

BID Africa 2015 – National Grant Template

Final narrative report

Instructions

- Fill the template below with relevant information. **please indicate the reason of the delay and expected date of completion.**
- Use the information included in your project Full proposal (reproduced in annex III.a. of your BID contract) as a baseline from which to complete this template
- The information provided below must correspond to the financial information that appears in the financial report
- Sources of verification are for example direct links to relevant digital documents, news/newsletters, brochures, copies of agreements with data holding institutions, workshop related documents, pictures, etc. **Please provide access to all mentioned sources of verification** by either providing direct link or sending a copy of the documents.
- This report must first be sent as a **Word document** to GBIF@GBIF.org and be pre-approved by GBIFS
- Once this report is pre-approved in writing by GBIFS, it must be signed by the BID project coordinator and sent by post to:

The Global Biodiversity Information Facility Secretariat (GBIFS)
Universitetsparken 15
DK-2100 Copenhagen Ø
Denmark

Template

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2. Project Information

2.1. **Project Coordinator: Institution/network/agency name:** Ganglo Cossi Jean, GBIF Node manager. Faculty of Agricultural Sciences. Benin

2.2. **Main contact person and role:** Ganglo Cossi Jean, GBIF Node manager. Faculty of Agricultural Sciences. Benin

2.3. **BID proposal identifier:** BID-AF2015-0065-NAC

2.4. **Project title:** Capacity building and biodiversity data mobilization to address health and food security priorities in Benin (West Africa)

2.5. **Start date and end date of the reporting period:** 1st /09/2017 – 31/08/018

2.6. **Country in which the activities take place:** Benin

3. Overview of results

3.1. Executive summary

Give a short summary of the activities implemented and the outcomes of the project for the reporting period (500 words maximum)

The project began in June 2016. The main achievements are declined as follows with respect to the initial three goals of the project:

1) Establish and strengthen national biodiversity information facilities

We early identified the priority medicinal and agroforestry plant species and organized 5 workshops against the 4 initially planned to capacitate the national GBIF partners to enable data mobilization and data uses all along the project. The last two workshops mostly involved decision and policy makers and we showed cases of our achievements to facilitate their uptake so that they can be taken into account in decision making process. Data from Naturalis in Netherlands were digitized from the images we received from that institution.

2) Increase available biodiversity data, within and beyond the grant period

Capacitated GBIF partners were also given technical and financial assistance so that we could achieve the publication of 17 occurrence datasets for a total of 61,524 georeferenced data published against an initial objective of publishing 50,000 occurrence data. Checklists were derived from the datasets published so that we could publish 3 checklists.

3) Apply biodiversity data in response to national priorities

By using data on the priority species identified, we could achieve the distribution maps and ecological niche models on 11 species of which 05 medicinal species (3 during the last period of the project) and 6 agroforestry species (2 during the last period of the project). Strategies of conservation of the targeted species were identified and recommended. The efficiency of protected areas with respect to biodiversity conservation was evaluated. Those important



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results are separately reported in two of the annexes of the national project report. Those achievements we already presented to decision makers and natural resource managers will also be sent to them. By keeping in touch with decision makers and natural resource managers we can help in integrating our findings into decision making processes on biodiversity conservation and therefore definitely demonstrate the value chain: data → knowledge → applications.

3.2. Progress against expected milestones:

Give an overview of all the expected milestones for your project from the beginning until now (see Annex V of your contract)

Expected milestones/activities	Completed? Yes/No	Explanatory notes	Sources of verification
<p>Completed capacity self-assessment questionnaire for national biodiversity information facilities https://www.gbif.org/document/82277/capacity-self-assessment-guidelines-for-national-biodiversity-information-facilities (EN) https://www.gbif.org/document/82782/evaluation-des-capacites-pour-les-systemes-nationaux-dinformation-sur-la-biodiversite (FR) (Early Progress report milestone)</p>	<p>Yes</p>	<p>We received and completed the questionnaire on request of BID team</p>	<p>GBIFS</p>
<p>At least three national data publishing institutions are registered with GBIF.org Guidelines to become a publisher: https://www.gbif.org/become-a-publisher (Early Progress report milestone)</p>	<p>Yes</p>	<p>12 data publishers are effectively registered on GBIF site</p>	<p>GBIF Benin http://www.gbif.org/publisher/b2db85d5-c5fe-4125-9e36-590a5f651829 Université d'Abomey-Calavi, Faculté des Sciences Agronomiques http://www.gbif.org/publisher/2afeb273-cbbc-4fcf-a10f-7baf271b62c5 Direction Générale des Eaux, Forêts et Chasse http://www.gbif.org/publisher/616e379f-90ed-4c21-9793-8e20f982e9d1 Laboratoire d'Ecologie Appliquée/Université d'Abomey-Calavi (LEA/UAC) http://www.gbif.org/publisher/633602e8-4c6f-4619-b433-c4968da3ed08 Laboratory of Forest Sciences (University of Abomey-Calavi) http://www.gbif.org/publisher/5ca9a113-2397-4540-84b4-41114a1404ef Agence Privée d'Expertise et de Conseils pour le Développement Inclusif (APECDI) http://www.gbif.org/publisher/dfb951db-f345-4e4b-a7e2-00da7efce5e7 SOS Biodiversity https://www.gbif.org/publisher/47737ea6-3620-4c0c-bc6d-c67cc2acfa34 Faculté des Sciences et Techniques (FAST) https://www.gbif.org/publisher/65fffa9e-53b3-40cd-9dbb-727c1cb2a431 Projet forêts sacrées https://www.gbif.org/publisher/f5fe9ccf-233a-4d74-bab5-6043d7926d1d ONG Rêve Développement https://www.gbif.org/publisher/4903a06b-</p>



