

FINAL ACTIVITY REPORT

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1. Executive summary

Between April 17 and 21, 2017, the "Capacity Building Workshop for Documentation and Publication of Sample Data Based in Latin America" was held, with the participation of national and international specialists.

The workshop aimed to encourage editors in Peru and other Latin American members to improve data quality and the development of tools for biodiversity information management by strengthening regional cooperation for the benefit of the global community.

The Ministry of the Environment (MINAM) and the Global Biodiversity Information Infrastructure (GBIF) conducted the workshop "Capacity Building for Documentation, Cleansing and Publication of Sample Data Based on Latin America", aimed at biodiversity experts in order to optimize the quality of their data and strengthen regional cooperation through the development of digital tools to improve information on biodiversity, taking into account the wide variety of species that Peru has.

Among the training topics is the Open Refine, which is a software that allows you to analyze, transform, annotate and explore existing data on all life forms on Earth that are on the international open data platform of GBIF in order to improve, eliminate or update data on biodiversity, especially wild species. In this way, the information gaps in flora and fauna are filled; and information is made available whose analysis will allow better decisions to be made.

This workshop was attended by renowned trainers such as Dr. Anabela Plos, Administrator of the GBIF Argentina Node; the Mg. Danny Vélez, Administrator of the GBIF Colombia Node, and Mg. Manuel Vargas, Administrator of the GBIF Costa Rica Node, who trained various governmental and academic institutions such as the Natural History Museum of the National University of San Marcos, the Ricardo Palma University, the National Forest and Wildlife Service, the National Service of Natural Protected Areas by the State, the Agency for Environmental Assessment and Control, the National Institute of Agrarian Innovation, the Peruvian Amazon Research Institute, the National Forest Program for Climate Change Mitigation, the Peruvian Sea Institute, among others.

Participants were interested in initiating a national process for consolidating biodiversity information in Peru, as well as "the effective reincorporation of Peru into the GBIF to publish biodiversity data, which will fill the information gaps."

Representatives from the countries of Argentina, Colombia, Chile, Costa Rica and Uruguay also participated, and with their knowledge they contributed positively to the exchange of experiences by improving the data published through the GBIF portal.

2. Contact information

Biologist Roxaa Solis Ortiz

Biologist Jose Carrasco Montoya

3. Project summary

The possible low quality of the data and metadata published through the GBIF network could evidence the low quality process of the data by the publishers. As well as ignorance of new ways of publishing data. It is therefore not only important to improve and strengthen these practices to publish quality data but also to make available to the old and new publishers the modern tools for data sharing with the GBIF. In addition, the present workshop sought to make available to all interested parties a way of quality control in systematization of information, documentation, storage and preservation of information, publication and use of data.

The workshop therefore through training increased the quality and aptitude to use the data currently published through the GBIF network motivating to publish new and more editors. In addition, it allowed the strengthening of a regional community around the data quality processes to achieve a greater capacity of construction in the editors of the nodes.

10 of the most representative and competent institutions in the management of biodiversity information in Peru improved their abilities and capacities to implement data quality actions in the short, medium and long term, not only to improve but to maintain the quality of the information shared and published the network.

It is important to recognize the vast experience of instructors that ensured the achievement of the goals we had set out.

3.1. Activities completed

Training materials and documents on the publication of data for the GBIF community in Latin America have been adapted, such as:

- Principles Of Data Quality de Arthur D. Chapman
- Publishing sample data using the GBIF IPT de GBIF

1. The implementation of the workshop made it possible to strengthen the capacities of national and regional representatives around data quality processes to achieve a greater number of editors in the nodes with the capacity to build such databases.

2. The workshop was attended by 10 of the most representative and competent institutions in the management of biodiversity information in Peru, which improved their skills and capacities to implement data quality actions in the short, medium and long term. long term, not only to improve but to maintain the quality of information shared and published the network.

3. A toolkit has been developed, product of the workshop that has been placed on the server of the Ministry of the Environment, the same that can be accessed through this link: <http://chm.minam.gob.pe/workshop-gbif/>.

4.- After the workshop in Lima, Peru, other countries will develop actions to replicate the experience in Peru applying the knowledge acquired and test the set of tools developed in the national GBIF communities. In both Argentina and Uruguay it is possible that such a reply may be given, while Colombia has expressed its wish to make such a reply.

It has certainly contributed to: (i) promoting the development of data quality assessment tools for the benefit of the GBIF community as the workshop can be delivered to various institutions within and outside the country; through the GBIF network by sharing, for example, data from the National Forestry and Wildlife Service; and (iii) strengthening regional cooperation among GBIF member countries as has been done with the countries with whom experience has been exchanged the data and the way in which it is handled in addition to the use of the IPT.

