Darwin Initiative Main & Extra Annual Report

To be completed with reference to the "Project Reporting Information Note": (https://www.darwininitiative.org.uk/resources/information-notes/)

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes)

Submission Deadline: 30th April 2025

Submit to: BCF-Reports@niras.com including your project ref in the subject line

Darwin Initiative Project Information

Scheme (Main or Extra)	Main
Project reference	30-020
Project title	Fungal Conservation in Sub Saharan Africa: sustainability and livelihood implications
Country/ies	Benin and Zimbabwe
Lead Organisation	University of Parakou
Project partner(s)	CAB International (United Kingdom), Matobo Conservation Society (Zimbabwe), Permaculture Association (United Kingdom)
Darwin Initiative grant value	£399,974
Start/end dates of project	1 June 2023 to 31 March 2026
Reporting period (e.g. Apr 2024 – Mar 2025) and number (e.g. Annual Report 1, 2, 3)	Apr 2024 – Mar 2025 Annual Report 2
Project Leader name	Yorou S. Nourou
Project website/blog/social media	https://fc-ssa.org/ https://web.facebook.com/profile.php?id=61552153022482 https://twitter.com/FCSSAnews
Report author(s) and date	NS Yorou, April 30th 2025

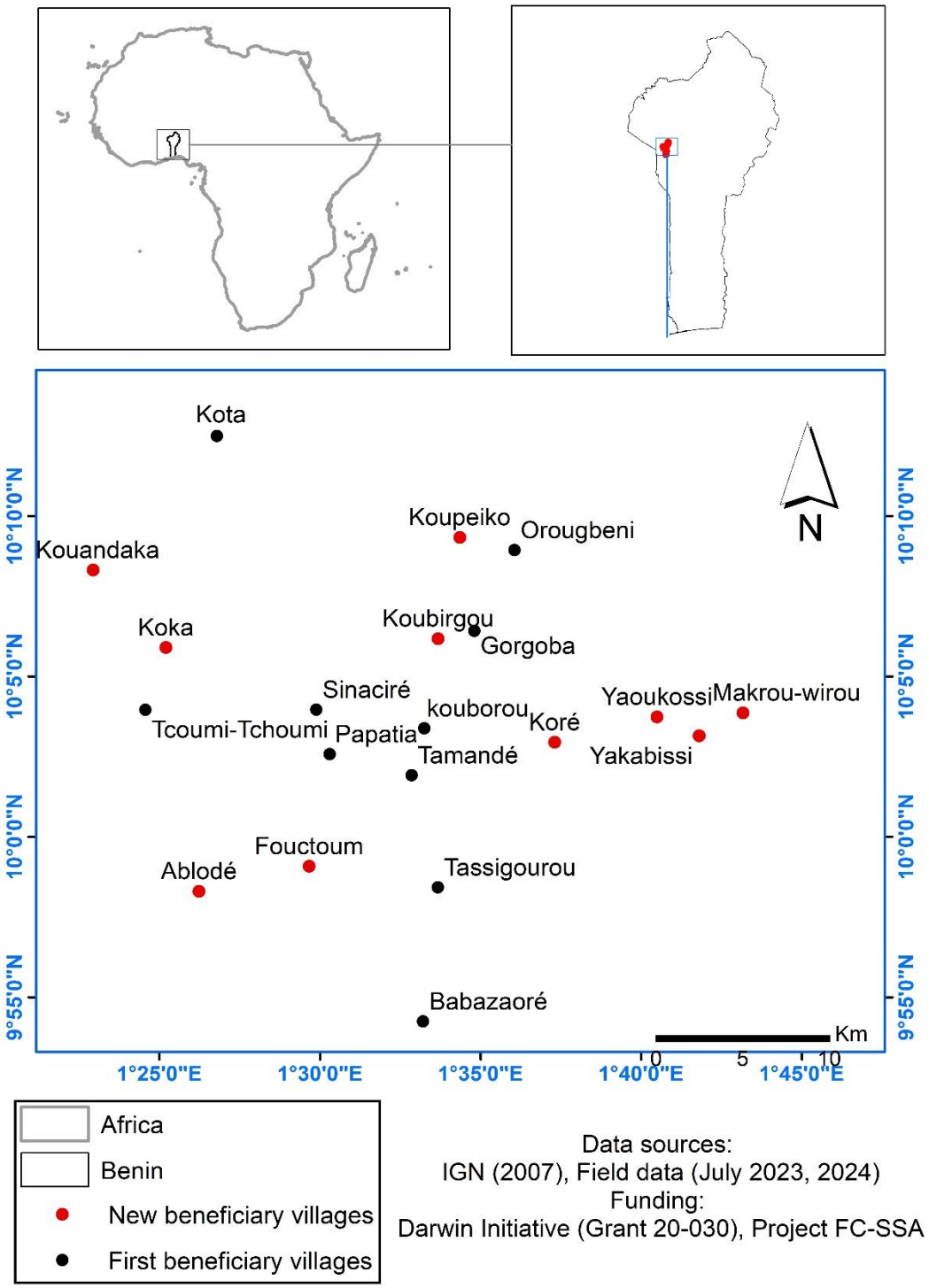
1. Project summary

Fungi play crucial roles in ecosystem functioning, including decomposition, nutrient cycling, and symbiotic relationships with plants. They provide numerous ecosystem services that are vital for human well-being and livelihoods. As Non-Timber Forest Product providing food and medicine, fungi are harvested by rural people, especially women, and sold for income generation. However, they are overlooked in conservation efforts compared to animals and plants. Sub Saharan Africa is especially the region where fungi are less known scientifically. This coupled with anthropogenic threats to natural habitats and global change leads to fungal diversity loss with serious implications for sustainability and livelihoods. These problems were identified from the previous National Biodiversity Strategies and Action Plans (NBSAPs) of Sub-Saharan Africa countries where half don't mention fungi and the rest treat them as resources to be exploited, undesirables to be eliminated, or even confuses them with plants or insects.

The project entitled "*Fungal Conservation in Sub Saharan Africa: sustainability and livelihood implications*", aims to achieve five outputs: (1) information about sub-Saharan fungi and the threats they face, available on-line, analysed and presented to governments as national fungal conservation plans in a form convenient for non-specialists, (2) fungal habitats and sustainable

mushroom-harvesting livelihoods they provide understood, valued, protected, and included in remediation plans, with (Benin only) pilot ameliorative measures introduced [UN Sustainable Development Goals SDG2, SDG3, SDG7, SDG15], (3) a global investigation of links between fungal diversity loss, poverty and gender inequality (currently almost completely unexplored), with a published pioneering report on the findings, (4) Sub-Saharan mycology infrastructure strengthened, and (5) public awareness of importance of fungi raised.

This project is taking place in Zimbabwe and Benin. Initially, the project targeted a total of 10 villages. During 2024-2025, ten additionnal villages (Ablodé, Fouctoum, Koka, Koré, Koubirou, Kouandaka, Koupeiko, Makrou-Wirou, Yakabissi, and Yaoukossi) were selected, bringing the total number of beneficiary villages to 20 (see figure 1).



2. Project stakeholders/ partners

The partners of this project are university, international organizations, NGOs and a volunteer contributor. In addition, there are collaborators such NGO and beneficiary villages from Benin.
LEAD PARTNER: University of Parakou. The university is the lead organization, responsible for project management, financial control, monitoring and evaluation, risk management, ensuring value for money, maintaining ethical standards, and reporting to the Darwin Initiative. It supervises fieldworks, trials, and the organization of NGO courses related to the project. The university jointly supervises research with CABI on investigating how declines in fungal diversity impact poverty and gender inequality.

PARTNER: CABI. In accordance with its global commitment of sharing knowledge and science, CABI has participated in the project through preparing plans for a culture collection in Parakou (jointly with Yorou); supervision of report on links between fungal diversity decline and poverty and gender inequality; supervision of status of fungi assessments.

PARTNER: Matobo Conservation Society. It is overseeing monitoring and evaluation efforts for Outputs 2 and 4 in Zimbabwe. Its key contributions encompassed digitizing fungal diversity data, advancing public education on fungal conservation, and assisting in the development of national fungal assessments for Zimbabwe. Additionally, it collaborates with the team of Benin to produce comprehensive field guides on local fungi species while spearheading project outreach, communications, and public engagement initiatives to raise awareness about fungal preservation efforts.

PARTNER: Permaculture Association. It plays a crucial role as an expert partner in community-driven sustainable development, with a strong emphasis on advancing gender equality. The organization is leading monitoring and evaluation on outputs 2 and 4 in Benin, while managing a diverse portfolio of activities, including overseeing habitat restoration activities, blog content, public outreach, and digital campaigns for initiatives spanning Benin, the UK, and Zimbabwe.

PARTNER: Cybertruffle. It has played a pivotal role in training and coordinating data digitization and editing teams in Benin and Zimbabwe, ensuring high-quality outputs. It contributes monitoring and evaluation efforts for Output 1 while managing software development and updates for country-specific websites and horizon-scanning tools. Cybertruffle is also helping to new country-specific websites for Sub-Saharan nations, providing platforms to share fungal diversity information, in addition to producing exhibition materials to raise awareness. Furthermore, Cybertruffle will be contributing to the development of national fungal assessments, strengthening the documentation and analysis of fungal diversity in Sub-Saharan Africa.

STAKEHOLDER: **National Office of Water Forest and Hunting.** Facilitates the implementation of field activities and cooperates on the proposal of national fungal conservation plan.

STAKEHOLDER: *REDERC ONG*. Based in Papatia (Benin), this NGO collaborates with the Project. It is responsible for facilitating activities in the different project beneficiary villages.

Each project partner successfully fulfilled their assigned roles, contributing to the overall effectiveness of the initiative. The North-South collaboration notably strengthened the capacities of southern partners through knowledge exchange and training. The National Office of Water, Forest, and Hunting played a crucial role by facilitating field activities and actively contributing to the development of a national fungal conservation plan. The British embassies provided vital support by visa approvals, enabling team members to travel to the UK for capacity-building. Local communities, ensuring gender equality and social inclusion, were meaningfully engaged in seed collection, nursery establishment, and ecosystem restoration efforts. Additionally, stakeholders

were sensitized to the links between biodiversity and poverty through targeted information meetings and educational materials such as flyers and PowerPoint presentations.