Expected milestones/activities	Completed? Yes/No	Explanatory notes	Sources of verification
			38a2-4abc-a56a-3876c5eec91a Laboratoire d'Ecologie, de Botanique et de Biologie végétale (LEB) https://www.gbif.org/publisher/63680734-f107-4746-890f-fa68834fb13e Centre régional de recherche et d'éducation pour un développement intégré (credi-ong) https://www.gbif.org/publisher/4fd48884-241b-4e14-940f-dd9ece86c541
At least one person from the project team has completed the certification process following the BID Capacity Enhancement workshop on Data Mobilization organized as a part of the BID programme Africa 2015 (<i>Early Progress report milestone</i>)	Yes	We were two from Benin (GBETOHO Jaures and myself, GANGLO Cossi Jean)	GBIFS
Knowledge dissemination activities have been scheduled following the first BID Capacity Enhancement workshop (<i>Early Progress report milestone</i>)	Yes	There were follow up activities of our previous workshops through in person contacts to enhance data mobilization, data cleaning, and data publishing.	GBIFS (eralier reports)
At least one dataset has been published to GBIF.org (<i>Midterm report milestone</i>)	Yes	In the framework of the project a total of 17 datasets with 61,524 georeferenced records are published against an initial objective of publishing 50,000 records 3 checklists are also published	The links to the datasets published are provided in table 3.3 The links to the checklists published are in table 3.3
The data users identified in the full proposal have documented their intended use of the mobilized data and provided early feedback (<i>Midterm report milestone</i>)	Yes	Two of them are already using data or expressed their interest: 1) Faculty of Agricultural Sciences of the University of Abomey-Calavi through its Laboratory of Forest Sciences 2) Center of study and research in forestry, Benin. Ministry of Environment The two others don't yet have the capacity of using the data published on GBIF site	GBIFS (earlier reports)
All mobilized data have been published to GBIF.org (<i>Final report milestone</i>)	Yes	In the framework of the project a total of 17 datasets with 61,524 georeferenced records are published against an initial objective of publishing 50,000 records 3 checklists	The links to the whole datasets published are in table 3.3 The links to the checklists published are in table 3.3
All published data meet the minimum requirements outlined in the Data Quality Requirements available at https://bid.gbif.org/en/community/data-quality/ (<i>Final report milestone</i>)	Yes	17 occurrence datasets 3 checklists	The links to the whole datasets published are in table 3.3 The links to the checklists published are in table 3.3



Expected milestones/activities	Completed? Yes/No	Explanatory notes	Sources of verification
The training outcomes of the project have been documented, including the number of people receiving certification through the BID Capacity Enhancement workshops, the number of people trained in nationally organized events, and the evaluation of the impacts of these training activities (Final report milestone)	Yes	All along the projects, the workshops organized were documented including those related to training	GBIFS (earlier reports) Report_NAC_REG_01 and report_NAC_REG_02
Final capacity self-assessments for national biodiversity information facilities have been completed with sustainability plans. https://www.gbif.org/document/82277/capacity-self-assessment-guidelines-for-national-biodiversity-information-facilities (EN) https://www.gbif.org/document/82782/evaluation-des-capacites-pour-les-systemes-nationaux-dinformation-sur-la-biodiversite (FR) (Final report milestone)	Yes	It is achieved	Report_03
All uses of the mobilized data have been documented (Final report milestone)	Yes	We achieve reports and scientific publications	GBIFS (earlier reports) Report_NAC_04 Links to scientific publications: https://www.gbif.org/resource/search?contentType=literature&literatureType=journal&countriesOfCoverage=BJ
Best practices and lessons learned have been documented (Final report milestone)	Yes	We achieve a report with respect to them	Report_NAC_REG_05

3.3. Project deliverables and activities

Refer to the table in section 2.2 "Deliverables, activities and reporting criteria" of your BID full proposal. Provide updates on the status of each of planned deliverables. In the event of unexpected delay, please provide detailed explanatory notes and indicate planned completion date. Add as many rows as needed.