3.2. Ongoing and post-project activities

It is expected that a workshop will be replicated in Colombia and that part of what has been learned will also be replicated at the meeting in Chile in 2018.

4. Project objectives

Editors in Peru have been encouraged and motivated, such as the National Forestry and Wildlife Service, which is placing information relevant to the country, such as the National Forestry and Wildlife Inventory. In addition, the Natural History Museum, which is close to being 100 years old, has expressed, through its representative, Dr. Lettys Salinas, one of the most recognized ornithologists in the country, who also participated in the Workshop that will soon develop 2 projects whose data are intended to be shared through the GBIF and IPT of Peru. In the same way it is in coordination with the National Service of Natural Areas Protected by the State so that the information that is hosted in Atrium is also shared with the GBIF through the IPT of Peru.

The presence of 5 countries in Latin America has allowed the strengthening of regional cooperation to increase capacities in the development of tools for the benefit of the global community.

The presence of representatives of 10 competent institutions in the occurrence of species such as Biodiversity monitoring has allowed the strengthening of regional capacities for the publication of data based on samples, as well as in the evaluation of the quality of the data.

Finally, Open refine training has made it possible to improve data published through GBIF as a significant contribution to the activities proposed in the GBIF 2014-2016 Work Program5.

5. Project deliverables

1. Workshop agenda, contents and presentations. Each participant worked their data and metadata using the tools (Open refine and IPT) that were presented during the theory sessions.

2. The evaluation of the workshop was done at the beginning of the workshop through a questionnaire to each participant, which consisted of three basic questions.

This previous evaluation of the workshop before was a questionnaire to know the profile of the participants through which the knowledge about excell, Open refine, data publication, Darwin Core, IPT, etc. was explored. The questionnaire is attached.

At the end of the workshop, participants were asked about their development through a form on google about the content, work sessions and even the conditions of the workshop facilities. It was then concluded with the need to commit to presenting examples of application of learning. The question and answer form is attached.

3. Training toolkit in Spanish.

A manual was developed to guide the participants as a reminder of what was learned so that it can be applied in the implementation of a pilot. The same one that was used for the publication of the data that is in the IPT of Peru. The manual is attached.

4. A report of the certified participants.

The workshop at all times counted on the advice of the instructors who guided the assistants and solved some of their doubts. For this, each instructor had a number of assistants in charge.

5. Through the sessions it is clear the high importance of having metadata that has been properly collected from the outset even before the computerization of the same, taxonomic identification, computerization, documentation database, storage and preservation of information , presentation of data and use of management data.

6. Regional and local technicians trained in data quality assessment tools and data publication based on samples, participants had the opportunity to practice with their data as taught in the management of tools in order to computerize a collection of natural history, observational data obtained directly in the field, biodiversity, international standards relating to biological databases, interconnection between different databases and easy adherence to international initiatives such as GBIF.

7. 1000 DwC EventCore records based on the published standard across the GBIF network. The publication of Fauan Silvestre Registry data in the National Forestry and Wildlife Inventory of the National Forestry and Wildlife Service - SERFOR Perú of more than 4300 data records of the national forest and wildlife inventory corresponding to events of monitoring. In addition to 1300 data records of data monitoring events of vegetation plots of Atiquipa, Southern Peru.6.

6. Evaluation: findings and conclusions

It should be noted that the development of the Training Workshop has been an activity that has once again encouraged Peru in order to share data, encouraging participants to continue to publish their data and have a multiplier effect in their work and academic environments and even recognized specialists. In the same way we are sure that the representatives of each country are evaluating to replicate the same workshop in their countries to be able to share

data in GBIF using the tools with which they have trained in the workshop and taking advantage of the new platform with the GBIF. Which has motivated even more those who have shared their information through the IPT of Peru, to be able to view the data immediately and also georeferenced through a map.

7. Recommendations and lessons learned

It is necessary to strengthen and strengthen the capacities of the Spanish-speaking countries, through these spaces of exchange, and operability, allowing the participants to apply the exercises teroría. On the other hand, it is necessary to achieve new exchange spaces to share more experiences in implementing such tools and to evaluate existing limitations, such as language, lack of resources, among others. Certainly the face-to-face meetings facilitate the strengthening of the contents of the trainings.

8. Future plans.

Maintain contact with the national participants, in such a way as to have an active national group for the implementation of GBIF in Peru.

Make new contacts in order to make the GBIF known and show the window of opportunities for the strengthening of capacities and tools for the organization and updating of data.

The Museum of Natural History of the National University has expressed its desire to share information with the GBIF through the IPT of Peru. Likewise, the representative of the National Service of Natural Areas Protected by the State has expressed his desire to share information that is housed at Atrium through the IPT of Peru, for this he is giving the necessary support and according to our possibilities.