3. Project progress

3.1 Progress in carrying out project Activities

Output 1: Conservation planning

[Activity 1.1 (1)] During the second year of this project, about 40,000 records of Sub-Saharan fungi were acquired, digitised and added to the 22,000 records of the previous year (**Evidence in Annex 4a**). **[Activity 1.1 (2)]** Benin and Zimbabwe graduates, during a visit in the UK and Dr Minter's in Zimbabwe, were introduced to HTML and Perl programming in order to enhance their capacity to develop website for beneficiary countries' fungal records with subsequent applications to handle diverse users' requests [see Activity 4 1 (3) below]. During these training, they had participated to some editing tasks of the new digitised cohort of fungal records to ensure that these latter fit all the standards of style of the Cybertruffle database. Furthermore, during the stay of Apollon HEGBE (graduate 1 from Benin) in the UK, he contributed to updating the Perl program that enable the Cybertruffle database to display distribution map of the records. This makes it possible to display distribution map of the SSA fungal record at country level. **[Activity 1.1 (3) and 1.1(9)]** So far, while no reference collections have been identified this year, two big databases of fungal records of SSA have been acquired by the team of Benin. One of these databases is about airborne mycobiome in 8 countries in SSA with more than 20,000 records and the other is about soil mycobiome associated to forest trees and plantation in Benin, Ghana and Cote d'Ivoire with more than 5,000 records. In the project's third year, digitized records from these two databases will be added to the project queue. **[Activity 1.1 (4)]** During the project's second year, for the selected SSA countries, searches were made for publications where fungi are discussed. **[Activity 1.1 (5)]** The nomenclatural and taxonomic information of the newly digitised records is almost edited up to genus and species level in order to meet standards of style of the taxonomic table of Cybertruffle database (**Evidence in Annex 4a**). Other editing is underway and includes basic checks that (1) scientific names of fungi and (2) scientific names of their associated organisms in each record are known to the system's Nomenclatural & Taxonomic Database, (3) names of countries, names of in-country (4) provinces/states etc., and (5) second-tier in-country localities, and (6) descriptions of exact localities are meaningful, (7) latitude and (8) longitude information is present wherever possible, (9) dates are valid, and descriptions of (10) substrata, (11) habitats and (12) ecosystems are sufficiently structured to permit informative analysis. [**Activity 1.2 (2)]** Congo, Burundi and Guinea have been added to the three countries (Benin, Zimbabwe and Burkina Faso) shortlisted last year. Data acquisition, digitisation, editing has proceeded so well that, reports and national fungal conservation plans are underway for CBD National Focus Points [See Activity 1.3 (2) below]. The reports will be presented to CBD national focus points during the fourth International Congress of Fungal Conservation (ICFC-4) in November 2025 in Benin. **[Activity 1.3 (2), 1.3 (8)]** During the next year, national fungal conservation plans are expected to be ready for the selected countries and sent to their CBD national focus points. **[Activity 1.3 (3) and (5)]** Using the multiple published papers, information on associated organisms of fungi were recorded for any Sub-Saharan African countries. **[Activity 1.3 (6)]**: National Reports (NR) and NBSAP published on the CBD website form an important source of evidence about national levels of awareness documents about fungi among administrators and politicians. Using simple standard criteria, coverage of fungi in those documents is evaluated by the International Society for Fungal Conservation and published on its Micheli Guide to Fungal Conservation website [www.fungal-conservation.org/micheli.htm]. CBD NR and NBSAPs were evaluated and the results are made available on the Micheli website in addition to the 74 evaluations in the project's first year. The project team, represented by the project's leader Prof. Yorou, seized the opportunity presented by the CBD 16th Conference of the Parties (COP16), held in Cali, Colombia, from October 21 to November 1, 2024, to spotlight the urgent challenges facing fungal conservation globally. During that event, he endorsed the Benin Focus Point to support the proposal (initiated by the United Kingdom and Chile) of formal recognition of fungi as a unique biological kingdom termed "Funga" and a stronger global commitment to prioritize and implement fungal conservation initiatives [**Evidence in Annex 4b**]. [**Activity 1.3 (7)**]. The project leader's participation in COP16 is remarkable in that it is the first time a mycologist has officially taken part in a COP, which has helped to highlight the project's activities. No other COP has ever had so many sessions dedicated to fungi. The project director

actively participated in all sessions. The bibliographic searches about how fungal diversity promotes wealth and well-being, and how its loss impacts poverty and gender issues for each Saharan-Africa country, started in the first year has been wrapped up this year.

Output 2: Livelihoods protection (Benin, Zimbabwe).
[Activity 2.4 (4)] In June 2024 we implemented various restoration activities with local communities, representatives of forest office and REDERC NGO. A total of 3,291 seedlings were transplanted across the first cohort of 10 target forests, with the involvement of 83 workers. The transplanted seedlings are being maintained by the local community through the installation of firebreaks. In January, we counted 1,952 plants growing at the regeneration sites, representing a survival rate of approximately 59%. **[Evidence Annex 4c]**. **[Activity 2.5 (2,3,4,5 and 7)]** In July 2024, some project staff members introduced the initiative to authorities and local communities in ten additional villages (Koka, Koré, Koubirou, Makrou-Wirou, Ablodé, Kouandaka, Koupeiko, Fouctoum, Yakabissi, and Yaoukossi), bringing the total number of beneficiary villages to 20 **[Evidence See Map]**. As part of our efforts, we assessed the potential of regeneration sites (community forests) in each village for receiving transplants from nurseries and implementing agroforestry, intercropping, and other restoration treatments. In collaboration with REDERC NGO, we also conducted site visits to the proposed nurseries, documenting their characteristics. This assessment led to the selection of six sites (Ablodé, Fouctoum, Koka, Makrou-Wirou, Koupeiko, and Yakabissi) for seedling production, which will supply the four remaining new villages. During the same period, we introduced Output 2 to the local population. Meetings were held in each of the ten selected villages to discuss planting logistics, sapling care, and practical arrangements **[Evidence Annex 4d]**. Subsequently, activities were planned in alignment with the community's availability, ensuring that all participants clearly understood the tasks and agreed upon the terms of remuneration. **[Activity 2.5 (6)]** Villagers were selected based on their avalaibility and interest in our project to collect seeds of *Afzelia Africana, Isoberlinia doka, Isoberlinia tomentosa* and *Berlinia grandiflora*, the most dominants and threatened ectomycorrhizal trees of the project sites **[Evidence Annex 4e]**. They were all remunerated. **[Activity 2.5 (8)]** Meetings were held in each of the ten newly added villages to discuss seedling transplantation and aftercare with local populations and designated focal points. **[Activity 2.5 (4)]** in February 2025, we introduced courses topics to local populations and identified beneficiaries as well as agree course dates. Courses were delivered on impacts of forest destruction, the ecological importance of mycorrhizal fungi, the role of mushrooms' harvesting in livelihoods, forest nursery practices, and regeneration management. Courses were held at ground and secondary (if available) schools of all target villages, in order to promote awareness among pupils. Nsezi High School in the south-eastern side of Matobo Hills (Zimbabwe) was revisited in September 2024. Seeds of *Brachystegia glaucescens* were planted in this school. Following initial visits by the project leader and some graduates, work has begun on plans for further visits by other core staff. Further visits are now planned based on data collection and analysis from year 1. Training needs have been identified as: 1- Water harvest, storage, and management. 2- Composting and waste management. 3- Cultivation of mushrooms. 4- Sustainable use of wild mushrooms. 5- Different methods and substrates for boosting the diversity of wild mushrooms. A course has been designed to address those needs using different types of technology such as 3D printing for models, Artificial Intelligence for films and videos, and software translation for training materials. 6- Exploring links between indigenous knowledge (TEK) and science of conservation represented in permaculture practices **[Evidence Annex 4f]**. Exploring the natural cycles, especially of water, carbon, and nitrogen in simple non-technical terms. **[Activity 2.6 (2)]** During height days in February and March 2025, we delivered courses in four villages about impacts of forest destruction, the ecological importance of mycorrhizal fungi, the role of mushroom harvesting in livelihoods, forest nursery practices, and regeneration management. **[Evidence Annex 4o]**. **[Activity 2.7 (2) and (3)]** Nursery installation activities were held in February 2025, after which seed collection was carried out in collaboration with local communities. Based on the projected seedling production per site (800 and 1,200), we trained 10-person teams composed of at least 70% women and equipped them with the necessary tools for the task. The seed collection teams gathered a total of 6,810 seeds of the target species, which were subsequently sown in March 2025. This series of activities was implemented in each beneficiary village with teams of 7 to 23 local participants, composed of 60% to 85% of women **[Evidence Annex 4m]**.

Output 3. Poverty and gender equality issues (global).
[Activity 3.1 (2)] Wilfrid Adjimoti, the graduate 3 student from Benin, has drafted a manuscript tentatively titled "Contribution of Fungal Resources to Human Well-being and Their Implications for Poverty and Gender Inequality Reduction in Sub-Saharan Africa: systematic review." This work reviews 92 publications, focusing on larger fungi used for food and medicinal purposes. In addition to this literature review, he plans to conduct an ethnomycological survey to assess the role of edible mushrooms in household food security and the economic empowerment of rural women during the 2025 mycological season.

Output 4: Infrastructure (Benin, Zimbabwe).
[Activity 4.2 (1)] New books were acquired for the mycological library. A new cupboard was acquired for the mycological reference collection. A total of 10 tables and 40 chairs were acquired for the Mycological centre. **[Activity 4.1 (3)]** As the first year, training and subsequent supervision were provided for graduates upon a variety of activities. Indeed, Apollon Hegbe (graduate 1 from Benin) and David Walter (graduate from Zimbabwe) were trained in editorial standards for handling fungal data during the visit Apollon in the U.K and the visit of the British team in Zimbabwe. These graduates received training in HTML and Perl programming for website and software development concerns. They were introduced to the existing country websites of Cybertruffle database, and will be involved in the development of websites for the SSA countries (see [Activity 1.3] above). For these graduates, further trainings are planned to begin in the early third year of the project, and will be about assessing the status of fungi at national level, and understanding and developing suitable national fungal conservation strategies **[Evidence Annex 4s]**. **[Activity 4.2 (3)]** The Zimbabwean and Beninese teams are actively collaborating over drafting field guide of fungi for the West-Africa region. Twenty species have been identified and information gathered. The Zimbabwean team has provided some field guides they had published with important information for the edition and publishing process. The draft field guide of West African mushrooms is currently being drawn up by the Beninese team, and should be ready for further revision by other collaborating mycologists at the end of the first quarter of next year. The draft of the west-African fungi field guide is in progress by Beninese team, and expected to be ready for further revision by other collaborating mycologists, in the late first quarter of the upcoming year. **[Activity 4.2 (4)]** Two mycologists from the mycological centres contributed to the book “Edible fungi of West Africa (ABC taxa 24, edited by CEBioS Belgium) **[Evidence Annex 4t]**. In total, 16 scientific papers were generated in 2024. A plan to set the university of Parakou as a regional centre of excellence for mycology is being prepared in collaboration with the International Society of Fungal conservation (ISFC). The plan includes organizing regional mycological events, equipping the centre, intensifying mobilities, south-south and north-south collaborations, contributing to training and building capacity to young African mycologists, extending the fungarium of the University of Parakou and enhancing its management, and intensifying collaboration with regional and international mycological associations. In 2024, the collection centre was enriched with 982 specimens coming from Benin and Togo. The centre hosted two regional intensive training courses in 2024, that assembled a total of 42 participants coming from 8 African and 2 Europeans countries **[Activity 4.2 (5)]** Detailed plans for establishing a culture collection at the centre of mycology in Parakou was prepared, and under peer-review by collaborating mycologists. **[Activity 4.3 (4)]** A proposal for a new African fungal conservation NGO (named *African People, Land and Forests Initiative NGO*-IPTFA) was prepared and circulated to mycologists and conservationists. More than 20 African mycologists signed the proposal for membership, and gave valuable comments for improvement. Registration process is underway in Benin for formal recognition of the NGO. An Inaugural meeting would be held through Zoom Meeting, as soon as registration process is fully completed.

