

Darwin Initiative Main Annual Report

To be completed with reference to the “Writing a Darwin/IWT Report” Information Note:
(<https://www.darwininitiative.org.uk/resources-for-projects/reporting-forms-change-request-forms-and-terms-and-conditions/>).

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

Submission Deadline: 30th April 2021

Darwin Project Information

Project reference	27-001
Project title	Conserving High Atlas agrobiodiversity to improve Amazigh livelihoods in Morocco
Country/ies	Morocco
Lead organisation	Global Diversity Foundation
Partner institution(s)	Moroccan Biodiversity and Livelihoods Association (MBLA); High Commissariat for Water and Forests and Desertification (HCWFD); Cadi Ayyad University; Cagliari Botanical Gardens; Institut Agronomique et Vétérinaire Hassan II, Rabat (IAV); International Center for Agricultural Research in the Dry Areas (ICARDA) and Agropolis Resource Center for Crop Conservation, Adaptation and Diversity (ARCAD); National Institute for Agronomic Research (INRA); Slow Food International; Federation of Leagues for Women’s Rights (FLDF); University of Cagliari; Terre et Humanisme Maroc; Provincial Directorate of Agriculture (DPA); Réseau des initiatives agroécologiques au Maroc - RIAM and DEAFAL.
Darwin grant value	£362,686.00
Start/end dates of project	Start date: 01/06/2020 / End date: 31/05/2023
Reporting period (e.g. Apr 2020 – Mar 2021) and number (e.g. Annual Report 1, 2, 3)	October 2021 – April 2021, Year 1 Annual Report
Project Leader name	Gary Martin
Project website/blog/social media	www.global-diversity.org A general description of the project is available on GDF’s UK website and regular updates are posted on the GDF news page .
Report author(s) and date	31 May 2021 by Pommelien da Silva Cosme, Gary Martin, Emily Caruso, Ugo D’Ambrosio, Manish Panjabi, Rachid Ait Babahmad.

1. Project summary

We observed the erosion of traditional agricultural knowledge, adaptive local practices and plant genetic resources through our work with High Atlas Amazigh communities to maintain their agroecological practices and water management systems. This attrition negatively impacts unique High Atlas agroecosystems that sustain a regional biodiversity hotspot and diversified community livelihoods. These changes accompany a decline in agrobiodiversity, locally-adapted production methods, diet quality and community values – such as collaboration and reciprocity – that maintain traditional agroecosystems. A key driver of this downward spiral is socio-economic marginalisation, leading to an increase in rural-to-urban migration and the consequent severing of knowledge and practice transmission. Since 2016, we documented historical trends attested by community members: a notable reduction in extent and fertility of agricultural lands cultivated and traditional crops produced alongside an increase in commercial fruit and nut arboriculture and the cultivation of introduced varieties that require chemical inputs for optimal production and sale. We noted a particular impact on one forage legume (alfalfa, *Medicago sativa*), two grain legumes (fava bean, *Vicia faba*; pea, *Pisum sativum*), and two cereals (barley, *Hordeum vulgare*; durum wheat, *Triticum durum*) – along with associated biodiversity – that are increasingly marginalized by agricultural intensification, land abandonment and rural exodus.

Aware these changes render their food security and community wellbeing precarious, local farmers seek to improve their agricultural productivity and income by accessing diverse seeds, selecting climate-resilient varieties and reaching the growing high-end urban niche markets that celebrate the cultural and geographical origins of High Atlas products. These efforts are consistent with national policy – especially the Green Morocco Plan and its 2020 – 2030 Génération Green programme – which promotes government-funded solidarity agriculture, natural resource conservation and marketing of regional products to increase revenues. We contribute to these positive trends by responding to a request from Amazigh farmers, Moroccan government agencies and urban-based agroecological initiatives for assistance. In particular, they are seeking support to characterize and conserve traditional varieties, select new drought-adapted crops, improve agricultural techniques, engage in crop transformation innovations (including novel culinary uses) and curate seed portfolios to ensure food security. We activate knowledge transmission through learning exchange, strengthen local capacities to add value to High Atlas products and sell them in high-end urban niche markets, and promote urban-rural networks of reciprocity and conviviality.

