FINAL ACTIVITY REPORT
Course on Participatory Biodiversity Monitoring: Building Locally, Connecting Globally

Contents

1. Executive summary

Provide a brief explanation of the project and its implementation, the main capacity enhancement objectives achieved, lessons learned and conclusions.

This report contains the final evaluation of the Participatory Monitoring Course. For the purpose of this report it is important to mention that the course was divided in two stages. For the first stage, we present the outcomes achieved during the six-day course (October 21-28) in Rio Claro Natural Reserve, Colombia. During those days we had the opportunity to work with 50 people of seven different countries, exchange experiences and generate scenarios of transfer of capacities regarding concepts and methodologies related to participatory monitoring. For the second stage, we present how the participants applied what they learnt through two different exercises: 1) design of a monitoring plan and 2) evidence of the replicate courses held by participants.

It is worth to highlight that the main results of the first stage were: a digital final report including a detailed description of the whole process, supporting graphic documentation and a video compiling the key moments of the course. All this information is available in the websites of the Humboldt Institute and SIB Colombia. For the second part of the course, one aspect that was very rewarding was the interest of the participants in maintaining active the community of practice through the sharing of their replicate courses in their own contexts. Currently, we have the results of 16 replicate courses across Colombia and Latin America. Additionally, we have 14 plans of participatory monitoring that were elaborated by the people that were selected in the open call of the course. Among the participatory monitoring plans we would like to draw attention to the Lagoon of Fuquene and the Grey Dolphin monitoring plans because both show how to integrate participatory monitoring techniques and data management through the monitoring process.

Finally, regarding the evaluation of the course, we used different approaches to try to cover several aspects of the course. It was carried out using three different tools: Firstly, there was feedback throughout the whole course, via a daily open circle session with all the participants (questions, suggestions, and expectations were noted on a board). Each question/suggestion was resolved by the coordinators, instructors, or fellow participants depending on the nature of it. Secondly, there was a feedback session at the end of the

course where all the participants talked about their experiences, the lessons they learned, and about aspects of the course that could be improved. Finally, there was one virtual evaluation where instructors, project partners and participants evaluated the methodology, content, outcomes, logistics and schedule of the course. In general, participants considered that the course was very useful for consolidating a community of practice that will keep on working in the long term in different aspects including: novel approaches about data management and data collecting, and strengthening of participatory strategies (see evaluation report).

2. Contact information

Provide the name, institutional affiliation, role in the project and contact details of the author(s) of the report.

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3. Project summary

This section should provide readers with a good understanding of the project, from the original plans to the final implementation, highlighting:

- *The capacity needs that instigated the project and how these have changed as a result of the project activities.*
- *The activities that have been completed at the time of writing the report, and those that are ongoing or pending (e.g. longer-term evaluation, follow-up projects/meetings/training events) and your plans for their completion.*
- *How the different partners in the project have contributed to its implementation.*

In Colombia there are more than 70 ongoing projects about participatory monitoring and inventory involving public participation. However, a significant number of the projects have no open data, do not have good technological capabilities to facilitate the use of the data they create, do not have clearly-defined information flows, nor clear governance models for the data. Additionally, the monitoring and evaluation of impact at participant level and socio-ecological systems is not evident. The preliminary mapping of these citizen science initiatives and some of their identified needs is available in the following report: Memorias del Primer Encuentro de Ciencia Participativa.

Based on that scenario, we decided to propose the course as an opportunity to tackle the aforementioned issues. Throughout the course it was possible to get a better insight of the participants' projects, in terms of objectives, activities, and focal communities involved in each project. Additionally, we were able to identify a common pattern among all projects:

from our perspective all the initiatives were conceived as citizen science projects, however, the participants of the course were not very familiar with the term and general principles of it. After identifying that pattern we tailored the course in a way that at the end of it we achieve a very interesting results: participants felt empowered because they realised that the citizen science was a common ground between them.

Furthermore, we identified that the participants were not aware of the existence of digital platforms and apps for collecting citizen science data such as iNaturalist and eBIRD. Also, they were not very familiar with GBIF and the National System of Biodiversity Information (SIB, acronym in Spanish). However, thanks to the capacity building activities that were carried out during the course, the participants were able to include the use of these tools according to the needs of their projects, also, they acknowledged the link between the information they collected in their projects and GBIF and SiB, and the importance of both biodiversity information systems at national and global levels.

Finally, we achieved one of the main goals of the project, to create a community of practice of citizen science. This achievement allows participants to exchange information, experiences, and foster the transfer of capacities in several aspects including data management and digital platforms, not only within the country but between seven different countries in Latin America (Argentina, Bolivia, Brazil, Colombia, Chile, Mexico, Peru,) and one in Europe (Spain).