Output 5. Public awareness (Sub-Saharan Africa).
[Activity 5.1 (3) (4) (5)] In Benin with the collaboration of organizations opposing illegal logging and charcoal production we are raising awareness campaign on the impact of destruction being done to fungal habitats and sustainable livelihoods. **[Activity 5.1 (6)]** Five hundred and thirty (530) flyers and three hundred stickers (300) additional were printed and distributed among audiences during awareness sessions, conferences and capacity building activities. Moreover, the Kakemonos and posters designed for mobile exhibitions were also used at these events. All those publicity material bear logos of our project, that of Darwin Initiative, and UK international Development **[Evidence Annex 4g].** In May 2024, at the Youth Conference on Natural

Resources and Environmental Governance in Accra, Ghana, and the National Biodiversity Week in Benin, we presented Fungal Conservation in Sub-Sahara Africa Project, highlighting the role of fungi in preserving biodiversity, the need to protect their habitats, and the importance of integrate them into national and international biodiversity conservation policies. Beyond these events, we actively promoted the project at various conferences, including the World Species Congress in May (a video was recorded and presented by the project leader), Climate Diplomacy Academy in June 2024 in Kenya and the Science and Partnerships for Agriculture Conference in July 2024 in Rwanda, where we discussed the impact of climate change on forest resources, including fungi, highlighting their role in carbon sequestration and forest regeneration. In addition, at many other venues such as the International Mycology Congress (IMC12) held in Maastricht in the Netherlands in August 2024, the CBD COP16 from October 21 to November 1, 2024 and the United Nations Convention to Combat Desertification (UNCCD) COP16 in December 2024, we brought the voice of fungi to the biodiversity conservation table and presented the project **[Evidence Annex 4h]**. Many exchanges and sessions took place under the coordination of the project leader Prof. Yorou and made it possible to share Benin's experience regarding fungal conservation, through the project. Moreover, a team composed of project members organized an awareness session with administrative authorities, local communities and water and forestry officers on the importance of creating a protected area in Kota, a fungal hotspot in Benin. Two interviews were conducted in 2024; This includes Newspaper published in the Daabaaru Journal in September **[Evidence Annex 4i]** and an interview given for an American radio during the IMC12 **[Evidence Annex 4j]** during which the project coordinator highlighted the socio-economic importance of fungi and called on decision-makers to take action for fungal conservation. The project was also advertised and discussed at two different meetings of the Benin National Academy of Science (ANSALB) during which 5 oral talks were given by mycologists of the excellence centres. In addition, we participated in the “formulating national objectives and defining monitoring indicators as part of the revision of Benin’s National Biodiversity Strategy and Action Plan (NBSAP), in line with the new Kunming-Montreal Global Biodiversity” organized by the Benin CBD Focal Point in December 2024 where we advocate for the importance of include fungi in NBSAP. We have participated also in the International Conference on SDG held in Kara, Togo, from 10th to 12th March 2024, during which, we highlighted the contribution of fungi in SDGs achievement through three presentations **[Evidence Annex 4k]**. **[Activity 5.2 (3)]** Description sheets of the second batch of ten fungal species have been conducted and published **[Evidence Annex 4l]**, while the third and fourth batches are in progress. **[Activities 5.2 (2), (4)]** Relevant documents, including images, descriptions, and detailed information on each species, are being compiled. Moreover, a field guide intitled “Mushrooms and other fungi of Zimbabwe” is in draft. A publisher has been found and the printing quote will be adjusted once the size of the book is finalised. **[Activity 5.3 (3)]** the digitized panels from the UK and Zimbabwe exhibition are currently under review to identify elements best suited for audiences in SSA. **[Activity 5.3 (7)] s**upplementary materials with embedded QR codes were developed to provide seamless access to relevant online resources, enhancing engagement and learning. **[Activity 5.3 (6) and (8)]** in September 2024 and February 2025, we actively participated in the International Scientific Colloquium of Parakou (held from September 17 to 20, 2024) and the Conference on the 30th Anniversary of LEA (Laboratory of applied Ecology) in February 2025, respectively. During these events, we showcased the findings of our research at MyTIPS (excellence centre), along with various promotional and informational materials, including posters, flyers, and stickers. In Zimbabwe, New sites for staging permanent exhibitions have been proposed. Once the exhibition at Mukuvisi Woodland has been finalised and costed, there will be more evidence with which to promote the idea to other venues. New sites for staging permanent exhibitions have been proposed. Once the exhibition at Mukuvisi Woodland has been finalised and costed, there will be more evidence with which to promote the idea to other venues **[Evidence Annex 4u]**.

3.2 Progress towards project Outputs

Output 1: Conservation planning

Information about sub-Saharan fungi and the threats they face, available on-line, analysed and presented to governments as national fungal conservation plans in a form convenient for non-specialists.

Indicator 1.1: More than 70,000 sub-Saharan fungal records from reference collections and published sources previously unavailable on-line, digitized, edited, and made

available along with new project-generated records, through GBIF [Darwin Core fields] and open-access on-line mycological databases [by end of December 2025].
At the end the project's second year, over 60,000 records previously unavailable on-line have been digitized from downloaded literature and references collections **[Evidence Annex 4a]**.

Indicator 1.2 Websites based on these records set up for at least six Sub-Saharan countries (Benin, Zimbabwe and four other countries) [by end of March 2026].
There is no website set up for fungal records per country till now. Fungal records are still being edited for all the target countries.

Indicator 1.3: Detailed peer-reviewed assessments of the status of fungi published, with advice and policy recommendations for at least six Sub-Saharan countries (Benin, Zimbabwe and four other countries) [by end of December 2025].
These assessments are in preparation, but cannot be finalized until fungal records for those countries have been edited.

Output 2: Livelihoods protection (Benin, Zimbabwe).
Fungal habitats and sustainable mushroom-harvesting livelihoods they provide understood, valued, protected, and included in remediation plans, with (Benin only) pilot ameliorative measures introduced [UN Sustainable Development Goals SDG2, SDG3, SDG7, SDG15].

Indicator 2.4. (Benin only). 10 plant nurseries each annually producing at least 300 actively growing young trees of known native ectomycorrhizal species (plans in place to employ mushroom-harvesting women for sourcing seed, planting and seedling care), with each year's saplings transplanted to regeneration sites (plans in place for transplanting work and after- care) [by end of March 2026].

This Year, in addition to the four existing nurseries we installed six new plant nurseries bringing their total to 10. In these nurseries we are producing 4000 seedlings that will be distributed 400 seedlings in each new village **[Evidence Annex 4m]**.

Indicator 2.5 (Benin only). Collaboration extended to 10 more villages (200 more households) with suitable nurseries and regeneration sites [by end of March 2026].

The collaboration is extended to 10 more villages (See map). Two hundred and three (127) beneficiaries from different households are working with us and the number will increase during transplanting activities **[Evidence Annex 4n]**.

Indicator 2.6 (Benin only). 20 more training days, two for each additional village, as for activity 2.3 [by end of March 2025].

from February to March 2025, we delivered courses in four villages about impacts of forest destruction, the ecological importance of mycorrhizal fungi, the role of mushroom harvesting in livelihoods, forest nursery practices, and regeneration management, during two days training (lasting two hours per session) per village. At the same time, we raised awareness about the ecological importance of ectomycorrhizal trees and their role in fungi conservation **[Evidence Annex 4o]**.

Indicator 2.7 (Benin only). Plant nurseries of additional villages operating as for activity 2.4 [by end of March 2026].

We are producing 400 (Ablodé, Fouctoum, Koka and Koupeiko) and 1200 (Makrou-Wirou and Yakabissi) seedlings in the six additional nurseries according to their characteristics. The resulting seedlings will be distributed 400 per village. We employed 127 Persons of which 86 are women, for seed collection, seed sowing and seedling care **[Evidence Annex 4n]**.

Indicator 2.8 (Benin only). A countrywide report of monitoring mycorrhizal fungi, with special focus on project sites [by end of March 2026].

Five hundred and fifty-seven (557) ectomycorrhizal fungi specimens were collected across the country of which 36 were from project sites.

Indicator 2.9 (Benin only). Provision for continued livelihood protection through exit strategy [by end of March 2026].

Nursery maintenance and transplantation tools are offered to beneficiary villages for continued livelihood protection. Additional tools will be supply to them for this purpose.

Output 3. poverty and gender equality issues
A global investigation of links between fungal diversity loss, poverty and gender inequality (currently almost completely unexplored), with a published pioneering report on the findings.

Indicator 3.1. A published peer reviewed pioneering global report on links between fungal diversity loss, poverty and gender inequality [by end of March 2026]
The draft of the literature review on assessing fungal diversity loss in relation to poverty and gender inequality was written and submitted for the publication process.

Output 4: Infrastructure
Sub-Saharan mycology infrastructure strengthened
Indicator 4.1. Three graduates trained as mycologists at Parakou University's regional centre of excellence for mycology, and one graduate similarly trained in Zimbabwe, with additional expertise in fungal conservation and data handling [by end of March 2026].
All the three graduates of Benin and the one of Zimbabwe received further training in accordance with their position and activities in the project. Three mobility were accomplished in the UK for this purpose.

Indicator 4.2: Enhanced facilities at the centre, including plans for culture collection [by end of March 2026].
Books, collection cupboard and furnishers were acquired for the mycological centre.

Indicator 4.3: Increased numbers of visiting mycologists, students trained, field trips, reference collections accessed, and papers published at the centre [by end of March 2026].
Along this second year of the project, the head of Mycological Excellence Centre assisted by 6 assistants had delivered 06 routine courses at the University of Parakou (north Benin) and The University of Abomey-Calavi (south Benin). Moreover, the centre held one international capacity building training to young west-African scientists in July 2024 over molecular technics and tools with bioinformatic for rapid assessment of the functional diversity of fungi. The Centre was visited by more than a hundred of peoples including not only mycologists, but specialists of other research fields. A total of 35 short term visits to European n American mycological laboratories were undertaken by mycologists from the centre, as the centre also welcome more than 25 visitors in 2024 **[Evidence Annex 4p]**. In term of field activities. A total of 71 mycological trips were carried out by MyTIPS members in 18 different forests during the 2024 mycological season. These field visits enabled to collect 982 fungal specimens, well annotated and conserved as references material in the mycological reference collection of the centre worldwide known under UNIPAR acronym.

Indicator 4.4: The African Mycological Association revitalized, and new African fungal conservation NGO(s) established. Gender- equal policies encouraged in these bodies
Many online discussions were made with members of the African Mycological Association to come up with a plan to revived the association. A physical meeting is scheduled to happen in Benin during the upcoming fourth International Congress of Fungal Conservation in November 2025.

Output 5. (Sub-Saharan Africa).
Public awareness of importance of fungi raised.

Indicator 5.1. Publicity (including involvement of local communities, women and non-scientists) through radio, television, newspaper, magazine and social media including blogs and campaigns.
In Benin, through social media (Facebook and the project website), we reached 1,038 people. In addition, through the distribution of our flyers and leaflets at events such as the Youth Conference on Natural Resources and Environmental Governance, the National Biodiversity Week, the Climate Diplomacy Academy, the Science and Partnerships for Agriculture

Conference, IMC12, the UNCCD COP16, we reached more than 3830 people from different countries around the world. We also participated in other meetings organized by the CBD, which allowed us to advocate to the national authorities on the importance of biodiversity conservation.

Indicator 5.2. Three popular (accessible to lay-people) guides to common fungi (2 for Benin, 1 for Zimbabwe where three already exist) [by end of March 2026].
Data compiled on wild edible and useful fungi are analyzed and sorted. Starting now, the writing of the first draft is ongoing. The guides will be arranged by fungal genera, targeting the most common ones (*Amanita, Inocybe, Russula, Lactarius, Lactifluus*, Boletes, Termitomyces, *Cantharellus*…). For the Benin National academy of Science two volumes are under press, that one on *Termitomyces* and the other one on *Cantharellus*.

Indicator 5.3. Mobile exhibitions staged in Benin, Zimbabwe and, if possible, other countries [by end of March 2026].
Kakemonos and posters are designed for mobile and static exhibitions at the University of Parakou, in the forestry offices of Borgou, during the National Biodiversity Weeks, as well as at national and international conferences on biodiversity and Environment governance. In Zimbabwe, "New locations have been suggested for hosting permanent exhibitions. After the exhibition at Mukuvisi Woodland is completed and its costs assessed, there will be stronger support to present the concept to other potential venues. Kakemonos were produced for this purpose.

3.3 Progress towards the project Outcome

Outcome: Sub-Saharan fungal conservation established through national conservation plans, protection of mycorrhizal forest and sustainable mushroom harvesting livelihoods, and better understanding of links between fungal diversity loss, poverty and gender inequality.

Indicator 0.1. National assessments and mushroom conservation plans presented to at least six CBD national focal points (Benin, Zimbabwe, and four other countries) [by end of march 2026]

Based on the digitized data [Activity 1.1 (1)], in addition Burkina Faso selected in the first year, Guinea, Congo and Burundi, have been selected to benefit from a conservation plan, as well as the Benin and Zimbabwe. With this progress, the indicator appears adequate to measure fungal conservation efforts in SSA, as established through national conservation plans. The project is expected to achieve this result by March 2026.

