at the second meeting of the project, to be held in April 2018, in Santiago de Chile.

It should be noted that the GBIF Secretariat has always been available for consultations that arose during the project implementation process and with an excellent disposition on possible changes to implementation as scheduled.

From the Technical Secretariat of the Node, we consider it important to prepare this intermediate report, since it allows for an accurate evaluation of the activities executed to date, in addition to identifying those areas to strengthen for the activities that remain to be executed.

It is considered that the objectives were met and exceeded the expectations raised regarding the achievement of transmitting key elements and considerations for the re-implementation of the Chile node. The current scenario is ideal for making further progress in carrying out dissemination and popularization activities with respect to the Node and mainly to boost the benefits of publishing data. Partners will have access to participation in the data publishing mentoring workshop, which corresponds to the second project meeting; they will be able to access the online resources generated during the workshop.