With this project, GDF supports local Amazigh farmers and government agencies engaged in solidarity agriculture, to improve agricultural productivity and income from diverse crop landraces of key cereals and leguminous plants cultivated by these communities.

As part of our wider [High Atlas Cultural Landscapes Programme](#), GDF works in the rural communes of Ait M'hamed, Imegdâl, Oukaïmeden and Ourika (see map below), and is currently expanding to an additional commune Zaouit Ahansal, near Ait M'hamed.



2. Project partnerships

Effective partner collaboration and stakeholder management is key to the successful implementation of this project. Our main implementing partner is [Moroccan Biodiversity and Livelihoods Association](#) (MBLA), a Moroccan NGO which was created in 2015 with sponsorship from GDF during a previous Darwin project. Throughout this reporting year, GDF and MBLA have collaborated closely to deliver the activities reported on below. We ensured effective internal communications through weekly online meetings, in-person for those based in Marrakech.

We continued to build our long-term partnership with Cadi Ayyad University Marrakech, in particular with the MARK Regional Herbarium where the regional seed bank was created with Darwin support and through collaborations with Professor Ahmed Ouhammou and his students. The seeds of local crop landraces we have collected under Activity 1.2 will be stored in MARK seed bank. We have also strengthened our partnership with DEAFAL, an Italian NGO that supports the social and economic empowerment of small-scale farmers and producers in the Global South through sustainable agriculture projects. In collaboration with DEAFAL, we developed and organised a second module of Farmer Field Schools (Activity 2.3), which focused on plant health and nutrition. Once travel restrictions are lifted, DEAFAL consultants will travel to Morocco to host a third module on livestock management and to further develop the soil, pest and water management plans in collaboration with our local team and community researchers.

In addition, we are building a relationship with Dr. Loubna Belqadi (Agronomic and Veterinary Institute of Rabat – IAV) and Dr. Devra Jarvis (Platform for Agrobiodiversity Research – PAR) on the [DATAR Application](#) (Diversity Assessment Tool for Agrobiodiversity and Resilience). GDF and MBLA team members have received training in the use of the application in order to provide feedback to the DATAR developers in advance of applying this tool in the field with local farmers. We have been engaged with the Réseau des initiatives agroécologiques au Maroc (RIAM) along with other partners such as Terre et Humanisme Maroc, Nature et Progrès and the French Agricultural Research Centre for International Development (CIRAD), on refining a participatory guarantee system for agroecological producers and extending it to rural cooperatives.

Thanks to this project, we are also developing new partnerships. In collaboration with Dr. Athanasios Tsivelikas of the International Center for Agricultural Research in the Dry Areas (ICARDA) and Dr Zaine El Abidine Fatemi and Dr. Khalid Azim of National Institute for Agronomic Research (INRA), we launched a specific project on participatory varietal selection of fava beans and peas; this is co-funded by Salvia Foundation through our new partner Lebende Samen. We have organised an initial discussion with Slow Food International to explore collaborations on mapping local food products in the High Atlas, exploring participatory guarantee systems, networking local producers, developing booklets on local crops, certifying local foods as [Ark of Taste](#), and organising an October Harvest Festival around World Food Day (October 16 2021). We also held two meetings with Federation of Democratic League for Women's Rights to exchange ideas on organising Gender and Agricultural Caravans (Activity 2.6), once COVID19 restrictions are lifted. We started an emerging collaboration with the [Trade Union Institute for Development Cooperation Contacts](#) in Italy (ISCOS - Istituto Sindacale per la Cooperazione allo Sviluppo Contacts en Italie) through the development of a project proposal to support female rural entrepreneurship in the High Atlas and improved income generation from sales of cosmetic, craft and culinary products. Finally, we embarked on a new partnership with [Mowgli Mentoring](#) and the [IES Social Business School](#) to support rural entrepreneurs in Morocco and the High Atlas to promote sustainable land-use practices, with additional funding from MAVA Foundation.