Deliverable	Related activity	Completed ? Yes/No	Explanatory notes	Sources of verification
Deliverables for GOAL 1 - Establish or strengthen national biodiversity information facilities				
Strategy is developed to clearly identify the priority medicinal plants renowned in healing malaria as well as priority multipurpose agroforestry plant species to be considered in the project	Achievement of the list of priority species	Yes	This activity was achieved during the period of the first report	GBIFS (earlier reports)
Workshops are organized at national level to capacitate partners and raise their awareness on data mobilization and use	Achievement of workshops at national level	Yes	Two workshops were organized in that respect jointly with the regional project in December 2017 and May 2018	GBIFS (earlier reports)





Deliverable	Related activity	Completed ? Yes/No	Explanatory notes	Sources of verification
Beninese are capacitated in institutions overseas and digitize Beninese data deposited in overseas institutions	Digitization of data in overseas institutions	Yes	But from images received from Naturalis The data will be published to GBIF site with the consensus of Naturalis	Link to the dataset: https://docs.google.com/spreadsheets/d/1EEF9I3fF6y4anNO7_g8-bU0sw0lkLpc6ZxOSvnJyy/edit?ts=5b205fd3#gid=0
Deliverables for GOAL 2 - Increase available biodiversity data, within and beyond the grant period				
Technical and financial assistance are provided to partner institutions to help them achieve data digitization	Enhancing data mobilization at national level	Yes	Our assistance to partner institutions help us successfully publish along the project 17 datasets with a total of 61,524 georeferenced records	The links to the datasets published are provided below
Data mobilized at national level are published through GBIF and GBIF Benin portals	Publishing data mobilized at national level	Yes	In the framework of the project a total of 17 datasets with 61,524 georeferenced records are published against an initial objective of publishing 50,000 records 3 checklist were also published	Links to occurrence datasets <ol style="list-style-type: none"> http://www.gbif.org/dataset/acc8633-d38a-4cd7-a6f8-5a2d4e29832a http://www.gbif.org/dataset/c349aada-38d4-4602-99c1-5939680ad9cb http://www.gbif.org/dataset/107c4e84-79a1-4e3f-b96b-77d87d723628 http://www.gbif.org/dataset/356e8538-d6c7-4935-9450-821a68dea158 http://www.gbif.org/dataset/9e9aa5e4-3717-4212-94f0-089e4a24f501 http://www.gbif.org/dataset/ef9fca55-a303-458a-b95d-eeff0e8cce46 http://www.gbif.org/dataset/80a00e21-1d93-490f-b94e-a6bd87997f33 http://www.gbif.org/dataset/be454edf-e4b7-444d-9f49-cfb54efeacaf http://www.gbif.org/dataset/2a5ec2a2-ca47-469c-9ccd-43826d9bf7a8 http://www.gbif.org/dataset/bfd83b14-c0d7-4646-a9e0-d0a7a37d0a98 http://www.gbif.org/dataset/289d0510-12d8-4d87-9875-465cfc7a8769 http://www.gbif.org/dataset/9cc68a7f-df2d-49d6-b797-94c99a2cafe8



Deliverable	Related activity	Completed ? Yes/No	Explanatory notes	Sources of verification
				13. http://www.gbif.org/dataset/37d71109-216b-461d-b3a4-a100eef077cc 14. http://www.gbif.org/dataset/fc7cca53-4b48-415a-9d31-9c9b71659697 15. http://www.gbif.org/dataset/a5a93c20-5100-413f-a181-382850354c1f 16. https://www.gbif.org/dataset/b737fdac-8e6c-40fb-b743-f226e2b2f9da 17. https://www.gbif.org/dataset/ed5fc1c1-5a36-4ae0-a208-b7b89c8aacf7 links to checklists 1. https://www.gbif.org/dataset/81a257d9-9522-410e-b921-8c9283dbb939 2. https://www.gbif.org/dataset/6ac09c4d-bf7b-4e47-9c2d-f5abf6e89aa0 3. https://www.gbif.org/dataset/dba21dbc-ea38-4bbf-b50f-ba3d256e1f73
Data mobilized in overseas institutions are published through GBIF, GBIF Benin, and partner institutions' portals, and databases	Publishing data mobilized in overseas institutions	No	However, the datasets already exist and we are waiting for the feedback of Naturalis to publish them	https://docs.google.com/spreadsheets/d/1EEF9l3fF6y4anNO7_g8-bU0sw0lKlPc6ZxQSVnJyy/edit?ts=5b205fd3#gid=0
Checklist of renowned multipurpose agroforestry plant species used as staple food and income sources by Beninese populations is achieved and published	Achievement and publishing of checklist of renowned multipurpose agroforestry plant species	Yes	2 checklists are published	The links to the checklists published are above
Checklist of renowned plant species used to heal malaria in Benin is achieved and published	Achievement and publishing of checklist of renowned medicinal plants	Yes	2 checklists are published	The links to the checklists published are above
Deliverables for GOAL 3 - Apply biodiversity data in response to national priorities				
The distribution maps and ecological niche models of the targeted species are achieved in the context of global change	Achievement of distribution maps of the species in the context of global change	Yes	In the framework of the project the research activities of the Laboratory of Forest Sciences that is supporting GBIF Benin concern 11 species of which 05 medicinal species (3 during the last period of the project) and 6 agroforestry species (2 during the last period of the project).	Report_NAC_04