Indicator 0.2. In Benin alone, 20 villages (400 households) across the country are participating in a program to raise young native ectomycorrhizal trees to regenerate felled forests [by end of march 2026]

This year we worked in ten new villages (Ablodé, Fouctoum, Koka, Koré, Koubirou, Kouandaka, Koupeiko, Makrou-Wirou, Yakabissi, and Yaoukossi) bringing the total number of beneficiary villages to 20 (See map). A total of 127 households have participated in the execution of various planned activities, bringing the total number of beneficiary households to 343. This indicator is suitable for measuring the involvement of local communities in restoration activities to protect mycorrhizal forests.

Indicator 0.3. Advertising across a wide range of media, demonstrating increased awareness

Thanks to the printing of additional publicity materials such as flyers and brochures, we have been able to amplify awareness-raising efforts [see Activity 5.2]. These actions have reached 2,147 people. This indicator is suitable for measuring a better understanding of the links between mushrooms, their diversity loss, poverty, and gender equality and social inclusion **[Evidence Annex 4i and j]**.

Indicator 0.4. Pioneering global report on gender and poverty impacts of fungal diversity loss published [by end of march 2026]

By the end of this year, the first draft of a literature review on the gender and poverty impacts of fungal diversity loss will be submitted for publication [see Activity 3.1 (2)]. With this progress, this indicator appears useful for understanding the links between fungal diversity loss, poverty, and gender inequality.

3.4 Monitoring of assumptions

Assumption: No major global or national events, political or otherwise, adversely impact on work [CBD National Focus Points have already indicated that assessments would be welcome].
Comments: This assumption still holds true, as well as at global and national scale. In country-wide, forest management office both in Benin and in Zimbabwe are cheerfully providing collaboration and facilities. Several meetings and workshops were held with the CBD focal point of Benin and other conservationists. At international level, the participation, to the sixteenth Conference of the Parties of the CBD in 2024, of the project's leader as mycologist alongside the CBD Focal Point for the Benin team, and his commitment to the international pledge (as he also brings 4 other CBD focal points), is of a great positive impact for fungal conservation in SSA.

Assumption 1.1, 1.2. Procedures used over many years make this work low risk [through previous Darwin Initiative and other projects, fungal records from Cuba, Georgia, Trinidad and Tobago, Ukraine, Venezuela and other countries have been digitized, now fungi of Sub-Saharan Africa need to be done].
Comments: This assumption still proves true. The procedures implemented for previous Darwin Initiative and other projects proved efficient for this project as well, thus making risk low. As matter of fact, the number of fungal records expected by end of the project is yet tripled, as results of data extraction from thousands of documents, and from existing of collections and online databases. Editing job is still underway to make these bunch of records suit the standard of the Cybertruffle database **[Evidence Annex 4a]**.

Assumption 1.3.: Suitable in-country mycologists or potential mycologists can be found to collaborate in preparing fungal assessments for the four as-yet unidentified beneficiary countries or, failing that, the work can be done from Benin and Zimbabwe, largely based on paper-published and on-line information.
Comments: This assumption still holds true. Appointed graduates in Benin and Zimbabwe have been in charge of the fungal assessment. The first part of this job consists in carrying the assessment through CBD documents originating from SSA countries. This step is now finished and the results available of the website of the International Society of Fungal Conservation [www.fungal-conservation.org]. The next step is to elaborate the conservation plan adapted to fungi for the six selected countries (Benin, Zimbabwe, Burkina-Faso, Guinea, Congo, Burundi). For that, information such as species' geographic range, associated organisms, threat to its natural habitat gathered in the database will be used once record editing job is completely finished.

Assumption 2.5; 2.6.: Additional suitable villages can be found where administrations and land-owners are willing to collaborate.
Comments: This assumption still holds true. In addition to the previous villages, 10 new villages are collaborating on the project (See Map).

Assumption 2.8.: Mycologists can visit sites often enough to generate meaningful data.
Comments: Over and over surveys are directed into non-investigated forests within the guineo-sudanian area in Benin. Published articles and project granted from 2020 till now in Benin support that fact. Mycologists affiliated to the Excellence Mycological Centre organised throughout each mycological season, some field expeditions in different forests all over and outside the country.

Assumption 3.1. Anticipated informational gaps can be bridged through an investigative approach (fungal diversity loss is poorly understood, and links with poverty and gender inequality may be subtle, hidden or even denied). Additional expertise can be imported in through collaboration.
Comments: This assumption proved true. Even though social science literature on fungi is rich and significant in terms of number of publications in SSA, a close scrutiny showed a paucity of

study which seek straight links between fungal diversity loss poverty and gender inequality. The multitude of papers contented just to catalogue usages of mushrooms across different ethnic groups, local nomenclature, local ecological knowledge on mushrooms. Very few studies dealt with wild mushrooms business and its contribution to the household income. Faced with this reality, a proposal was elaborated to investigate this subject and bridge the informational gaps. The data collection will be carried out in Benin this year during the mycological season from June to August.

Assumption 4.1.: No major global or national events, political or otherwise, adversely impact on work.
Comments: see comment of the first assumption.

Assumption 5.3.: Venues [indoor and outdoor] willing to stage exhibitions can be found.
Comments: Numerous venues at both national (Benin, Zimbabwe) and international levels expressed willingness to host exhibitions. Notably, an exhibition was held during Benin's National Biodiversity Days from May 21 to 25, 2024, at the Cotonou Congress Palace. During this event, the Head of the National Office of Forest Management was engaged in discussions highlighting fungi's critical role in biodiversity and the necessity of incorporating them into national conservation strategies. Additional exhibitions took place at the National Agro-Ecology Day at the University of Parakou, as well as during the university's 7th International Conference from September 17 to 20, 2024. In Zimbabwe, mobile exhibitions were organized at schools, institutions, and public spaces across the country. Key displays were set up at Mukuvisi Woodlands in Harare (a permanent poster), the nation's capital, and a dedicated fungi exhibit was showcased at the Natural History Museum in Bulawayo.

3.5 Impact: achievement of positive impact on biodiversity and multidimensional poverty reduction

Project impact: Fungi no longer neglected by CBD; poverty and gender inequality impact of fungal diversity loss recognized.

The digitization of new records generated essential data for the inclusion of fungi in national reporting to the CBD. Furthermore, the project actively contributed to events at the national level involving biodiversity stakeholders. We collaborate closely with the CBD Focal Point in Benin. These efforts resulted in the development of a specific target dedicated to fungal conservation in the country: "**Conserve and promote fungal diversity by ensuring their ecological role, sustainable use, and the preservation of their habitats**." At the local level, in the project's beneficiary villages, and in collaboration with local communities (women, men, youth, people with disabilities, and ethnic groups), the project established ectomycorrhizal tree nurseries to produce 4,000 seedlings. Furthermore, awareness-raising activities helped raise local awareness of the impact of deforestation and the need to preserve ecosystems. Furthermore, the project made a significant contribution to human development and multidimensional poverty reduction. The creation of tree nurseries and restoration activities promoted job creation, generating income for local communities. The high implication of women (over 50%) in various activities planned by the project helped reduce gender inequalities.

4. Project support to the Conventions, Treaties or Agreements

Our project highlights the crucial role of fungi in forest ecosystems functioning and ecosystem services. Through extensive awareness-raising and advocacy, we contributed to the integration of the new Global Biodiversity Framework (GBF) and the revision of Benin's NBSAP. Our contributions focused on Target 2, which aims to restore at least 30% of degraded ecosystems by 2030, emphasizing the need to consider fungi in ecosystem restoration, and Target 3, which seeks to protect 30% of terrestrial, coastal, and marine ecosystems. In this context, we are advocating for the designation of the Kota Forest as a protected area for fungal conservation **[Evidence Annex 4q].** We actively collaborate with Benin's CBD Focal Point. Ultimately, these efforts led to the formulation of a dedicated target for fungal conservation in Benin: conserve and promote fungal diversity by ensuring their ecological role, sustainable use, and the preservation of their habitats. Additionally, our project aligns with several key international agreements,

including the **Nagoya Protocol**, by promoting the fair and equitable sharing of benefits derived from genetic resources and traditional mycological knowledge; the **UNCCD**, by highlighting the role of mycorrhizal fungi in soil restoration and ecosystem resilience; the **Ramsar Convention**, by recognizing the importance of wetland fungi in maintaining ecological balance and restoring natural habitats; and the **UNESCO World Heritage Convention**, by supporting the documentation and protection of fungal-rich forest sites like Kota within Koutammakou, the Land of the Batammariba. Through these commitments, our project strengthens global conservation efforts by advocating for greater recognition of fungi in environmental policies and ecological restoration initiatives.

5. Project support for multidimensional poverty reduction

The primary beneficiaries are local communities, particularly women, who rely heavily on non-timber forest products like edible mushrooms for their livelihoods. These communities are directly affected by the degradation of fungal habitats due to anthropogenic activities like deforestation, unsustainable agriculture practices and overgrazing. This project supports them by promoting restoration through capacity building in nursery development, ectomycorrhizal tree planting and training in mushroom cultivation **[Evidence Annex 4r]**. The women in mushroom cultivation can earn over $100 per month.

Meetings were conducted within each beneficiary village to introduce the project and explain their expected participation in implementation. These exchanges revealed a major concern about deforestation and the loss fungal diversity over years. The involvement of local communities in project activities, such as establishing nurseries, has not only enabled them to generate income but also helped them acquire valuable skills in nursery development. These new skills can be further developed into sustainable income-generating activities. Moreover, the recovery of degraded forests in the long term will increase the natural production of wild edible fungi that could be sold to generate additional income for collector.

As in the first year of the project, we increased awareness campaigns on the importance of conserving fungal resources and highlighted their importance for the communities that depend on them. These efforts aim to promote sustainable use and better understand the ecological, economic, and cultural benefits that fungi offer to local populations. In addition, the publication of a literature review on the contribution of wild edible mushrooms to human well-being and the fight against gender inequality will provide a comprehensive overview of the multidimensional role of this resource.

6. Gender Equality and Social Inclusion (GESI)

Please provide a self-assessment of where you think your project sits on the Gender Equality and Social Inclusion (GESI) scale provided below. The scale goes from less ambitious to more ambitious moving top to bottom. As a reminder, all Biodiversity Challenge Funds (BCFs) projects should be aiming for a GESI Sensitive approach at a minimum.

GESI Scale	Description	Put X where you think your project is on the scale
Not yet sensitive	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	
Sensitive	The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups and the project will not contribute to or create further inequalities.	x
Empowering	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups	x

Transformative	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	x

Benin has ratified several international and regional conventions related to human rights, gender equality, the rights of local communities, and sustainable natural resource management. These include the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the United Nations Declaration on the Rights of Indigenous Peoples, and CBD. Nationally, the Beninese government has implemented policies promoting gender equality, such as free schooling for girls and programs to strengthen women's leadership. Our project supports these efforts through awareness-raising campaigns on gender equality, while ensuring strong female representation in activity planning (over 50%).

In the project intervention areas, the main environmental stresses are linked to climate change effect such as prolonged drought and seasonal flooding. These phenomena severely affect agricultural production, the main source of income for local people, leading to soaring prices, food insecurity, and sometimes famine. Women and marginalized groups are the most affected, as they have fewer means of adaptation. Our project anticipates these vulnerabilities by involving them in activities implementation so that they earn money.

The project relies on local communities, such as village committees, women, youth, disables, village associations, and ethnic representation. The consideration of all these groups ensures the social inclusion in decision-making. In each village, activities are carried out in group while women are generally dealing with activities perceived as "light" or flexible, and physically demanding works are reserved for men. This task allocation demonstrates a collaborative and equitable approach, promoting a balance on benefits sharing.
The access and control of assets and services is becoming more and more equitable in the beneficiary villages due to numerous education programmes held by the government of Benin. Men recognize now the role and importance of women in local development. Nowadays, women can participate to decision making process in the villages.

Our project activities promote social inclusion by addressing barriers that individuals face due to their social identity, such as gender and ethnic. We prioritize gender equality by empowering women to train and play a leading role in conservation activities. In each village, representative above 18 years old, are selected in each ethnic group as well as disables who are able to work. Finally, to combat socioeconomic disparities, we offer compensation for each activity carried out by communities as part of the project implementation, thus ensuring that participation is not hindered by financial constraints.