3.1. Activities completed

Highlight the activities that have been completed at the time of writing the report. Explain how the different partners in the project have contributed to its implementation.

Activities	Outputs/Deliverables
Web page of the course, where we published the open call, and where we will shared the results of the course.	https://www.sibcolombia.net/curso-de-monitoreo-participativo-en-biodiversidad/
Open call: On August 8th, we launched the open call for participation in the course. The call closed on August 31st. The open call required applicants to fill out two application forms: One which required details about their experience, purpose for applying, and replication capacity; the other one required a detailed description (data management, planning, evaluation) of participatory monitoring biodiversity projects in which they are or have been involved in.	Application form: http://bit.do/application-formPM Inventory form: http://bit.do/inventory-formPM
Selection of participants: The evaluation committee (4 people) verified the submission and selected 15 people from various regions and different kind of projects in Colombia, and selected one person each from Bolivia and Chile. We invited a participants from Peru and Brazil,	Selected participants: http://bit.do/participantsPM

additionally of the partners from Mexico, Spain and Argentina. 177 people from Iberoamerica submitted proposals for the Course: 12 people from Mexico, Spain, Peru, Bolivia and Chile and 165 from Colombia.	
Course: Six days of training for 50 people.	Instructors: http://bit.do/instructorscourse-PM Program: http://bit.do/programPM Photos: https://drive.google.com/open?id=16LKF4h buvhA2yvgHOzmb8S5O5Mo5lt8v
Documentation of the course including methodologies, exchange of experiences and evaluation	https://drive.google.com/open?id=19c2C6p n2A3MJ5f6NkOPl7y9emZjJigJ3
One video with the key reflections about participatory monitoring process including the management of data and information.	https://youtu.be/Pf9tzEyRpWg
Graphic documentation elaborated during the course	https://drive.google.com/open?id=1JGQcX w3MHZ6vKS1CNM7PNOG2LoV9-si9
Video capsules about the lessons learned by the participants in the course, shared through social networks.	Capsule 1: https://www.facebook.com/instituto.humbol dt/videos/1594444620623088/ Capsule 2: https://www.facebook.com/instituto.humbol dt/videos/1598516280215922/ Capsule 3: https://www.facebook.com/instituto.humbol dt/videos/1599538366780380/ Capsule 4: https://www.facebook.com/instituto.humbol dt/videos/1600701499997400/ Capsule 5: https://twitter.com/inst_humboldt/status/929 033703648645123 Capsule 6: https://twitter.com/inst_humboldt/status/928 385681084252162 Capsule 7: https://twitter.com/inst_humboldt/status/930 546708144119808 Capsule 8: https://twitter.com/inst_humboldt/status/930 903574510555136

Document of best practices in participatory monitoring (including visibility of the contributors) and of the criteria to be taken into account for the capture, quality, and publication of data under the GBIF model.	https://drive.google.com/open?id=1XnsbGli9TU-p_XNmbsrEvMeit2Kzy-tW
Sets of open data through platforms interoperable with GBIF, such as iNaturalist, eBird, Natusfera, wherever feasible.	Natusfera-Spain: https://www.gbif.org/dataset/e58dbe2f-cfc0-40c2-a04d-e45a7e876980#description Naturalista-Mexico: http://www.naturalista.mx/observations?on=2018-02-25&place_id=60682 Naturalista-Colombia: https://www.gbif.org/occurrence/search?country=CO&dataset_key=50c9509d-22c7-4a22-a47d-8c48425ef4a7&event_date=2018-04-27,2018-04-30&repatriated=true&advanced=1 iNaturalist-Argentina: https://www.inaturalist.org/projects/city-nature-challenge-2018-la-plata
Participatory monitoring plan developed by each of the participants, which includes the data and information management.	https://drive.google.com/open?id=1mNMxMMEj1pbiwj0uqyEoDHcBa1yBxB-O
Assessment of the evaluation and assessment process and the final results obtained, including evidence of the replicate courses held by participants.	Evaluation report: https://drive.google.com/open?id=1wqdiNX2OIrYwvXsASS0YbWfOdSyeNC8tvCkng_4aXK0 Feedback: https://docs.google.com/spreadsheets/d/1nbx8TjUM0UOgXhkzBWGKBA3RejPlubByV3bCAHTzy98/edit?usp=sharing
Replicate of the workshop done by participants in their own countries.	https://drive.google.com/drive/folders/1JdNMU0GL8JAp0SLdA1ywtUt7CaID-N5N?usp=sharing

3.2. Post-project activities

Highlight post-project activities if any (e.g. longer-term evaluation, follow-up projects/meetings/training events) and your plans for their completion.