Deliverable	Related activity	Completed ? Yes/No	Explanatory notes	Sources of verification
Strategies of the species' conservation and sustainable use are suggested	Identification of efficient strategies and actions to protect and conserve targeted species	Yes	The results achieved are validated and enriched with participants' contributions during the workshops organized in December 2017	Report_04 and report_ NAC_06
Conclusions are derived on how relevant protected areas are today and in the future with respect to the distributions of targeted species and possible adjustments of their extents are suggested so as to increase their efficiency in protecting biodiversity	Evaluation of the usefulness of protected areas as of today and in the future and suggestions of possible adjustments	Yes	All along the research activities on agroforestry species and medicinal plants, the efficiency of the protected areas were taken into account	Report_04 and report_ NAC_06
Communication and outreach are elaborated from our results to demonstrate to policy and decision makers the value chain: data → knowledge → applications (conservation priorities) on the targeted species	Achievement of communications and outreach on deliverables	Yes	Communication and outreach are elaborated to show case of the achievements and the reports are addressed to the authorities of the Ministries of the environment and sustainable development and high education	Report_ NAC_04 and report_ NAC_06 Video_01
	broadcast deliverables through communications and outreach via diverse media	Yes	Communication and outreach are elaborated to show case of the achievements and the reports are addressed to the authorities of the Ministries of the environment and sustainable development and high education	Report_ NAC_04 and report_ NAC_06 Video_01, Video_02



3.4. Datasets published on GBIF.org

Refer to the table in section 2.4 "Biodiversity data mobilization plan" of your BID full proposal. If the dataset is not yet published, please indicate the name of the institution that is expected to host the data when published in the column "DOI or URL/Planned hosting institution". Add as many rows as needed.

Dataset title	Publishing institution	DOI or URL/Planned hosting institution	Date/expected date of publication	Explanatory notes
Census of the species of medicinal plant of Benin Data mobilized in the framework of BID National project BID-AF2015-0065-NAC and funded by EU	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/acca8633-d38a-4cd7-a6f8-5a2d4e29832a	22/08/2016	See URL
Species from priority families of some medicinal species found protected areas and riparian land in Sudano-guinean and Sudanian agroecological zones. Data mobilized in the framework of BID National project BID-AF2015-0065-NAC and funded by EU	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/c349aada-38d4-4602-99c1-5939680ad9cb	29/09/2016	See URL
Agroforestry plant species found in protected areas and riparian lands in Sudano-guinean and Sudanian agroecological zones. Data mobilized in the framework of BID National project BID-AF2015-0065-NAC and funded by EU	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/107c4e84-79a1-4e3f-b96b-77d87d723628	29/09/2016	See URL
Inventory of <i>Synsepalum dulcificum</i> Daniell in south Benin. Data mobilized in the framework of BID National project BID-AF2015-0065-NAC and funded by EU	Laboratoire d'Ecologie Appliquée/Université d'Abomey-Calavi (LEA/UAC)	http://www.gbif.org/dataset/356e8538-d6c7-4935-9450-821a68dea158	30/09/2016	See URL
Répertoire des Forêts sacrées dans les Départements de l'Ouémé et du Plateau. Data mobilized in the framework of BID National project BID-AF2015-0065-NAC and funded by EU	Programme des Nations Unies pour le Développement (PNUD)	http://www.gbif.org/dataset/9e9aa5e4-3717-4212-94f0-089e4a24f501	30/09/2016	See URL
Distribution de quelques espèces de plantes agroforestières et médicinales au Bénin	Faculté des Sciences et Techniques (FAST)	http://www.gbif.org/dataset/ef9fca55-a303-458a-b95d-eeff0e8cce46	16 January 2017	See URL
Monitoring the dynamics of a medicinal tree species <i>Haematosiphis barteri</i> Hook. f. in Benin	Direction Générale des Eaux, Forêts et Chasse	http://www.gbif.org/dataset/80a00e21-1d93-490f-b94e-a6bd87997f33	5 February 2017	See URL
Plantes médicinales et agroforestières inventoriées au cours de l'élaboration du plan Aménagement et de Gestion Simplifié (PAGS) des forêts	ONG Rêve développement	http://www.gbif.org/dataset/be454edf-e4b7-444d-9f49-cfb54efecaf	2 March 2017	See URL