One of the key lessons learned was the importance of understanding local cultural norms and ensuring that GESI initiatives are adapted to the community context. While promoting gender equality, we realized that involving both women and men in conservation efforts is crucial to achieving lasting change and social inclusion. The inclusion of all ethnic groups leads to behaviour change within Fulbe ethnic which traditional are involved in transhumance activities.

7. Monitoring and evaluation

The early dispatching of the outputs' responsibilities among the core staff members is maintained during the second year of the project, while the overall responsibility on M&E was assumed by the project leader. This system proved efficient in the project's first year of implementation. At the beginning of the second year, baseline data for each output were recorded for all outputs in order to measure progress quarterly, in regard of the SMART indicators set for each planned activity.
We used both qualitative methods (participant feedback) and quantitative methods (field surveys, counting) to gather and analyse this information. By leveraging these methods and the collected data, we assessed our achievements towards SMART indicators.

From that, we conclude that in overall, the project activities carried out contribute to the project outcome. Zoom meeting and email exchanges were held at the end of each quarter (every three months) to assess the progress of the project and find the way to reach the outcome. We are using the pathway 'Activity >> Output >> Outcome', to assess and to understand the progression from the activities undertaken to our desired outcomes to reach. Due to the fact that most of activities are planned to be implemented in Benin, the Beninese team held a separate meeting also each three months to identify the activities and evaluate the field activities progress.
There is no change made to the M&E

8. Lessons learnt

The involvement of local communities in planning activities enabled to take into account GESI. This facilitates transplanting at regeneration sites and subsequent plant care. The increase of awareness session, lobbying and advocacy through several channels enabled more and more to the inclusion of fungi to biodiversity programs as well as Benin's NBSAP. However, challenges were encountered during the implementation of activities. Local community engagement has sometimes been hampered by seasonal agricultural work, particularly cashew nut harvesting, as well as mining activities.

If we were to do it again, we would reduce workload during intensive agricultural activity periods, launch our activities which match with those of local communities and improve incentive for local communities. We recommend to strength collaboration with local schools and educational institutions to integrate fungal conservation into environmental education programmes, thereby fostering the emergence of a new generation of biodiversity advocates.

The lessons learned will be used the next year during restoration activities implementation. They will be taken into account in designing further project in the future. No changes are planned for next year's activities, and no requests for modifications will be submitted.

9. Actions taken in response to previous reviews (if applicable)

The following issues were raised up in the previous evaluation:

- Explain why we harvested seeds only for a few forest trees. The main reason is that we want to promote fungal diversity. The target forest trees live in symbiosis with fungi. To sustain fungal diversity, we need to promote habitat restoration via planting partner trees. This has been explained in details in previous section
- The reviews wanted to know which species were planted from the 400 plants nurseries seedlings acquired from local people. As stated above, plantings activities concern all forest trees that live in symbiosis with fungi. This has been clarified in the report
- Which of the papers and sampling trips have been financed by the project: Those aspects fall within the scope of promoting the mycological centre. The present report clarified which of the activities have been supported by the project.
- Discuss with BCF about the allocation of fund to support PhD training fees. A financial change was submitted and was approved by the staff of BCF. This change is still valid for this year 2025-2026. However, we will discuss and clarify this with the BCF's staff.

10. Risk Management

There is no new risk arisen in the last 12 months. Also, the project didn't make any significant adaptations. Using the new template, we developed a risk register for our project. The risk register is attached to this report.

10. Scalability and durability

Government forestry services and biodiversity conservation organizations, including NGOs, have been made aware of the importance of fungal conservation alongside plant and animal conservation, through project presentations, advocacy meetings, and multi-level engagement at both local and national scales. These efforts have increased awareness of the potential benefits,

associated costs, and implementation steps of such initiatives. A key outcome demonstrating the project's attractiveness and adoption is the inclusion of a specific target on fungal conservation in Benin's National Biodiversity Strategy and Action Plan (NBSAP), a historic first that elevates fungi as a national conservation priority. The project has supported awareness-raising activities led by government and civil society groups, particularly those focused on the destruction of natural forests, which serve as critical habitats for fungi. This alignment of interests has fostered ongoing collaboration and strengthened institutional incentives. Moreover, the project has contributed to a shift in social norms and values, with local communities increasingly recognizing fungi as ecological keystones and adopting behaviours that protect their habitats. These changes collectively reflect growing support for long-term engagement and scaling of fungal conservation efforts.

Referring back to our original exit plan, we propose for Output 1 to continue our advocacy efforts and engage CBD Focal Points as key allies to ensure the meaningful inclusion of fungi in National Biodiversity Strategies and Action Plans (NBSAPs). Fortunately, Cybertruffle guarantees the ongoing availability of occurrence data from our data compilation. For Output 2, we aim to continue forest restoration efforts and promote the cultivation of local fungal species. This approach will help ensure long-term community well-being and contribute to poverty reduction, as it represents a potential income-generating activity (Output 3). To support this, we recommend strengthening the capacities of the members of the Centre of Excellence in Tropical Mycology and equipping the Centre with modern tools for biological and ecological research (Output 4). For Output 5, we recommend maintaining and scaling up awareness raising and participatory forest management in fungi-rich areas by fostering collaboration between local communities, NGOs, and conservation agencies to ensure inclusive and sustainable stewardship of fungal resources. The newly established NGO (People, Land and Forest Initiatives for Africa) dedicated to fungal conservation will play the leading role and assemble any actors engaged in fungal conservation.

Significant progress has been achieved across all proposed steps to ensure the sustainability of fungal conservation efforts. Regarding Output 1, the inclusion of a specific target on fungal conservation in Benin's revised National Biodiversity Strategy and Action Plan (NBSAP) stands as a major milestone. This historic inclusion reflects successful advocacy and engagement with CBD Focal Points and national stakeholders, clearly indicating increased political will and institutional commitment. The active involvement of government forestry services and biodiversity conservation organizations, including NGOs, further demonstrates growing awareness and ownership of fungal conservation priorities. For Output 2 and Output 3, community-based forest restoration and initial trials on fungal domestication have been launched in our laboratory. Local communities have been trained to mushrooms cultivation. These initiatives have not only contributed to ecological recovery but have also sparked interest in sustainable fungal harvesting and value chains, with several local households reporting improved seasonal incomes. These benefits have been documented through field interviews, community reports, and monitoring data collected during the project. In line with Output 4, training sessions have been delivered to members of the Centre of Excellence in Tropical Mycology, with curricula focused on ecological monitoring, fungal identification, and data management. Some of member benefiting from training within north partners institutions such as university of Frankfurt in Germany and Botanic Garden of Meise in Belgium. The Centre has also been partially equipped with modern lab. and field tools (microscopes, GPS units, data loggers, molecular facilities), enhancing its capacity to support ongoing research and conservation actions. Under Output 5, partnerships have been strengthened between local communities, NGOs, and conservation agencies to maintain participatory forest management models.

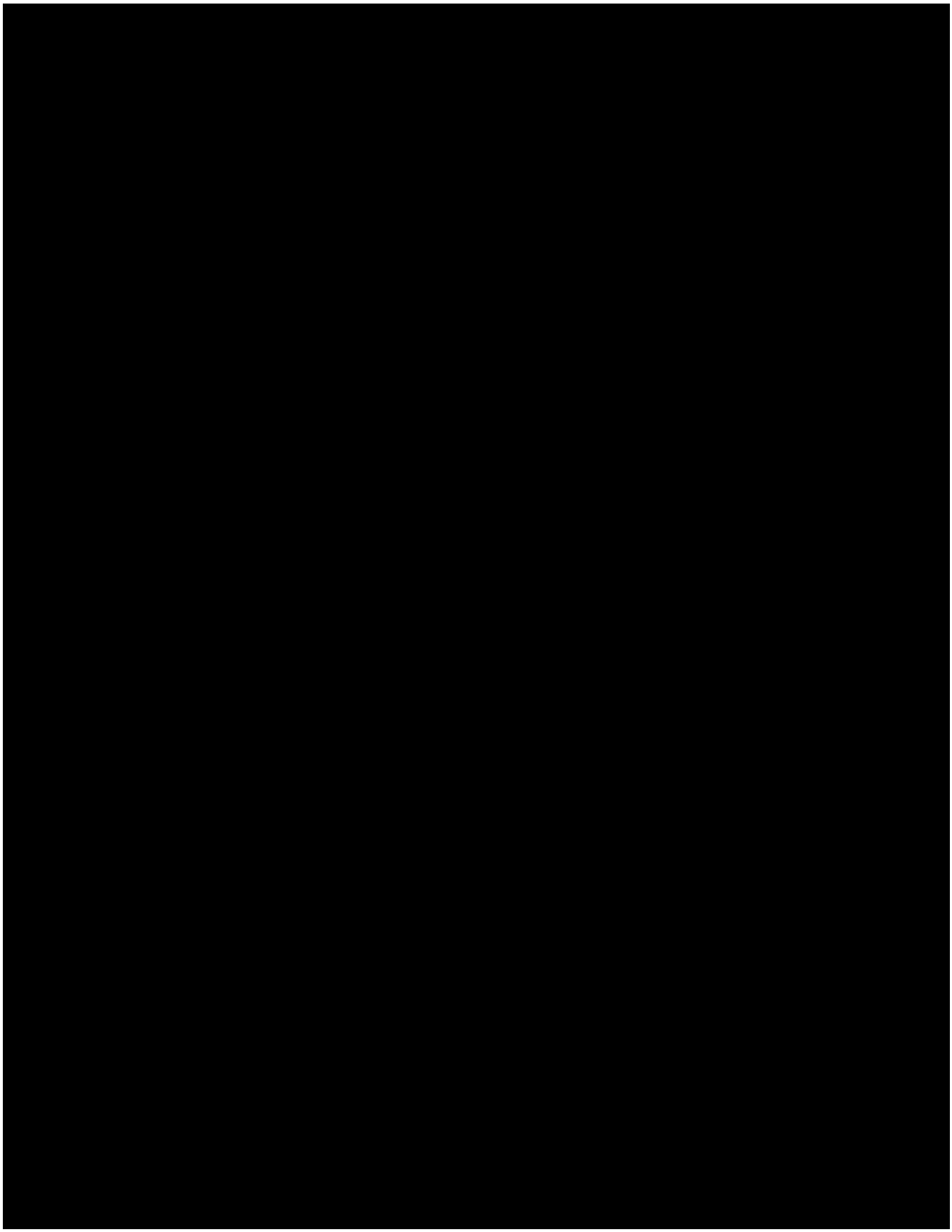
To further ensure long-term impact, the team is actively pursuing several complementary actions. First, we are integrating fungal biodiversity into formal environmental education materials used in local schools and outreach programs, thereby fostering early awareness among youth. Second, we are engaging national media outlets and cultural institutions to mainstream fungi's ecological and socio-economic roles through storytelling and exhibitions. Institutionally, we are advocating for the formal recognition of key mycological areas within national conservation frameworks, working with legal and policy experts to explore how fungi can be better protected under existing environmental legislation. The project team is also mentoring a new cohort of local

researchers and technicians, ensuring that national capacity in fungal conservation continues to grow beyond the project's lifespan. Finally, we are building a repository of open-access data, case studies, and best practices from the project, hosted in collaboration with Cybertruffle and partner universities, to serve as a long-term reference for practitioners, policymakers, and academics across the region.

11. Darwin Initiative identity

Our project maintains consistent visibility for both our institutional branding and the Darwin Initiative through all publicity and awareness materials, including posters, kakemonos, flyers, indicator plaques, T-shirts, caps, pens, and notepads. We formally acknowledge the UK Government's vital contribution by expressing gratitude in every communication. Starting from the second year, we further emphasized this partnership by updating all materials to include the UK International Development logo. As a Darwin Initiative-funded project, we operate under a distinct identity, complete with a dedicated logo, website, and social media presence. The Darwin Initiative's reputation in Benin has grown significantly, particularly within scientific and NGO circles, thanks to its expanding funding footprint in the country and our frequent acknowledgments during exhibitions and public engagements. On the project website as well as in its social media account description (Facebook), we clearly indicated that the project benefits from a full financial support of Darwin Initiative.