3. Project progress

NB: We noticed a minor error in the logframe under Output 2. Although in the activities list of the original proposal we included the following activity “2.2 Baseline research for innovative soil, pest and water management carried out”, the activity wasn’t included in the logframe which caused a minor disorder in the numbering under Output 2. We have now included Activity 2.2 in the logframe. In addition, we added an indicator for activity “3.8 Second RHoMIS survey carried

out, data published online and analysed in comparison with existing baseline”, as this was missing from the original logframe (see Annex 1 logframe below).

3.1 Progress in carrying out project Activities

As part of *Output 1*, which focuses on the assessment, characterisation and conservation of High Atlas agrobiodiversity, our community researchers collected 14 different seed varieties in our three partner communes (Imegdal, Aït M'hamed and Oukaïmeden) of the 5 species (*Hordeum vulgare*, *Triticum durum*, *Vicia faba*, *Pisum sativum* and *Medicago sativa*), in addition to 67 other seed varieties (Activity 1.2) (see Annex 1). Once the collection of the remaining varieties is completed, the seeds will be stored in the community, regional and international seed banks in order to maintain the variability, quality and availability of local varieties. The data gathering for the seed surveys (Activity 1.1) has been delayed due to COVID19. However, we have carried out initial research and literature reviews on the 5 species (*H. vulgare*, *T. durum*, *V. faba*, *P. sativum* and *M. sativa*) in preparation of the seed surveys (Annex 2). Concerning the conservation assessments for High Atlas varieties of 5 crops (Activity 1.3), we developed an adapted conservation assessment protocol for agrobiodiversity (Annex 3), and produced a literature review on the agrobiodiversity of the 5 species mentioned above (Annex 4). Furthermore, 6 community researchers (including 2 women) received on the job training in seed bank management at the community seed banks in our partner communes (Activity 1.7).

We gathered the baseline data for innovative soil, pest and water management plans from partner communes Aït M'hamed and Imegdal (Activity 2.2). The baseline data will be completed with additional data from a third commune (Oukaïmeden) for which we are planning a focus group next month. On April 25th and 26th, we held a Farmer Field School on plant nutrition and health (Activity 2.4) in Aït M'hamed. During the two-day event, 28 local community members learned about the different stages of plant growth, while practicing how to prepare organic fertilisers that boost plant health such as mixtures with alfalfa (see Annex 5 for the full report). We consider this event a success given the current health crisis and limitations in organising group gatherings. We already started planning for a Farmer Field School in September 2021 on livestock management with partner DEAFAL. In preparation of this training and to improve our understanding of local challenges related to livestock management, we carried out baseline research and livestock characterisations in the High Atlas (Bernat). The full report is provided in Annex 6.

As part of Activity 2.5 (Training for community farmer trainers), we developed a targeted training programme for 8 community researchers (including 2 women). The training programme includes 10 thematic workshops on the following themes: 1) introduction to agroecology, 2) soil fertilization, 3) water management, 4) plant health, 5) sowing and multiplication of seeds, 6) crop management, 7) arboriculture and agroforestry, 8) seed conservation, 9) agroecological farming practices and 10) facilitating and animating workshops (see [our online blog](#) and Annex 7 for the full programme). In March and April, we organised two practical workshops on the introduction to agroecology (Annex 8) and water management (Annex 9). In addition, we organised two meetings with new partner Federation of Leagues for Women's Rights (FLDF) to organise and plan Gender and agricultural caravans (Activity 2.6). The event has not yet been approved by local authorities and must take place in person in order to ensure participation of the targeted groups. Furthermore, three GDF team members (Ugo D'Ambrosio, Meryem Aakairi and Omar Saadani Hassani) received training on Diversity Assessment Tool for Agrobiodiversity and Resilience ([DATAR](#)) on 27th April and 4th May (Activity 2.7) and will start applying this tool in the field with local farmers starting July 2021.

