



## **GBIF Mentoring Project 2011-2012: Chile and Costa Rica (INBio)**

**Final Report**  
**May 15, 2012**

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### **Section 1: Activity Report**

#### **I. Contact**

{Please provide the name and contact details of the author of the report}

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## II. Introduction

{Please provide an overview of the mentoring project and its objectives as stated in the project proposal}

The Ministry of Environment of Chile, national governing body on environmental matters, has been mandated to develop and maintain an inventory of plants, algae, fungi and wildlife species up to date. In addition, it must conduct studies and collect all available information to determine the environmental baseline of the country (Law 19,300, amended by Law 20,417).

To fulfill this mandate, the Ministry of Environment (MMA) has, among other repositories of biodiversity data, the National Inventory of Wildlife Species hosted on servers of the MMA and available to the public through a Web portal, which has the objective to provide information on national biodiversity, and thus take appropriate measures to conserve and preserve the species.

The second stage of the inventory is expected to contain a document repository for species (downloadable documents such as publications, books, studies, legal documents, etc.), and a repository or database of biological collections of specimens in order to contribute information of the species recorded. On the latter subject, the need to have advisory to let us know the tools available for data management of biological collections of specimens, as well as standards and protocols to make them available to the public came up.

In 2011 we conducted the GBIF Mentoring Project "Strengthening and Implementation of Biodiversity Information Node associated to Specimens following GBIF platform" with the aim of strengthening national capacity to integrate and provide free access to information on biodiversity of Chile, through the exchange of experiences with GBIF Costa Rica in the use of international standards, tools and protocols validated by IABIN and GBIF. This Mentoring Project was carried out by the National Biodiversity Institute of Costa Rica (INBio). A first part was conducted in the city of San Jose, Costa Rica and another one in Santiago, Chile during the first half of 2012. This allowed us to summon the actors responsible for biological collections of specimens in Chile, to strengthen their capabilities with respect the standardization of data, to establish a partnership with the National Museum of Natural History, and to install the GBIF Chile Portal.



### III. Activities

{Please provide an overview of the all the mentoring activities undertaken and the key deliverables}

<i>Activities</i>	<i>Timeline</i>	<i>Responsible</i>	<i>Current status</i>
1. To carry out a diagnosis at the national level of the biological specimen collections databases status.	November 2011 - February 2012	MMA Chile	Completed. The final diagnosis report document is attached.
2. To conduct a workshop at INBio to train the national network managers in biodiversity informatics topics, evaluate the diagnosis results, and define the best strategy to implement the national biodiversity information network.	February 28 <sup>th</sup> - March 3 <sup>rd</sup> 2012	INBio	The training program was conducted from February 28 to March 3 in the city of Heredia, Costa Rica. Representatives from the Ministry of Environment and the National Natural History Museum participated.
3. To assess the status of the two selected databases to be integrated into the national network.	February - March 2012	MMA, INBio	During the meeting carried out in Costa Rica, the indexation at least two databases into the Chilean biodiversity data portal started.
4. To train IT staff to install, manage, and configure the software tools selected. Activity carried out in Chile by two staff members of INBio.	March 19 <sup>th</sup> - 21 <sup>th</sup> , 2012	INBio, MMA	The training program was conducted from March 19 to 21 in the city of Santiago, Chile. Representatives from the Ministry of Environment, the National Natural History Museum, and major universities participated.
5. To install the infrastructure required to establish a national network of biodiversity information in Chile. Activity carried out in Chile by two staff members of INBio.	March 2012	INBio, MMA	Two Chilean biodiversity databases were indexed during the meeting carried out in Costa Rica. In Chile databases were standardized and complemented by MNHN and MMA in March and April 2012, in order to be indexed to the GBIF portal. The portal is available at <a href="http://gbif-chile.mma.gob.cl/portal/welcome.htm">http://gbif-chile.mma.gob.cl/portal/welcome.htm</a>



6. To organize a national workshop on biodiversity informatics. Activity carried out in Chile by two members of INBio's staff.	March 22 <sup>th</sup> - 23 <sup>th</sup> , 2012	MMA, INBio	The training program was conducted from March 22 to March 23 in the city of Santiago de Chile. Representatives from the Ministry of Environment, the National Natural History Museum, and major universities participated.
7. Configuration of the GBIF Chile node: the commitments and agreements made by institutions and the national node administrator.			Documents containing participation agreements of the institutions are attached.