12. Safeguarding



13. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2024 – 31 March 2025)

Project spend (indicative) since last Annual Report	2024/25 Grant (£)	2024/25 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	[redacted]			
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL			[redacted]	

Highlight any agreed changes to the budget and **fully** explain any variation in expenditure where this is +/- 10% of the budget. Have these changes been discussed with and approved by Darwin Initiative?

Table 2: Project mobilised or matched funding during the reporting period (1 April 2024 – 31 March 2025)

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)	[redacted]	[redacted]	Personal investment from the project core staff (Dr. David Minter, Prof. Yorou, Dr. Sharp, MSc Soliman)
Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)	Not applicable		

11. Other comments on progress not covered elsewhere

We did not meet any major difficulties during 2024-2025. The only major constraint was related to the allocation of funds to cover the PhD training fees for graduates. Significant efforts were made to cover these unplanned costs from other budget lines. However, this allocation did not affect the normal implementation of the planned activities.

12. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes.

I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes (please leave this line in to indicate your agreement to use any material you provide here).

Two major milestones have been achieved in regard of the project's expected impact according to which, fungi would no longer be overlooked by the Convention on Biological Diversity (CBD), paving the way for future editions of the Biodiversity Outlook to fully include fungal diversity. Indeed, the sustained and dedicated partnership and collaboration with stakeholders, particularly Benin's CBD Focal Point, led to the integration of a specific fungal conservation target in Benin's NBSAP. The target states: "To conserve and promote fungal diversity by safeguarding their ecological functions, ensuring sustainable use, and protecting their natural habitats."
At the international level, the project team spearheaded a proposal that secured formal recognition of fungi as a distinct biological kingdom under the Global Biodiversity Framework. This landmark decision was adopted during the 16th Conference of the Parties (COP16) to the Convention on Biological Diversity (CBD), held in Cali, Colombia, from October 21 to November 1, 2024. Beyond merely acknowledging fungi as a separate kingdom, the proposal goes further while advocating for a stronger global commitment to prioritize and implement fungal conservation efforts worldwide.

No photo or video can be provided.

Annex 1: Report of progress and achievements against logframe for Financial Year 2024-2025

Project summary	Progress and Achievements April 2024 - March 2025	Actions required/planned for next period
Impact Fungi no longer neglected by CBD; poverty and gender inequality impact of fungal diversity loss recognized	More and more fungi are considered by CBD. A specific Target is added to the revised Benin's NBSAP and a pledge was introduced to the CBD at COP16 for the recognition of fungi as separate biological kingdom. At least 50% of activities team members are women.	
Outcome: Sub-Saharan fungal conservation established through national conservation plans, protection of mycorrhizal forest and sustainable mushroom harvesting livelihoods, and better understanding of links between fungal diversity loss, poverty and gender inequality.		
Outcome indicator 0.1 Country level assessments and conservation plans for fungi presented to at least six CBD National Focus Points (Benin, Zimbabwe and four other countries) [by end of March 2026].	Six beneficiary countries were selected (Benin, Zimbabwe, Burkina Faso, Burundi, Congo, Guinea); Over 70% of promised records now digitized and fungal assessments and conservation plans are underway.	Complete fungal assessments and conservation plans.
Outcome indicator 0.2 In Benin only, 20 villages (400 households) countrywide participating in a programme rearing native ectomycorrhizal saplings to regenerate felled woodland [by end of March 2026].	Restoration activities were carried out in 20 villages, involving 343 households.	Recruit other participants for transplantation activities
Outcome indicator 0.3 Publicity through a wide range of media, evidencing raised awareness.	Awareness has been raised through various channels including radio, newspapers, Facebook, web site, conferences, group discussions; courses deliveries and exhibitions events both in Benin and Zimbabwe. In addition to this, new publicity materials such as flyers, pens, stickers, tee-shirts, are printed and distributed.	Maintain publicity through all channels.
Outcome indicator 0.4 Pioneering global report on gender and poverty impacts of fungal diversity loss published [by end of March 2026].	A literature review on gender and poverty impacts of fungal diversity loss is in publication process. A proposal prepared for a field survey.	Implement and publish research on the impact of fungal diversity loss on poverty and gender inequality
Output 1 Information about sub-Saharan fungi and the threats they face, available on-line, analysed and presented to governments as national fungal conservation.		
Output indicator 1.1 More than 70,000 sub-Saharan fungal records from reference collections and published sources previously unavailable on-line, digitized, edited, and made available along with new project generated records, through GBIF	This year we digitized over 40,000 fungal records from various sources.	Continue record editing

[Darwin Core fields] and open-access online mycological databases [by end of December 2025].		
Output indicator 1.2 Websites based on these records set up for at least six Sub-Saharan countries (Benin, Zimbabwe and four other countries) [by end of March 2026].	Six beneficiary countries are already selected. No website is built so far. During this year, our endeavour was focused on extraction and digitization of fungal records which would feed the website of the six identified countries.	Build websites for fungal data for the selected countries
Detailed peer-reviewed assessments of the status of fungi published, with advice and policy recommendations for at least six Sub-Saharan countries (Benin, Zimbabwe and four other countries) [by end of December 2025].	We got 100% CBD documents of the Sub-Saharan Africa countries already assessed based on the Micheli Evaluation Guide. Based the results of these assessments, a scientific article is under review process.	Follow publication steps
Output 2: Livelihoods protection (Benin, Zimbabwe).		
Indicator 2.1. Publicity [see Output 5 below].		
Indicator 2.4. (Benin only). 10 plant nurseries each annually producing at least 300 actively growing young trees of known native ectomycorrhizal species (plans in place to employ mushroom-harvesting women for sourcing seed, planting and seedling care), with each year's saplings transplanted to regeneration sites (plans in place for transplanting work and after- care) [by end of March 2026].	This Year, in addition to the four existing nurseries we installed six new plant nurseries bringing their total to 10. Three native ectomycorrhizal species (*Afzelia africana, Isoberlinia doka and Isoberlinia tomentosa*) are kept growing in four small and two large nurseries. In large nurseries we keep 1200 seedlings and 400 seedlings in small ones giving the total number of 4000 seedlings.	Continue with nurseries maintenance and transplant the seedlings in regeneration sites of the new beneficiary villages.
Indicator 2.5 (Benin only). Collaboration extended to 10 more villages (200 more households) with suitable nurseries and regeneration sites [by end of March 2026].	Ten (10) more villages are collaborating with us. Two hundred and three (127) beneficiaries from different households are working with us and the number will increase during transplanting activities.	Continue collaboration and recruit more local people for seedlings caring, transplantation and aftercare.
Indicator 2.6 (Benin only). 20 more training days, two for each additional village, as for activity 2.3 [by end of March 2025].	During two days training (lasting two hours per session) per village, courses were delivered on the chosen topics in 5 villages.	Continue trainings and awareness raising in the remaining villages
Indicator 2.7 (Benin only). Plant nurseries of additional villages operating as for activity 2.4 [by end of March 2026].	Local communities participated in seed collection and train in sowing, dormancy break, nurseries management.	Continue nurseries maintenance and transplant seedlings
Indicator 2.8 (Benin only). A countrywide report of monitoring mycorrhizal fungi, with special focus on project sites [by end of March 2026].	Five hundred and fifty-seven (557) ectomycorrhizal fungi specimens were collected across the country of which 36 were from project sites.	Continue with fungal monitoring in regeneration site

Indicator 2.9 (Benin only). Provision for continued livelihood protection through exit strategy [by end of March 2026].	Nursery maintenance and transplantation tools are offered to beneficiary villages for continued livelihood protection. Additional tools will be supply them for this purpose.	Support local communities in restoration activities
Output 3. A global investigation of links between fungal diversity loss, poverty and gender.		
Output indicator 3.1 A published peer reviewed pioneering global report on links between fungal diversity loss, poverty and gender inequality [by end of March 2026].	The first draft of the literature review on the assessment of fungal diversity loss to poverty and gender inequality was written and suggested to publication procedure. A proposal has been elaboration for field data collection to assess the contribution of fungal resources to food security and economic empowerment of local communities.	Implement the protocol
Output 4 Sub-Saharan mycology infrastructure strengthened.		
Output indicator 4.1 Three graduates trained as mycologists at Parakou University's regional centre of excellence for mycology, and one graduate similarly trained in Zimbabwe, with additional expertise in fungal conservation and data handling [by end of March 2026].	All graduates from Benin and Zimbabwe are trained and continue to receive capacity building.	Continue with capacity building and south-south competence transfer
Output indicator 4.2 Enhanced facilities at the centre, including plans for culture collection [by end of March 2026].	The fungarium has been extended; book acquired for the library.	Continue to equip the Mycological Excellence Centre
Output indicator 4.3 Increased numbers of visiting mycologists, students trained, field trips, reference collections accessed, and papers published at the centre [by end of March 2026].	4 mycologists visited the centre, 16 students trained, 52 others researchers and student visited the centre. Six routine courses delivered at national universities. Seventy (70) Mycological trips were carried out. 982 fungal specimens collected, 12 papers published.	Continue courses deliveries and training, strength south-south and north-south partnerships, intensify field trips and mycological surveys to increase reference collections.
Indicator 4.4: The African Mycological Association revitalized, and new African fungal conservation NGO(s) established. Gender- equal policies encouraged in these bodies	Discussion among member to revitalize the African Mycological Association. A physical meeting is scheduled to happen in Benin during the upcoming fourth International Congress of Fungal Conservation in November 2025.	Continue with the African fungal conservation NGO registration process
Output 5. Public awareness (Sub-Saharan Africa).		

Indicator 5.1. Publicity (including involvement of local communities, women and non-scientists) through radio, television, newspaper, magazine and social media including blogs and campaigns.	Awareness has been promoted through multiple platforms, including radio broadcasts, newspaper articles, Facebook, a website, conferences, group discussions, training sessions, and exhibitions held in both Benin and Zimbabwe. Furthermore, new publicity materials such as flyers, pens, stickers, and t-shirts have been printed and distributed.	Continue publicity through radio, television and newspaper.
Indicator 5.2. Three popular (accessible to lay-people) guides to common fungi (2 for Benin, 1 for Zimbabwe where three already exist) [by end of March 2026].	20 species for the guide have been selected for which information about the use, the distribution and ecology are gathered. The two-field guide of Benin are underway.	Complete the draft of the guide and launch publication process
Indicator 5.3. Mobile exhibitions staged in Benin, Zimbabwe and, if possible, other countries [by end of March 2026].	Kakemonos and posters were printed for mobile and static exhibitions at various venues in Benin, including the University of Parakou and forestry offices, as well as during biodiversity events and conferences. In Zimbabwe, new sites are being considered for permanent exhibitions, with plans to expand once the Mukuvisi Woodland exhibition is completed and evaluated.	Continue exhibition at national and international level