Under Output 3, which focuses on improving livelihoods, we have been providing support to 8 rural cooperatives from the High Atlas (including 5 all-female cooperatives) through capacity building and targeted training in marketing, packaging and social media (Activity 3.1) (Annex 10a). In order to amplify our efforts with the cooperatives, we were successful in obtaining a [Darwin Covid response grant in January 2021](#), which focuses on the online commercialisation of the cooperative's products. To further support the local cooperatives, we recruited [Hafida Mazoud](#) as our Rural Entrepreneurship Consultant. With her support, we will be able to work more closely with cooperative members to support them in improving their work, including innovation of new food products.

Due to the challenges of organising large group gathering during this reporting year, we were unable to organise provincial seed and biocultural diversity fairs (Activity 3.5) as originally planned. However, on International Day for Biological Diversity (22 May), we organised a High Atlas Food Market in Marrakech to celebrate the food culture from the High Atlas and to support the 8 rural cooperatives by providing them a stand to sell their products and an opportunity to engage with urban costumers (see Annex 10 for the event programme). The day after the event, we organised a training for all cooperatives, which focused on branding, product quality, marketing and social media in order to support the sale of their products. We also started planning the regional gastronomy fair in Marrakech (Activity 2.6), which will take place on World Food Day (16 October 2021) as part of a broader October Harvest Festival.

As part of the same output, we reviewed our approach on the RHoMIS household surveys (Activity 3.8), based on the outcomes of our experience with this survey during our previous Darwin project (24-010). We found the RHoMIS surveys presented multiple challenges as they were very time intensive which limited our ability to conduct surveys on a larger scale. Therefore, we have developed a new approach which we call Socioeconomic Impact Assessments (SEIA) for which we developed a new questionnaire tailored to our project (Annex 11), and identified participants (Annex 12). We have also improved the efficiency of our data collection method by developing the questionnaire in an online tool (Kobo ToolBox), which our community researchers can easily access using their tablets in the field ([see here for an example survey](#)). The Kobo ToolBox allows for offline data collections and provides data analysis options. We have identified a list of participants, which are all project beneficiaries, and have started a second round of survey in April 2021. We also started carrying out short questionnaires after our project activities such as training for cooperatives to better understand and monitor the impact of our interventions.

In contribution to Output 4, we recruited a Policy Analysis and Dissemination Consultant ([Tasnim Elboute](#)). In preparation of the regional capacity building workshop on the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), we produced a draft policy brief on this issue to inform the workshop, which is planned for July 2021 (see Annex 13 for the draft). Although the workshop was initially planned for this reporting year, COVID19 restrictions didn't allow for in-person workshops until now and an alternative online workshop would have decreased the level of participation from rural community members.

3.2 Progress towards project Outputs

Output 1. High Atlas agrobiodiversity surveyed, assessed, characterised and conserved

We made progress towards achieving Indicator 1.2 (*100 accessions of landraces of 5 species*), through collecting 14 different seed varieties of the 5 species in our three partner communes: Imegdâl, Aït M'hamed and Oukaïmeden (Annex 1). In contribution to Indicator 3 (*Adapted IUCN conservation assessments carried out for High Atlas varieties of the 5 selected crops*), we developed an adapted conservation assessment protocol for agrobiodiversity (Annex 3), and produced a literature review on the agrobiodiversity of the 5 species (Annex 4). In addition, 6 community researchers (2 women) received on the job training in seed bank management, which contributes to Indicator 1.7 (*Six community researchers —at least 3 women— trained as CSB managers, actively implementing management*).

Output 2. Sustainable and climate- resilient agroecosystem and crop management implemented

Under Output 2, we are progressing well to achieve indicators 2.2, 2.3 and 2.4 through the establishment of the necessary baseline data for innovative soil, pest and water management plans and the implementation of a Farmer Field School on plant nutrition and health, which addressed practices for pest control (Annex 5). We also initiated a [targeted training programme](#) for 8 community researchers (including 2 women), who will be trained as community agroecology trainers and focal points. It includes a series of 10 thematic workshops (Annex 7), thus exceeding our indicator 2.5 (*Three community researchers —at least 1 woman— trained as community farmer trainers*). In addition, three GDF team members received training on Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR) to prepare the application of this tool with local farmers, which contributed to indicator 2.7 (*100 farmers engaged in the use of the Diversity Assessment Tool for Agrobiodiversity and Resilience*).