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galeries des départements de l'Ouémé-Plateau.				
Census of medicinal and agroforestry plants of Benin	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/2a5ec2a2-ca47-469c-9ccd-43826d9bf7a8	2 March 2017	See URL
Data on medicinal plants of Benin	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/bfd83b14-c0d7-4646-a9e0-d0a7a37d0a98	4 May 2017	See URL
Data on agroforestry plant species of Benin	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/289d0510-12d8-4d87-9875-465cfc7a8769	4 May 2017	See URL
List of medicinal and agroforestry plants found in various ecosystems of Benin	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/9cc68a7f-df2d-49d6-b797-94c99a2cafe8	4 June 2017	See URL
Census of agroforestry plant species of Benin (West Africa) by SOS Biodiversity	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/37d71109-216b-461d-b3a4-a100eef077cc	4 June 2017	See URL
Census of medical plant species of Benin (West Africa) by SOS Biodiversity	Laboratory of Forest Sciences (University of Abomey-Calavi)	http://www.gbif.org/dataset/fc7cca53-4b48-415a-9d31-9c9b71659697	3 June 2017	See URL
Palmiers sauvages du Bénin	Laboratoire d'Ecologie Appliquée/Université d'Abomey-Calavi (LEA/UAC)	http://www.gbif.org/dataset/a5a93c20-5100-413f-a181-382850354c1f	28 July 2017	See URL
Agroforestry species in Parkia biglobosa's parklands in Northern Benin	Laboratory of Forest Sciences (University of Abomey-Calavi)	https://www.gbif.org/dataset/b737fdac-8e6c-40fb-b743-f226e2b2f9da	11 August 2017	See URL
Plants censued in the framework of the follow up of the dynamics of the secondary forests of the Lama forest reserve (Southern Benin)	Laboratory of Forest Sciences (University of Abomey-Calavi)	https://www.gbif.org/dataset/ed5fc1c1-5a36-4ae0-a208-b7b89c8aac7	13 August 2018	See URL
Checklist derived from occurrence data published on agroforestry plant species on GBIF site	<u>Laboratory of Forest Sciences (University of Abomey-Calavi)</u>	https://www.gbif.org/dataset/81a257d9-9522-410e-b921-8c9283dbb939	19/08/2018	See URL
Checklist derived from occurrence data published on medicinal plant species on GBIF site	<u>Laboratory of Forest Sciences (University of Abomey-Calavi)</u>	https://www.gbif.org/dataset/6ac09c4d-bf7b-4e47-9c2d-f5abf6e89aa0	19/08/2018	See URL
Checklist derived from occurrence data published on agroforestry and medicinal plant species on GBIF site	<u>Laboratory of Forest Sciences (University of Abomey-Calavi)</u>	https://www.gbif.org/dataset/dba21dbc- ea38-4bbf-b50f-ba3d256e1f73	19/08/2018	See URL

3.5. Examples of use of biodiversity data available through GBIF

Data mobilised through the BID programme, ultimately, should guide natural resource conservation and management policy. We require you to report on how you have integrated these data into these policy-making processes. You may want to refer to the section 2.5 "Plan to support the integration of biodiversity information into policy and decision-making process" of your original proposal as a reminder of your original commitments.

As part of that process, we request you to provide us with a summary of how you have used these data within the decision-making process and we have included some guiding questions below to help with that process. Please note



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that if your dataset has been combined with other datasets in analyses that guide the decision-making process, then this should be recorded too.

Description

Has your project been successful in integrating data within the policy-making process?

To some extent, yes. In the project team backed by the Laboratory of Forest Sciences, we used the data on priority valuable species of the country and achieved important results. The results were presented through workshops and communications. Some of the results are yet published in good scientific journals and others are still in the pipeline of journals. Especially during this last period of the project, we presented the results to decision makers during the workshops of December 2017 and May 2018. We achieved reports on our findings and sent them to decision makers and natural resource managers. Now we need to keep in touch with those partners to integrate the results into decision making process that surely will bear fruit with time.

Where did the demand for these data come from?

Some demands are implicit and come from the community of data users (researchers, teachers, natural resource managers...). They are downloading more and more data published on Benin at GBIF portal and are publishing diverse scientific articles partly reported on the following link:

<https://www.gbif.org/resource/search?contentType=literature&literatureType=journal&countriesOfCoverage=BJ>

Some of the authors of those papers, come from institutions that earlier expressed explicitly their needs of data:

- University of Abomey-Calavi. Faculty of Agricultural sciences
- Center for Studies, Research, and Trainings in Forestry
- University of Agriculture of Kétou
- University of Parakou

If yes, which policies have been developed using your data?

All along this project, through 2 to 3 workshops each year, partners of GBIF Benin including researchers, students, teachers, natural resources managers are invited and attended our workshops and were capacitated in data mobilization, data downloading and data use. The reports achieved are on decision and policy makers' desks and we will keep in touch with them to assist whenever needed, the integration of our results into decision.

If no, what were some of the challenges you faced in getting your data into those processes?

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Did you have a biodiversity data integration plan from the beginning of your project? If so, did you have to adapt your plan as the project progressed and why did you have to make those alterations?

Yes we did. The intended targeted application of biodiversity data is achieved with reliable results disseminated through workshops, communications and scientific papers. Through the workshops and communications, policy and decision makers on biodiversity conservation were invited and informed. Furthermore we sent to them the reports on our results. We will maintain contact with them and accompany them whenever required in the process of decision making taking into account our findings.