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
Impact: 16/30}Fungi no longer neglected by CBD; poverty and gender inequality impacts of fungal diversity loss recognized.			
Outcome: 30/30}Sub-Saharan fungal conservation established through national conservation plans, protection of mycorrhizal forest and sustainable mushroom harvesting livelihoods, and better understanding of links between fungal diversity loss, poverty and gender inequality.	0.1. Country level assessments and conservation plans for fungi presented to at least six CBD National Focus Points (Benin, Zimbabwe and four other countries) [by end of March 2026]. 0.2. In Benin only, 20 villages (400 households) countrywide participating in a programme rearing native ectomycorrhizal saplings to regenerate felled woodland [by end of March 2026]. 0.3. Publicity through a wide range of media, evidencing raised awareness. 0.4. Pioneering global report on gender and poverty impacts of fungal diversity loss published [by end of March 2026].	0.1. Examine copies of assessments. 0.2. Visit participating villages; inspect their community gardens, see planted saplings; see evidence of 'buy-in' from NGOs. 0.3. Examine articles in magazines & newspapers, press releases, radio & television appearances, social media, leaflets, exhibitions etc. 0.4. Read report.	No major global or national events, political or otherwise, adversely impact on work [CBD National Focus Points have already indicated that assessments would be welcome].
Outputs: **1 (conservation planning)**. Information about sub-Saharan fungi and the threats they face, available on-line, analysed and presented to governments as national fungal conservation plans in a form convenient for non-specialists.	1.1. More than 70,000 sub-Saharan fungal records from reference collections and published sources previously unavailable on-line, digitized, edited, and made available along with new project-generated records, through GBIF [Darwin Core fields] and open-access on- line mycological databases [by end of December 2025]. 1.2. Websites based on these	1.1, 1.2. View databases and websites on-line; demonstrate their use through Google Analytics. 1.3. View publications.	1.1, 1.2. Procedures used over many years make this work low risk [through previous Darwin Initiative and other projects, fungal records from Cuba, Georgia, Trinidad and Tobago, Ukraine, Venezuela and other countries have been digitized, now fungi of Sub-Saharan Africa need to be done]. 1.3. Suitable in-country mycologists or potential

	records set up for at least six Sub-Saharan countries (Benin, Zimbabwe and four other countries) [by end of March 2026]. 1.3. Detailed peer-reviewed assessments of the status of fungi published, with advice and policy recommendations for at least six Sub-Saharan countries (Benin, Zimbabwe and four other countries) [by end of December 2025].		mycologists can be found to collaborate in preparing fungal assessments for the four as-yet unidentified beneficiary countries or, failing that, the work can be done from Benin and Zimbabwe, largely based on paper-published and on-line information.
2 (livelihoods protection). Fungal habitats and sustainable mushroom-harvesting livelihoods they provide understood, valued, protected, and included in remediation plans, with (Benin only) pilot ameliorative measures introduced [UN Sustainable Development Goals SDG2, SDG3, SDG7, SDG15].	2.1. Publicity [see Output 5 below]. 2.2 (Benin only). 10 collaborating villages (200 households) with 10 existing or new plant nurseries near surviving or recently felled natural forest (village administrations, landowners and NGOs already contacted and willing to collaborate) [by end of March 2024]. 2.3 (Benin only). 20 training days, two for each collaborating village, with 50 participants per village, raising awareness of mycorrhizal fungi restoration and options for agroforestry during regeneration [by end of March 2024]. 2.4 (Benin only). 10 plant nurseries each annually producing at least 300 actively growing young trees of known	2.1. See Output 5 below. 2.2 & 2.5. Lists of participating villages; photographs and videos of nurseries; georeferenced lists of forest sites. 2.3 & 2.6. Correspondence, photographs, lists of participants, copies of course teaching materials. 2.4 & 2.7. Nursery records, photographs. 2.8. Read report. 2.9. Examine written agreed exit strategy; verify implemention by parties to that strategy.	2.5 & 2.6. Additional suitable villages can be found where administrations and land-owners are willing to collaborate. 2.8. Mycologists can visit sites often enough to generate meaningful data.

	native ectomycorrhizal species (plans in place to employ mushroom-harvesting women for sourcing seed, planting and seedling care), with each year's saplings transplanted to regeneration sites (plans in place for transplanting work and after- care) [by end of March 2026]. 2.5 (Benin only). Collaboration extended to 10 more villages (200 more households) with suitable nurseries and regeneration sites [by end of March 2024]. 2.6 (Benin only). 20 more training days, two for each additional village, as for activity 2.3 [by end of March 2025]. 2.7 (Benin only). Plant nurseries of additional villages operating as for activity 2.4 [by end of March 2026]. 2.8 (Benin only). A countrywide report of monitoring mycorrhizal fungi, with special focus on project sites [by end of March 2026]. 2.9 (Benin only). Provision for continued livelihood protection through exit strategy [by end of March 2026].		
3 (poverty and gender equality issues). A global investigation of links between fungal diversity loss, poverty and gender inequality (currently almost completely unexplored), with a published pioneering report on the findings.	3.1. A published peer reviewed pioneering global report on links between fungal diversity loss, poverty and gender inequality [by end of March 2026].	3.1. View publication.	3.1. Anticipated informational gaps can be bridged through an investigative approach (fungal diversity loss is poorly understood, and links with poverty and gender inequality may be subtle, hidden or even denied). Additional expertise can be imported in through collaboration.

4 (infrastructure). Sub-Saharan mycology infrastructure strengthened.	4.1. Three graduates trained as mycologists at Parakou University's regional centre of excellence for mycology, and one graduate similarly trained in Zimbabwe, with additional expertise in fungal conservation and data handling [by end of March 2026]. 4.2. Enhanced facilities at the centre, including plans for culture collection [by end of March 2026]. 4.3. Increased numbers of visiting mycologists, students trained, field trips, reference collections accessed, and papers published at the centre [by end of March 2026]. 4.4. The African Mycological Association revitalized, and new African fungal conservation NGO(s) established. Gender-equal policies encouraged in these bodies.	4.1. At least one manuscript including their names as authors and dealing with fungal conservation prepared and submitted for peer-reviewed publication; digitized records attributable to their work (evidence in 'keyboarder/editor' field); evidence of participation in outreach activities (names on leaflets, records of interviews etc.). 4.2. Lists of equipment acquired; before & after photographs; detailed culture collection plans. 4.3. Annual statistics of scientific visits to the centre; numbers of students trained; numbers of publications in which the Darwin Initiative is acknowledged. 4.4. Evidence of learned society and new NGO activities on-line, including evidence of actively promoted gender-equal policies.	No major global or national events, political or otherwise, adversely impact on work.
5 (public awareness). Public awareness of importance of fungi raised.	5.1. Publicity (including involvement of local communities, women and non-scientists) through radio, television, newspaper, magazine and social media including blogs and campaigns. 5.2. Three popular (accessible to lay-people) guides to common fungi (2 for Benin, 1 for Zimbabwe where three already exist) [by end of March 2026]. 5.3. Mobile exhibitions staged in Benin, Zimbabwe and, if possible, other countries [by end of March 2026].	5.1. Lists of radio/television appearances; copies of newspapers and magazines; social media pages and tags. 5.2. Publications (hardcopies). Photographs, websites, press coverage.	5.3. Venues [indoor and outdoor] willing to stage exhibitions can be found.

Activities. Each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1. Each activity should start on a new line and be no more than approximately 25 words.

General

General (1). At the outset, ensure core project staff understand gender-equal character of project and procedures for M&E, training where necessary.
General (2). Throughout project, monitor and evaluate work, disaggregating measurables by gender and, where appropriate, by household income level.
General (3). Where not already done, seek to establish contact and a dialogue with CBD National Focus Points. General (4). Recruit graduate project staff on a gender-neutral basis, and train them (this may involve travel to UK).

Output 1.1 [digitizing Sub-Saharan fungal records]

1.1 (1). M&E: from outset, keep numbers of records newly digitized / derived from on-line open access databases; assess editorial work.
1.1 (2). Train graduates based in Benin and Zimbabwe to extract, digitize and edit new data, and be able to train and supervise others.
1.1 (3). Identify reference collection sources of new Sub-Saharan fungal records and, where permissible, digitize them.
1.1 (4). Identify publications containing new Sub-Saharan fungal records, obtain copies of those publications, and digitize the records.
1.1 (5). Edit the newly digitized records (scoping work indicates at least 70,000 new records will become available in this way).
1.1 (6). Add them to the existing 62,000 fungal records from Sub-Saharan Africa.
1.1 (7). Make the new records available on-line.
1.1 (8). Avoiding data duplication where possible, upload Darwin Core data to GBIF with copy to CABI.
1.1 (9). Extract records from other open access databases (particularly GBIF), avoiding duplicates, edit to compatible standard, and prepare for use in assessments.

Output 1.2 [preparing new Sub-Saharan country websites]

(1). M&E: test new country websites as they come on stream, to ensure they function correctly.

1.1 Consulting National Focus Points and national mycologists where present, select at least six beneficiary Sub-Saharan countries (Benin, Zimbabwe and four others).
1.1 (3). Using existing country websites as examples, prepare web pages, and modify existing code to function correctly for beneficiary countries.
1.1 (4). Make new country websites available on-line.

Output 1.3 [preparing Sub-Saharan national fungal assessments]

1.2 (1). M&E: review results of published works searches to check significant sources not missed; submit resulting documents for peer review.
1.2 (2). Finalize specifications for the proposed national fungal conservation plans (currently in draft).
1.2 (3). For each beneficiary country, search published works, not only on fungi, but also on associated organisms and on ecosystems.
1.3 (4). Add output from all existing, new and acquired records to that information.
1.3 (5). List associated organisms nationally significant economically or because endemic or threatened, and allocate extra attention to their fungi.
1.3 (6). Accumulate information about national awareness of fungi among administrators and politicians, in education, and in the public.
1.3 (7). Accumulate information for each country about how fungal diversity promotes wealth and well-being, and how its loss impacts poverty and gender issues.
1.3 (8). For each beneficiary country, using accumulated information, produce a detailed national fungal conservation plan.
1.3 (9). Present plans to each CBD National Focus Point, subsequently also making them available on-line.

Output 2.1 [publicity]

2.1 (1). Publicity [see activities for Output 5 below].

Output 2.2 [first tranche of collaborating villages]

2.2 (1). M&E: record information about villages already contacted (including disaggregated gender statistics, local fungus-harvesting levels, plant nurseries and regeneration sites).
2.2 (2). Inform village administrations in 10 already contacted villages / NGOs that the project can start.
2.2 (3) Visit villages / NGOs; discuss project's Output 2 activities with local contacts (female and male), listening to responses, and modifying plans accordingly.
2.2 (4). Identify training course participants on a gender neutral basis and agree course dates.
2.2 (5). Visit each existing or proposed nursery site, recording features; discuss planting and sapling care practicalities with local contacts (female and male).
2.2 (6). Select mushroom-harvesting villagers (i.e. with the strongest interest in project success) for seed collection and plant nursery work; ensuring they understand the job; agree remuneration.
2.2 (7). Visit regeneration sites; evaluate their potential for receiving transplants from nurseries, and for agroforestry intercropping and other restoration treatments.
2.2 (8). Select villagers to transplant seedlings at regeneration sites and provide after-care; ensuring they understand the job; agree remuneration.

Output 2.3 [first tranche of courses]

2.3 (1). M&E: record course dates, lists of course participants (including disaggregated gender statistics), and information about pre- and post-course awareness.
2.3 (2). Prepare course materials (forest destruction impacts, mycorrhizal fungi importance, mushroom harvesting livelihoods, forest nursery practice, regeneration management, permaculture, intercropping, coppicing etc.).
2.3 (3). Hold rehearsal of course.
2.3 (4). Deliver courses.

Output 2.4 [first sowing and transplanting]

2.4 (1). M&E: maintain records of tree planting at each nursery (dates, numbers of saplings, locations within nursery, species, sources, pests, diseases and mortality etc.).
2.4 (2). Obtain seed; ensure availability of necessary tools and other equipment; ensure participating villagers are ready to sow seed.
2.4 (3). Supervise sowing and check subsequent seedling care by villagers at each nursery is satisfactory.
2.4 (4). Supervise transplanting and check subsequent plant care is satisfactory.

Output 2.5 [second tranche of collaborating villages]

2.5 (1). M&E: same as for activity 2.2 (1).
2.5 (2). Identify and shortlist potential additional villages and regeneration sites; establish contact, explaining project aims and negotiating collaboration.
2.5 (3) Visit additional villages; discuss project's Output 2 activities with local contacts (female and male), listening to responses, and modifying plans accordingly.
2.5 (4). Identify training course participants on a gender-neutral basis and agree course dates.