● Firstly, it is important to highlight that the community of practice that was established during the course kept on working together in different scenarios. Likewise, they have been involved in some of the activities that we have carried out in the Institute. One

example of the interactions within the community of practice is the constant support of Elizabeth Torres (CONABIO, Mexico) in training about the use of iNaturalist.

- Secondly, in the In the long term, we are thinking about proposing a second course focused on scientific monitoring (participatory and non participatory) and evaluation of processes.

- Finally, we are trying to get some funding to support one of the prioritized initiatives that has a potentially feasible monitoring plan and also a methodology that supports and encourages community participation.

4. Project objectives

A list of the objectives included in your original project proposal, and a description of how your project activities contributed to meeting them. . Also include any additional objectives that were defined during the implementation of the project.

"Presenting conceptual and methodological bases to build a participatory monitoring plan that responds to the needs of the different actors, civil society, scientists, among others"

The main modules for achieving this objective were 3, 5, 7 and 8, in these modules the main topics were: types of projects, levels of participation, data management, good practices and prioritization of current needs. Additionally, we designed supporting material for the participants to design their own monitoring plans.

"Presenting in a practical way social technologies and methodological tools that facilitate the work between scientists and civil society for the construction of common objectives in the monitoring"

The module 3 of the course was entirely focused on explaining methodologies, experiences and data and information management. In this module, one of the researchers of the Humboldt Institute explained the process to publish information in the SiB Colombia, for different kind of users. Additionally, Felipe Castilla (GBIF Spain) presented the platform Natusfera and talked about how this platform has helped to increase the participation of citizens in collecting biodiversity data in Spain.

Given the importance of this topic we created a guideline that explains the data management process (including the criteria to be taken into account for the capture, quality, and publication of data under the GBIF model) and how to incorporate it in the design of the monitoring plans.

"Explaining basic aspects to plan data management and participatory monitoring information, including citizen science technology tools, publication platforms and good practices that facilitate its use at the local, regional and global levels"

To achieve this objective we selected key presentations of two participants of the course: Elizabeth Torres (CONABIO - Mexico) and Joaquin Cochero (Conicet - Argentina). Both explained from their own experience the advantages of using citizen science platforms and apps. At the end of the course, Elizabeth Torres (CONABIO - Mexico) conducted a brief workshop with the basics about how to use iNaturalist.

"Discussing instruments and methodologies for monitoring and evaluating the impact of participatory monitoring initiatives at three levels: science, people and socio-ecological systems"

The participants of the course had the chance to discuss about lessons learnt, identification of key tools for implementing in their projects, and best practices to follow up processes related to inventory and monitoring. Those discussions were carried out using the World Cafe methodology, which allows to create scenarios of dialogue in small groups. After finishing the discussions in each group, each group presented the results of their discussion in short theater plays.

"Exchanging experiences and lessons learned among participants"

In module one, local participants shared their experiences about working with local communities. Additionally, they had the chance to ask questions related to data management, monitoring, and highlighted the importance of tailoring th monitoring plans according to their own contexts.

5. Project deliverables

The original list of deliverables from your project proposal, including a description of the final deliverables produced.Make sure to include sources of verification for each of the deliverables, such as details of data mobilized through the project including DOIs to published datasets, and/or links to re-usable information resources or tools. Alternatively, the deliverables can be attached to the report as an annex.

Deliverables	Deliverables produced
A website for the course which will be used to put out the open calls, as well as to catalogue and present the course content, videos, and other documentation.	https://www.sibcolombia.net/curso-de-monitoreo-participativo-en-biodiversidad/
Documentation of the course, including methodologies and exchange of experiences and evaluation.	https://drive.google.com/open?id=19c2C6pn2A3MJ5f6NkOPI7y9emZjJigJ3 https://drive.google.com/open?id=1JGQcXw3MHZ6vKS1CNM7PNOG2LoV9-si9
Course videos edited and available under an open licence.	https://youtu.be/Pf9tzEyRpWg
Document of best practices in participatory monitoring (including visibility of the contributors) and of the criteria to be taken	https://drive.google.com/open?id=1XnsbGli9TU-p_XNmbsrEvMeit2Kzy-tW