#### **IV. Changes to the Mentoring Plans**

{Please provide details of any planned activities that were not undertaken or any new activities that were added to the project}

#### **V. Key Project Outcomes**

{Please provide an overview of the key outcomes and benefits of the mentoring project with reference to the objectives}

According to the set objectives, the main results achieved from the mentoring program were the following:

1. Currently the GBIF Chile Node has an initial diagnosis of the biodiversity collections status that include information about the relevant specimens collection found in national museums, herbaria, and research institutions.

The main results of the diagnosis were:

A first list of responsible people and curators of biological collections present in Chile.

A summary of the major collections in the country and their characteristics. An approximate number of specimens per collection and their geographical distribution is indicated.

Key aspects of biological collections and professionals that support them have been identified, which are necessary to address in order to optimize the current status of collections in Chile.

An approach to the accessibility of the collections found in Chile, and a list of people who are interested in participating in a national node on specimens hosted on a website of the Ministry of Environment.



The aforementioned is a diagnostic approach of the national situation, which will be updated during 2012, through contact with other collections, the socialization of the results of this Mentoring project and management of the Specimens Node by this Ministry. Results are presented in Annex I.

2. The Chilean capabilities for managing a national network of occurrences that share data with GBIF have been strengthened by means of training a core team of representatives of the central node (the national node managers and trainers).

The main goals of this first workshop was to build capacity by discussing the key issues involved in designing and implementing a National Biodiversity Information Management Network; providing training to participants in the use of main standards, protocols, and tools available to establish the technological infrastructure needed to implement this system; and defining the best strategy to implement the national biodiversity information network.

The workshop took place at INBio's premises, in Santo Domingo, Heredia, Costa Rica, on February 28th - March 3rd, 2012. It had seven participants, three from Chile (2 of them from the Ministry of Environment and one from the National Natural History Museum), three from the Costa Rican Biodiversity Information System -CRBio- (2 from the University of Costa Rica and one from the National Museum of Costa Rica), and one staff member from INBio (a botanist attended the workshop). The workshop agenda and participant list are attached as Annex II and III.

3. Capacity building of people responsible for biological collections in Chile through training in GBIF standards and protocols, further enriched by experiences from GBIF Costa Rica, in order to have a national node on biological collections of specimens in Chile.

On March 19 - 23, 2012 a workshop on Biodiversity Informatics was held in Santiago, Chile, based on GBIF's mentoring program. In addition training sessions were carried out aimed at people responsible and curators of biological collections and users of digital platforms to store biological data. During the first three days, the statuses of national biological collections and taxonomists, managers and curators of the national collections were discussed. Along with it, the theoretical basis for value-added digital tools available to strengthen the collections databases and data analysis, according to IABIN and GBIF international standards, were given. During the second part, we developed a practical training aimed at biological collection managers on the previously provided tools.

As part of this workshop, participants developed a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), with the aim of analyzing the country vision regarding biological collections in Chile, the projections and requirements identified by the working group. The agreements reached by the group of participants are attached in Annex IV.



4. The data portal of GBIF- Chile was installed on servers of the Ministry of Environment.

During the workshop held in Costa Rica, the mentoring for the installation of Chile GBIF portal began, which was concluded during the stay of INBio in Chile. The first data provider was the National Museum of Natural History, who gave us a total of 8,855 recorded data. These data were incorporated into the Chile GBIF Portal by personnel of the Department of Information Technology at MMA. The University of La Serena, particularly the area of botany was our second node participant, who released some 3.757 recorded data. In addition, particular data of sightings of approximately 6.600 specimens of recorded data were integrated, thus completing a total of 19.232 data records.