2.5 (5). Visit each existing or proposed nursery site, recording features; discuss planting and sapling care practicalities with local contacts (female and male).

2.5 (6). Select mushroom-harvesting villagers to collect and plant tree seeds and carry out nursery after-care; ensuring they understand the job; agree remuneration.

2.5 (7). Visit regeneration sites; evaluate their potential for receiving transplants from nurseries, and for agroforestry intercropping and other restoration treatments.

2.5 (8). Select villagers to transplant seedlings at regeneration sites and provide after-care; ensuring they understand the job; agree remuneration.

Output 2.6 [second tranche of courses]

2.6 (1). M&E: same as for activity 2.3 (1).

2.6 (2). Deliver courses.

Output 2.7 [second tranche of sowing and transplanting]

2.7 (1). M&E: same as for activity 2.4 (1).

2.7 (2). Obtain seed; ensure availability of necessary tools and other equipment; ensure participating villagers are ready to sow seed.

2.7 (3). Supervise sowing and check subsequent seedling care by villagers at each nursery is satisfactory.

2.7 (4). Supervise transplanting and check subsequent plant care is satisfactory.

2.7 (5). If these activities are progressing well in Benin, begin similar work in Zimbabwe.

Output 2.8 [monitoring mycorrhizal populations]

2.8 (1). M&E: carry out periodic mycological surveys of active nurseries and regeneration sites, and of sites where future regeneration is anticipated.

Output 2.9 [livelihoods protection exit strategy]

2.9 (1). Encourage and support stakeholders to develop and commit to plans for continued care of existing young trees, and post-project sowing, transplanting and after-care of new young trees.

Output 3.1 [pioneering global report on poverty and gender equality links]

3.1 (1). M&E: at end of years 1 and 2, invite appropriate external experts to review work; submit resulting documents for peer review.

3.1 (2). Seek general evidence of fungal diversity benefits for human wellbeing, and fungal diversity decline impacts on poverty and gender equality.

3.1 (3). Analyse that information then prepare and publish a peer reviewed report.

Output 4.1 [taking on project graduates and training them]

4.1 (1). M&E: make six-monthly appraisals of each graduate, evaluating progress, successes and problems, disaggregating measurables to ensure gender equality.

4.1 (2). Advertise for, interview, select (on gender equal basis), and appoint four graduates (see job descriptions).

4.1 (3). Provide training (which may involve travel to UK) and subsequent supervision for graduates, developing expertise in following areas:

- assessing the status of fungi at national level;
- database design and editorial standards for handling fungal data;
- identifying and assessing areas of natural forest being damaged by logging, and determining restorative and ameliorative

measures;

- liaising with NGOs organizing local courses raising awareness of diversity loss, gender issues and poverty resulting from unsustainable activities like logging and charcoal production;
- researching socio-economic aspects of fungal diversity and its links to human wellbeing, and of fungal diversity loss and links to poverty and gender inequality;
- software and website development;
- understanding and developing suitable national fungal conservation strategies.

4.1 (4). Allocate mycologist graduates the task of preparing fungal field guides mentioned in 5.2 below.

Output 4.2 [strengthening mycological infrastructure]

4.2 (1). M&E: check equipment has been purchased and improvements carried out; submit plans to peer review.
4.2 (2). Purchase budgeted new equipment, identify and carry out improvements to enhance centre for mycology in Parakou.
4.2 (3). Undertake south-south (Benin–Zimbabwe) transfer of competence in collection management, drafting of field guides, and staging of exhibitions.
4.2 (4). Prepare plans for, and where possible work towards enhancement of Parakou University as a regional centre of excellence for mycology.
4.2 (5). Prepare detailed plans for establishing a culture collection at the centre for mycology in Parakou.

Output 4.3 [increasing Sub-Saharan fungal conservation activities]

4.3 (1). M&E: record mycological activity associated with the centre (collected specimens, courses, field trips, numbers of visitors, publications etc.).
4.3 (2). Prepare plans and take measures to ensure, as far as possible, that graduates continue in relevant work after project completion.
4.3 (3). Working with current African Mycological Association, support and encourage a revived on-line presence, including newsletters, lectures and meetings.
4.3 (4). Prepare proposals for a new African fungal conservation NGO; circulate those proposals to mycologists and conservationists and, taking feedback into account, organize an inaugural on-line meeting.

Output 5.1 [raising awareness of project messages]

5.1 (1). M&E: annually record number of each publicity event type; record impacts, for example through social media followers.
5.1 (2). Identify target audiences for publicity; plan and prepare the messages to be suitable for each different audience, including form of delivery.
5.1 (3). Identify organizations opposing illegal logging and charcoal production, and evaluate them for potential to add value to this project's work.
5.1 (4). Contact those shortlisted and explore collaboration possibilities.
5.1 (5). Both independently and in collaboration, publicize the destruction being done to habitats and sustainable livelihoods.
(6). At all levels, raise awareness of project messages, particularly Output 2, through radio, television, newspaper, magazine, social media blogs and campaigns.

Output 5.2 [project-generated field guides]

5.1 (1). M&E: annually review progress in production of texts and images with each lead author.
5.2 (2). Determine scope and content of each field guide, and identify suitable publisher.
5.2 (3). Accumulate relevant material (images, descriptions, information about individual species etc.).

5.2 (4). Prepare text, illustrations and diagrams, including introduction, acknowledgements, and indexes.
5.2 (5). Print and publish.

Output 5.3 [project-generated exhibitions]

5.3 (1). M&E: maintain list of completed panels; record public attendance at and response to exhibitions.
5.3 (2). Identify suitable locations willing to host temporary/permanent exhibitions, and negotiate dates for staging those exhibitions.
5.3 (3). Review existing digitized panels from prior UK fungal exhibition, and material from on-going fungal exhibition in Zimbabwe, selecting components suitable for audiences in Sub-Saharan Africa.
5.3 (4). Adapt copies of digital masters where necessary.
5.2 (5). Identify additional fungal topics suitable for audiences in tropical and south-temperate Africa, and prepare digitized masters for them.
5.3 (6). Design new mobile and static exhibitions around them, identifying additional materials needed.
5.3 (7). Prepare accompanying paper exhibition leaflets, and on-line resources accessible by QR codes.
5.3 (8). Stage exhibitions with accompanying publicity.

Annex 3: Standard Indicators

Table 1 Project Standard Indicators

Please see the Standard Indicator guidance for more information on how to report in this section, including appropriate disaggregation.

DI Indicator number	Name of indicator	If this links directly to a project indicator(s), please note the indicator number here	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DI-B02	Number of new or improved species management plans available and endorsed	Indicator 1.3	Number of plans	New	0	0		0	6
DI-B02	Number of new or improved species management plans available and endorsed	Indicator 1.3	Number of plans	Improved	0	0		0	0
DI-B07	Number of policies with biodiversity provisions that have been enacted or amended	Indicator 1.3	Number of instruments	enacted	0	1		1	undefined
DI-B07	Number of policies with biodiversity provisions that have been enacted or amended	Indicator 1.3	Number of instruments	amended	0	1		1	undefined
DI-C08	Number of Media related activities	Indicator 5.1	Number of activities	Internet	13	1296		1309	undefined
DI-C08	Number of Media related activities	Indicator 5.1	Number of activities	Print	1831	850		2681	undefined
DI-C08	Number of Media related activities	Indicator 5.1	Number of activities	Radio	0	1		1	undefined
DI-C09	Number of records added to accessible databases.	Indicator 1.1	Number of records		22,000	40,000		62,000	70000
DI-D02	Ecosystem Loss Avoided	Indicator 2.4	Number of hectares	Woodlands and savannah	33	40		73	undefined

Table 2 Publications

Title	Type (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
Launching of the book « Champignons comestibles d'Afrique de l'Ouest »	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/edible-mushrooms-on-the-front-page-of-national-newspapers/
FC-SSA at the AYC on Natural Resources and Environmental Governance 2024	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/fc-ssa-at-the-ayc-on-natural-resources-and-environmental-governance-2024/
Edible mushrooms on the front page of national newspapers	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/edible-mushrooms-on-the-front-page-of-national-newspapers/
FC-SSA at the AYC on Natural Resources and Environmental Governance 2024	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/fc-ssa-at-the-ayc-on-natural-resources-and-environmental-governance-2024/
Spatial analysis vis a vis local perception of anthropogenic pressures on natural habitats of ectomycorrhizal fungi in Wari–Maro Forest Reserve in Benin	Journal	Teteli S. Clement	Male	Benin	Asian Journal of Mycology 7(2): 51–67 (2024)	https://asianjournalofmycology.org/pdf/AJOM_7_2_5-1.pdf
FC-SSA at the International Biodiversity Day	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/fc-ssa-at-the-international-biodiversity-day/

Title	Type (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
National Tree Day in Benin: The FC-SSA Project Upholds the Tradition	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/national-tree-day-in-benin-the-fc-ssa-project-upholds-the-tradition/
FC-SSA at the Climate Diplomacy Academy 2024	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/fc-ssa-at-the-climate-diplomacy-academy-2024/
Restoration of Kpeoussobé Sacred Forest	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/restoration-of-kpeoussobe-sacred-forest/
FC-SSA Project Introduced to Ten New Villages	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/fc-ssa-project-introduced-to-ten-new-villages/
MYCOBLITZ Summer Course 2024 in Benin	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/mycoblitz-summer-course-2024-in-benin/
FC-SSA at Science and Partnerships for Agriculture Conference 2024	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/fc-ssa-at-science-and-partnerships-for-agriculture-conference-2024/
MyTIPS at International Mycology Congress (IMC12) 2024	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/mytips-at-international-mycology-congress-imc12-2024/
Capacity Building: FC-SSA Trains Women Beneficiaries in Mushroom Production	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/capacity-building-fc-ssa-trains-women-beneficiaries-in-mushroom-production/
Establishing a Protected Area: Collaborative Efforts for the Preservation of	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/establishing-a-protected-area-collaborative-efforts-for-the-preservation-of-the-kota-waterfall-ecosystem-in-northern-benin/

Title	Type (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
the Kota Waterfall Ecosystem in Northern Benin						
Exclusive Interview with Prof Yorou: The FC-SSA Project and Fungi Conservation in Daabaaru Newspaper	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/exclusive-interview-with-prof-yorou-the-fc-ssa-project-and-fungi-conservation-in-daabaaru-newspaper/
Conservation with an impact : Fungi and Indigenous Knowledge – Benin	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/conservation-with-an-impact-fungi-and-indigenous-knowledge-benin/
MyTIPS at COP16: Fungal Conservation on the Global Stage	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/mytips-at-cop16-fungal-conservation-on-the-global-stage/
FC-SSA Participates in COP16 with a Groundbreaking Presentation on Community Inclusion in Restoration Projects	Blog post	Wilfrid Adjimoti, 2024	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/fc-ssa-participates-in-cop16-with-a-groundbreaking-presentation-on-community-inclusion-in-restoration-projects/
Advancing Fungal Conservation in Benin's National Biodiversity Strategy	Blog post	Wilfrid Adjimoti, 2025	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/advancing-fungal-conservation-in-benins-national-biodiversity-strategy/
Official launch of the forest seed harvesting campaign.	Blog post	Wilfrid Adjimoti, 2025	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/official-launch-of-the-forest-seed-harvesting-campaign-2/
Fungi for Sustainable Development: Highlights from the SDGs Kara 2025 Conference	Blog post	Wilfrid Adjimoti, 2025	Male	Benin	FC-SSA Facebook page	https://fc-ssa.org/fungi-for-sustainable-development-highlights-from-the-sdgs-kara-2025-conference/

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, scheme, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	X
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	X
Is your report more than 10MB? If so, please consider the best way to submit. One zipped file, or a download option, is recommended. We can work with most online options and will be in touch if we have a problem accessing material. If unsure, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Have you provided an updated risk register? If you have an existing risk register you should provide an updated version alongside your report. If your project was funded prior to this being a requirement, you are encouraged to develop a risk register.	X
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see Section 16)?	
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	