In what format are your data being used i.e. what were the analyses, if any, that you needed to perform on the data to ensure that they was in a format accessible to policy-makers?

The French version of the reports we presented to the decision makers and natural resource managers during our workshops is part of the reports sent to GBIFS / BID. The French version of the reports will also be sent to them. As you can realize, there are inside the reports, the distribution maps of species as well as ecological niche models taking into account scenarios of climate changes. On the maps, favourable and unfavourable areas of species distribution are easy to be understood by decision makers and natural resource manager and can inspire and guide them on strategies of biodiversity conservation identification and implementation. To achieve those important results, data were digitized, cleaned, and published on GBIF site. Thereafter, data of the different species of interest were downloaded from GBIF site and cleaned. We use the data in GIS to achieve the distribution maps of species. We further use the data along with environmental data in MaxEnt to achieve distribution and ecological models to inform decisions.

What level of communication has there been with the relevant policy stakeholders i.e. by which means? With what regularity? And, how critical have these interactions been for the development policy-relevant analyses?

As we said, it was through outreach and communication during workshops. We also achieve video records and will send to them to support the written reports. Those exchange of communication took place at least twice a year all along the project. We will maintain contact and accompany them whenever required in the process.

What additional support (resources, tools, network, training) would be needed for your project to ensure the flow of information from mobilisation to decision-making?

Even if nothing is really perfect on earth, we consider that in the framework of this project, we achieve a lot. Priorities must now shift to other more global field of interests of people (food security, public health, tourism...)

How would you improve on your own processes in the future to improve data integration in the future?

The results achieved in the framework of this project are simply outstanding. To facilitate their uptake, we need more communications and outreaches, more press release, more lobbying...

Data may serve other purposes other than for policy-making and these are as valuable. How was your data used for other purposes e.g. development of training materials, scientific publications, communication activities etc?

Right, we achieve interesting scientific publications

<https://www.gbif.org/resource/search?contentType=literature&literatureType=journal&countriesOfCoverage=BJ>

. Students in the master program of biodiversity informatics daily use data to achieve training exercises. For example, students used the data to achieve and publish the checklists of plants on GBIF site.

Supporting materials

As part of our reporting, we request you to provide us with a copy of any materials highlighting data use on your dataset, either on its own or in combination with other datasets. This could be in the form of:

- Reports – governmental, ministerial, non-governmental organisations, international policy-making bodies
- Policy briefs
- Scientific publications
- Outputs from analyses that will be used in the future e.g. species distributions maps and other spatial analyses
- Education/communication materials



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Please provide a valid dataset to the doi. Where the doi is not known, please state why.

Name of resource	Type of resource i.e. report, policy brief, scientific publication, analysis output, education materials, communication materials, other (please specify)	Dataset doi	Link to document or publication citation
Ecological niche modeling and strategies for the conservation of <i>Dialium guineense</i> Willd. (black velvet) in West Africa	Scientific publication (agroforestry species)	http://doi.org/10.15468/dl.bn7vpz	http://www.academicjournals.org/journal/IJBC/article-abstract/FB78CD066719
Spatial distribution and strategy of conservation of <i>Chrysophyllum albidum</i> in Benin	Report (agroforestry species)	On June 2017 directly with the plugin of GBIF in QGIS Further downloading: https://doi.org/10.15468/dl.e692qf	GBIFS (earlier reports to BID)
Modeling the spatial distribution of multipurpose forest trees for sustainable conservation and use in the context of climate change: case of <i>Azelia africana</i> Sm. and <i>Pterocarpus erinaceus</i> Poir. in Benin (West Africa)	Report (agroforestry species)	DOI of <i>P. erinaceus</i> : http://doi.org/10.15468/dl.6ucyyp ; DOI of <i>A. africana</i> : http://doi.org/10.15468/dl.yl7epd .	GBIFS (earlier reports to BID)
Potential geographical distribution of <i>Cissus populnea</i> Guill. & Perr. in Benin (West Africa)	Report (agroforestry species)	http://doi.org/10.15468/dl.des6nm	GBIFS (earlier reports to BID)
How broads are the suitable areas of <i>Sarcocephalius latifolius</i> Sm. E.A. Bruce to support its conservation despite climate change and use of all of its parts	Report (agroforestry species)	https://www.gbif.org/occurrence/download/0032212-160910150852091	GBIFS (earlier reports to BID)
Achievement of this last period			
Vulnerability of <i>Khaya senegalensis</i> Desr & Juss to climate change and to the invasion of <i>Hypsipyla robusta</i> Moore in Benin (West Africa)	Report (medicinal plants) and scientific publication	http://doi.org/10.15468/dl.is3mds and http://doi.org/10.15468/dl.k0adsn	Report_NAC_04 https://www.ajol.info/index.php/ijbcs/article/view/172335
Distribution and ecological niche of <i>Crateva adansonii</i> DC. in the context of climate change in Benin	Report (medicinal plants)	DOI10.15468/dl.r7f1oy.	Report_NAC_04
Spatial distribution modelling and impact of climate changes on species from the genus <i>Combretum</i>	Report (medicinal plants)	(DOI: 10.15468/dll.siygq)	Report_NAC_04
Distribution and ecological niche modeling of valuable species of Benin under climate changes: case of <i>Spondias mombin</i> L.	Report (agroforestry species)	https://doi.org/10.15468/dl.jldlp2	Report_NAC_04
Predicting the Impact of Climate Change on the Distribution of the Iconic African Baobab (<i>Adansonia digitata</i> L.) using Ecological Niche Models	Report (agroforestry species)	https://doi.org/10.15468/dl.n5eabk	Report_NAC_04