into account for the capture, quality, and publication of data under the GBIF model.	
Sets of open data through platforms interoperable with GBIF, such as iNaturalist, eBird, Natusfera, wherever feasible.	Natusfera-Spain: https://www.gbif.org/dataset/e58dbe2f-cfc0-40c2-a04d-e45a7e876980#description Naturalista-Mexico: http://www.naturalista.mx/observations?on=2018-02-25&place_id=60682 Naturalista-Colombia: https://www.gbif.org/occurrence/search?country=CO&dataset_key=50c9509d-22c7-4a22-a47d-8c48425ef4a7&event_date=2018-04-27,2018-04-30&repatriated=true&advanced=1 iNaturalist-Argentina: https://www.inaturalist.org/projects/city-nature-challenge-2018-la-plata
Participatory monitoring plan developed by each of the participants, which includes the planning of data and information management.	https://drive.google.com/open?id=1mNMxMMEj1pbiwj0uqyEoDHcBa1yBxB-O
Assessment of the evaluation and assessment process and the final results obtained, including evidence of the replicate courses held by participants.	Evaluation report: https://drive.google.com/open?id=1wqdiNX2OIrYwvXsASS0YbWfOdSyeNC8tvCkng_4aXK0
The participants in the project, will replicate the workshop in their own countries.	https://drive.google.com/drive/folders/1JdNMU0GL8JAp0SLdA1ywtUt7CaID-N5N?usp=sharing

6. Project communications

Report on the way the results of your project have been communicated and shared with the project stakeholders and broader GBIF community . Please also review the page describing your project available from https://www.gbif.org/programme/82219/capacity-enhancement-support-programme#projects. Highlight any additional documents, events, news items or links that you would like to add to your page.

The Participatory Monitoring Course was promoted using different digital media channels including the website and social networks of the Humboldt Institute and SiB Colombia (see links in activities section). Additionally, we produced a video with the highlights of the course.

Likewise GBIF and GBIF Spain shared the results of the course in their websites:

https://www.gbif.es/en/proyecto/participatory-biodiversity-monitoring/

https://www.gbif.org/project/83344/training-in-participatory-biodiversity-monitoring-building-locally-connecting-globally#about

Finally, we are expecting to publish an article about citizen science, in which we are going to present the result of the inventory of citizen science initiatives in the country (information

obtained in the course). It would be published at the end of the year in a publication of the Humboldt Institute.

7. Evaluation: lessons learned and best practices

An assessment of the overall outcomes and impacts of your project, including strengths and weaknesses in its implementation and results. If any changes have been made to the project plans please clearly indicate this and the reasons for this. Try to identify your experiences that could help others to design and implement projects more effectively, including the best practices to adopt and the pitfalls to avoid.

Evaluation of the main project activities

Outputs/Deliverables	State
Website with information about the course	100%
Open call and participates selected	100%
Six days of workshop with at least 40 participants	100%
Video that consolidates the main lessons learned	100%
Draft of the data management process for citizen science data	100%
Documentation of the course	100%
Communications plan	100%
Supporting participants in publishing data and creating/updating their own participatory monitoring plan	100%

Lessons learnt

On the one hand, we believe that the course was an opportunity to set some foundations of citizen science in the country and allowed us to proposed strategies to improve some parts the designing of participatory monitoring plans and inventories. However, we believe that there are still many aspects to cover, thus, we consider that we need to create other scenarios to keep on working together. On the other hand, it allowed us to get an insight of the state of several initiatives of citizen science in the national and regional levels. Additionally, we were able to identify the levels of applicability of those initiatives according to the needs and context in which the projects are embedded in.

Furthermore, it was possible to broaden the recognition of tools and platforms for publication of open data, also during the course we set the conceptual and methodological basis for the designing of a monitoring plan. However, we believe that it is still necessary to continue working on the training about the aforementioned topics. Therefore, we are considering the possibility of organizing an intensive workshop some of those themes.

According to the evaluation carried out after the course, 80% of the participants considered that the course was very useful and fostered a great scenario for exchanging experiences related to participatory processes at national and international level. It is important to mention that the participants of the course also highlighted some difficulties related to their projects, including: lack of continuity of projects, lack of understanding from donors perspective to the local context when asking for results and difficulty to understand the scope of a participatory monitoring project.

Finally, it is worth to mention that working in association with different partners was fundamental for the development of the course. Working with GBIF representatives of Spain and Latin America was very important, especially in themes related to the application of

technology in citizen science projects. In addition, this course was the first scenario for discussing the possibility of creating an Ibero-american network of citizen science.

8. Future plans and sustainability

A description of how the partners involved will build on the results of this project in their future work. This could include future collaborative activities, such as plans to complete any unfinished project activities and how the future impact of the project could be monitored or measured.

We have high expectations of the course to be replicated in other countries and to achieve a great impact in terms of the use of the methodologies and the recommendations proposed during our course. Also, we want to follow-up some prioritized initiatives and help them in different stages of their monitoring processes when needed.

9. Signature of the project main contact point

Signed on behalf of the project partners   Date

_____   _____