Output 3. Livelihood improvements through valorization, commercialization and exchange of local agrobiodiversity and increased collaboration within and between communities and regional support networks, achieved

During this reporting year, we contributed to indicator 3.1 (*Five rural cooperatives increase their sale of agricultural products (including from the target species) by 30%*) through capacity building trainings for rural cooperatives from the High Atlas, including 5 all-female cooperatives. We also recruited a Rural Entrepreneurship Consultant ([Hafida Mazoud](#)) to support the launch of activities under Output 3. Although we were unable to implement provincial seed and biocultural diversity fairs (Indicator 3.5) as originally planned due to travel restriction, we organised a High Atlas Food Market in Marrakech on World Biodiversity Day (22 May). We are also progressing well against indicator 2.6 (*At least one regional gastronomic event organized in Marrakech on High Atlas agrobiodiversity*) as we have confirmed the day and identified key participants for a regional gastronomy fair in Marrakech on World Food Day (16 October 2021). We have also recruited a curator for the fair, Louisa Aarrass, who has begun connecting with key actors and stakeholders and developing a roadmap for the event. Finally, we also reviewed our approach on the RHoMIS household surveys to support the measurement of indicators under this output. We have developed a new approach which we call Socioeconomic Impact Assessments (SEIA) for which we established a new questionnaire tailored to our project (Annex 11), and linked it to an online tool (Kobo Toolbox) to facilitate the process of data gathering and analysis.

Output 4. Stakeholder participation in national policy-making on smallholder agriculture and seeds, and implementation of ITPGRFA, accomplished

To support this Output and the achievement of its indicators, we recruited a Policy Analysis and Dissemination Consultant ([Tasnim Elboute](#)). Most of the activities under this output are planned for project Years 2 and 3. However, we have made some progress on indicator 4.1 (*One regional capacity-building workshop on ITPGRFA and its interactions with the Green Morocco Plan*), by producing a policy brief draft on ITPGRFA in preparation of the workshop, which is planned for July 2021.

3.3 Progress towards the project Outcome

Project Outcome: Agroecological research, farmer participation and capacity-building support the conservation and sustainable commercialisation of High Atlas agrobiodiversity, contributing to food security, poverty reduction and biodiversity-rich agroecosystems in three Amazigh rural communes.

This reporting year, we collected 81 different seed varieties, including 14 seed varieties of the 5 species mentioned below in our three partner communes: Imegdâl, Aït M'hamed and Oukaïmeden (Activity 1.2) which have been stored in the community and regional seedbanks. We also developed an adapted conservation assessment protocol for agrobiodiversity and produced a literature review to support the conservation assessments of High Atlas varieties of 5 crops (*Hordeum vulgare*, *Triticum durum*, *Vicia faba*, *Pisum sativum* and *Medicago sativa*) (Activity 1.3). We are therefore on track to meet Indicator 0.1 (*High Atlas varieties of five crops surveyed, assessed, characterized and conserved in 3 community, 1 regional and 1 international seed banks, by year 3; at least 150 other cultivated plants, arable wild species and wild crop relatives inventoried, with 20% represented in seed banks and 10% with conservation assessments completed, by year 3*).

We are making good progress to achieve indicator 0.2 '*at least 30ha of community-owned agricultural land under improved management, by year 3*' through our baseline research for soil, pest and water management plans (Activities 2.2 and 2.3) and the organisation of a Farmer Field School training on plant nutrition for 28 community members (Activity 2.4). In addition, we started an intensive training programme for 8 community agroecology trainers and three GDF team members received training in DATAR (Activity 2.7), which they will start applying in the field with farmers in July 2021.

We are therefore progressing well to achieve Indicator 0.3 '*At least 500 Amazigh households from three communities experience improved livelihoods and enhanced wellbeing, measured using the RHoMIS survey, by Year 3*'.