3.6. Events organized as part of the project

List all the events that have been organized as part of your project. Please provide links to any documents or webpages documenting the use in the "Sources of verification" column. Add as many rows as needed.



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Full title	Organizing institution	Dates	Number of participants	Sources of verification
Thoughts workshop on conservation of priority agroforestry, threatened and medicinal species, control and eradication of invasive alien species	GBIF Benin	19-20 December 2017	40	Report
Workshop on the dissemination of the results of the "Biodiversity Information for Development (BID) " projects to decision-makers and the scientific community	GBIF Benin	09-10 May 2018	48	Report





4. Updated calendar for the BID project implementation and evaluation period

The calendar should be completed in the same way as in the Full Project Proposal, but should include any expected changes. Provide reasons for any expected changes in section 4.1 'Explanatory Notes'.

Implementation period (maximum 24 months, starting 1 June 2016 at the earliest)																										
Implementation period start date and end date (01/06/16 to 31/08/18)																										
Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Notes	
BID Capacity Enhancement workshop 1			X	X																						
6-month progress analysis						X																				
Mid-term evaluation & reporting															X											
Achievement of the list of priority species	X	X																								
Achievement of workshops at national level	X				X	X											X							X		
Digitization of data in overseas institutions																X	X	X	X	X	X	X	X	X	X	
Enhancing data mobilization at national level		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
In person contacts to enhance data mobilization		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Publishing data mobilized at national level		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Publishing data mobilized in overseas institutions																X	X	X	X	X	X	X	X	X		
Achievement and publishing of checklist of renowned multipurpose agroforestry plant species								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Achievement and publishing of checklist of renowned medicinal plants								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Achievement of distribution maps of the species in the context of global change							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Identification of efficient strategies and actions to protect							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		





Evaluation of the usefulness of protected areas as of today and in the future and suggestions of possible adjustments				X			
Achievement of communications and outreach on deliverables					X		
broadcast deliverables through communications and outreach on TVs					X		

4.1. Explanatory notes:

The activities are achieved as planned



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5. Sustainability plans

Explain the approach that will be taken to ensure the sustainability of the project's results after the end of your project (500 words maximum)

The sustainability plans are presented below:

Establish or strengthen national biodiversity information facilities

GBIF Benin will be in charge of organizing workshops to enhance continuously capacity of in-country partner institutions to enable them to continue to contribute data after the project. A great success is that the ongoing master program of biodiversity informatics at my university is continuously capacitating students to contribute data and to use data to inform decision making. We need to lobby and get funds from the governments and elaborate and submit projects to various donors (EU, USA NSF, NEPAD, African Union, IPBES, and other donors ...) to complement the funds of JRS Biodiversity Foundation allocated to us to support the master program.

Increase available biodiversity data

In the framework of the master program in biodiversity informatics, data on priority species will be more mobilized and used. In parallel, capacity building to other partners than the students in the master program will continue whenever funds are made available through different projects or the government. Maintaining contacts with GBIF Benin partners, will enable continuous data mobilization.

Use of biodiversity data in response to national priorities

We are happy that GBIF Benin's team is more and more capacitated in relevant data use analysis. Students in the master program are also more and more in-depth capacitated. The relevant skills available will process and fully analyze data to achieve relevant results to guide decision making with respect to priorities in biodiversity conservation.



6. Beneficiaries/affiliated entities and other cooperation

6.1. Relationship with project partners

Please describe the relationship between your project coordinating team/institution and your project partners, and with any other organisations involved in implementing your BID project.

All the project partners are always invited to attend workshops organized in the framework of the project and are therefore regularly trained. They are also contributing data as promised. Other laboratories of our Universities are also more and more involved in the project and they are also providing data for publication.

6.2. Links to other projects and actions

Where applicable, outline any links and synergies you have developed with other actions, e.g. GBIF nodes, other BID funded projects, etc. If your organization has received previous grants in view of strengthening the same target group, to what extent has your BID project been able to build upon/complement the previous project(s) ?

As GBIF Benin node manager, I am in close contact with the three coordinators of BID small grant projects to assist them in attaining their objectives. I also publish the data related to their projects on GBIF site. I invite them and they all attended the workshops organized and were then trained.

7. Visibility

Please refer to the [BID guidelines](#).

7.1. Visibility of the BID project

How is the visibility of your BID project being ensured?