5. A manual of best practices for developing and managing information technology for management of specimens' data was developed to ensure interoperability of databases and software sustainability over time.

The Manual of Best practices will be a quick reference for the steps to follow in standardization, validation and provision of data on biological collections of specimens by interested institutions to join the national node. The document is attached as Annex VI.

## **VI. Next Steps and future collaborations**

{Please provide a summary of the next steps to build on the work in this mentoring project and any possibilities of future collaborations between Chile and Costa Rica}

From these important results, it is necessary to establish agreements with the concerned institutions (museums, universities, research centers, among others) to have an Integrated National Biological Collections System. Today we have a collaboration agreement with the National Museum of Natural History, which could be extended to all the museums belonging to the Directorate of Libraries, Archives and Museums of Chile (DIBAM), and thereby improve national representation.

Furthermore, this year we are considering summoning the institutions that have participated at training workshops recently, to form a working group to establish internal protocols for sharing information on specimens on a national portal.

The Ministry of Environment has designed a national tender to be held during 2012, to strengthen the biological collections in the country, and to improve the infrastructure that safeguards the specimens and optimize the databases that support them. With it, we hope to encourage researchers who have specimens data in biological collections, to standardize their data



using the standards and protocols agreed by GBIF and approved by the Ministry of Environment.

## VII. Feedback to the GBIF Secretariat on the Mentoring Process

{Please provide the GBIF Secretariat with any comments on the mentoring process - which parts worked well, which parts could be improved}

In general, the activities were carried out according to schedule, without difficulty. Below is a list of activities needed to carry out in order to have a national node of biological collections of specimens and the experience gained during the mentoring.

1. Diagnosis of the national situation with respect to biological collections.	We have identified that this is an ongoing process that requires being constantly updated.
2. Summon the various representatives of biological collections of specimens.	A two-month summoning time was required, given the difficulty of participants of having a full week to attend both workshops. Authorities from the National Museum of Natural History, the Deputy Secretary of the Ministry of Environment, and other representatives from national universities and public institutions were summoned.
3. Logistic Coordination of the workshop.	It started approximately three months in advance. In the case of Chile, a public bidding process was carried out to hire services such as lodging, meals, meeting room rental and coffee break. Along with it, airline tickets were purchased. In addition, there was a process of confirmation of the workshop attendants for at least two weeks prior to holding both events.
4. Execution of both workshops	During the development of both workshops, it was necessary to have an assistant in the room to register participants and hand them the materials. In addition, it was necessary to have a workshop general coordinator to inform about the agenda, to moderate and reach consensus on agreements during the work week.
5. Continuity of the activities following the workshop	It is necessary for the general coordinator of the National Node of Biological Collections project to keep in touch with participants and provide



	them information in the following activities taking place within the framework of this training. On the other hand is very important to send participants a certificate for the participation at the workshop.
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### VIII. Signatures of the Mentor and Mentee

Signed on behalf of the Mentor

Date

- María Mora  
Chief Information Officer  
National Biodiversity Institute (INBio)

Signed on behalf of the Mentee

Date

- Sofía Guerrero Zepeda  
Renewable Natural Resources and Biodiversity Division  
Ministry of Environment, Chile.



**Annex I**

{Please provide any additional attachments as you see fit, for example lists of trainees, agendas of meetings, documents relating to the mentoring project outcomes}

**Annex I**

Diagnostic Study of the National Status of Biological Collections of Specimens.

**Annex II**

Agenda of meeting Costa Rica

**Annex III**

Lists of trainees in Costa Rica

**Annex IV**

Agreements Workshop in Chile and Lists of trainees Chile

**Annex V**

Agenda of meeting in Chile

**Annex VI**

Manual of Best practices

**Annex VII**

Expense receipts of the workshop in Chile

**Annex VIII**

photographs