Short summary

All the datasets published on GBIF site, cited the BID project and its funder (European Union). On the banner of the workshops, the logos of EU, BID, and GBIF are put in good place.

Sources of verification

They are the links to the datasets published:

Links to occurrence datasets published

<http://www.gbif.org/dataset/acca8633-d38a-4cd7-a6f8-5a2d4e29832a>

<http://www.gbif.org/dataset/c349aada-38d4-4602-99c1-5939680ad9cb>

<http://www.gbif.org/dataset/107c4e84-79a1-4e3f-b96b-77d87d723628>

<http://www.gbif.org/dataset/356e8538-d6c7-4935-9450-821a68dea158>

<http://www.gbif.org/dataset/9e9aa5e4-3717-4212-94f0-089e4a24f501>

<http://www.gbif.org/dataset/ef9fca55-a303-458a-b95d-eeff0e8cce46>

<http://www.gbif.org/dataset/80a00e21-1d93-490f-b94e-a6bd87997f33>



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<http://www.gbif.org/dataset/be454edf-e4b7-444d-9f49-cfb54efeacaf>
<http://www.gbif.org/dataset/2a5ec2a2-ca47-469c-9ccd-43826d9bf7a8>
<http://www.gbif.org/dataset/bfd83b14-c0d7-4646-a9e0-d0a7a37d0a98>
<http://www.gbif.org/dataset/289d0510-12d8-4d87-9875-465cfc7a8769>
<http://www.gbif.org/dataset/9cc68a7f-df2d-49d6-b797-94c99a2cafe8>
<http://www.gbif.org/dataset/37d71109-216b-461d-b3a4-a100eef077cc>
<http://www.gbif.org/dataset/fc7cca53-4b48-415a-9d31-9c9b71659697>
<http://www.gbif.org/dataset/a5a93c20-5100-413f-a181-382850354c1f>
<https://www.gbif.org/dataset/b737fdac-8e6c-40fb-b743-f226e2b2f9da>
<https://www.gbif.org/dataset/ed5fc1c1-5a36-4ae0-a208-b7b89c8aac7>

links to checklists published

<https://www.gbif.org/dataset/81a257d9-9522-410e-b921-8c9283dbb939>
<https://www.gbif.org/dataset/6ac09c4d-bf7b-4e47-9c2d-f5abf6e89aa0>
<https://www.gbif.org/dataset/dba21dbc-ea38-4bbf-b50f-ba3d256e1f73>

7.2. Visibility of the EU contribution

How is the visibility of the EU contribution being ensured within your project implementation?

Short summary

All the datasets published on GBIF site acknowledged European Union as the funder of the BID project. We also thank EU in our opening and closing speeches during workshops. On the banner of the workshops, the logo of EU was put in good place

Sources of verification

They are the links to the datasets published:

Links to occurrence datasets

<http://www.gbif.org/dataset/acca8633-d38a-4cd7-a6f8-5a2d4e29832a>
<http://www.gbif.org/dataset/c349aada-38d4-4602-99c1-5939680ad9cb>
<http://www.gbif.org/dataset/107c4e84-79a1-4e3f-b96b-77d87d723628>
<http://www.gbif.org/dataset/356e8538-d6c7-4935-9450-821a68dea158>

<http://www.gbif.org/dataset/9e9aa5e4-3717-4212-94f0-089e4a24f501>
<http://www.gbif.org/dataset/ef9fca55-a303-458a-b95d-eeff0e8cce46>
<http://www.gbif.org/dataset/80a00e21-1d93-490f-b94e-a6bd87997f33>
<http://www.gbif.org/dataset/be454edf-e4b7-444d-9f49-cfb54efeacaf>
<http://www.gbif.org/dataset/2a5ec2a2-ca47-469c-9ccd-43826d9bf7a8>
<http://www.gbif.org/dataset/bfd83b14-c0d7-4646-a9e0-d0a7a37d0a98>
<http://www.gbif.org/dataset/289d0510-12d8-4d87-9875-465cfc7a8769>
<http://www.gbif.org/dataset/9cc68a7f-df2d-49d6-b797-94c99a2cafe8>
<http://www.gbif.org/dataset/37d71109-216b-461d-b3a4-a100eef077cc>
<http://www.gbif.org/dataset/fc7cca53-4b48-415a-9d31-9c9b71659697>
<http://www.gbif.org/dataset/a5a93c20-5100-413f-a181-382850354c1f>
<https://www.gbif.org/dataset/b737fdac-8e6c-40fb-b743-f226e2b2f9da>
<https://www.gbif.org/dataset/ed5fc1c1-5a36-4ae0-a208-b7b89c8aac7>

links to checklists



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<BID project id>

<Start and end date of the reporting period>



<https://www.gbif.org/dataset/81a257d9-9522-410e-b921-8c9283dbb939>
<https://www.gbif.org/dataset/6ac09c4d-bf7b-4e47-9c2d-f5abf6e89aa0>
<https://www.gbif.org/dataset/dba21dbc-ea38-4bbf-b50f-ba3d256e1f73>



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