Finally, we are on track to deliver indicator 0.4 '*At least 80 key stakeholders participate in national policymaking on smallholder agriculture and seeds, and implementation of ITPGRFA, by year 3*' through the development of a policy brief on the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) and the recruitment of a Policy Consultant (Tasnim Elboute) who will support the activities under Output 4.

3.4 Monitoring of assumptions

All our assumptions hold true at this stage of project implementation.

3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation

Impact: Unique and threatened High Atlas agrobiodiversity is maintained and promoted, leading to healthy agroecosystems, improved Amazigh livelihoods and resilience to environmental change, providing a model for ITPGRFA implementation in Morocco.

This project contributes to the higher goal of biodiversity conservation and poverty alleviation by:

- 1) Building knowledge of High Atlas agrobiodiversity through surveys, biometric characterisations and ethnobotanical research. Through the research carried out as part of this project, we ensure conservation and sustainable management and use of High Atlas agrobiodiversity (see Annexes 2,3 and 4).
- 2) Supporting community seed banks and encouraging varietal selection, through which we provide farmers with access to seeds and varieties that build the resilience and diversity of their agricultural practices and food systems. By complementing cultivation of local, underutilized and selected varieties with innovative soil, water and pest management and targeted trainings to Amazigh farmers through Farmer Field Schools, we improve crop productivity and adaptive capacity of agroecosystems.
- 3) Mentoring and training 'seed entrepreneurs', strengthening community cooperatives and developing a seed product marketing model. This project supports building community capacities, allowing High Atlas community members to participate in niche markets for local, culturally-relevant and sustainable food products and thus improving rural incomes through the organisation of events such as the High Atlas Food Market (Annex 10). Through engaging with urban buyers, retailers, chefs and urban agroecology initiatives, we build urban-rural solidarity and trade networks, brokering direct commercial relationships that contribute to community livelihoods and poverty alleviation.
- 4) Contributing to Moroccan smallholder agriculture and seed-related policy-making through multistakeholder workshops, publication of policy briefs (Annex 13) and case studies and the development of a model for ITPGRFA implementation in Morocco.

4. Contribution to the Global Goals for Sustainable Development (SDGs)

This project contributes to Sustainable Development Goals (SDG) #1 (No poverty), #2 (Zero hunger) and #3 (Good health and well-being) by improving the agricultural productivity of Amazigh farmers through training and outreach to growing regional niche markets, thus enhancing income from local crops and associated products. The project's core component on sustainable agriculture proposes to enhance crop diversity sustainability and yield while reducing external inputs, thus strengthening food security, improving community well-being and supporting better health. The capacity building component of the project includes 1) training of young seed entrepreneurs in production and commercialisation of High Atlas seed and crop products, 2) coaching of community researchers to become community farmer trainers and 3)

training of Amazigh farmers through Farmer Field Schools (FFS). By promoting lifelong learning opportunities for all, these activities address SDG #4 (Quality education).

The project's focus on capacity building for Amazigh farmers to improve High Atlas agroecosystems by increasing their diversity and resilience, selecting drought-adapted crop varieties and using water-efficient irrigation techniques provides them with tools to adapt to environmental change and shocks (SDG #13 Climate action). Finally, through our conservation actions (in particular community seed banks, conservation assessments of selected crops and improved land use and resource management), the project contributes to halting biodiversity loss and protecting, restoring and promoting sustainable use of ecosystems in partner communities' territories (SDG #15 – Life on land).

5. Project support to the Conventions, Treaties or Agreements

This project focuses on the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), in particular articles 5 (Conservation, Exploration, Collection, Characterisation, Evaluation and Documentation of Plant Genetic Resources), 6 (Sustainable Use of Plant Genetic Resources), 9 (Farmers' Rights) and 11 (the Multilateral System) of the Treaty.

We use ethnobotanical approaches to survey, inventory and collect germplasm and associated knowledge of High Atlas cereal and legume crops, along with accompanying biodiversity including other cultivated plants, arable wild species and wild crop relatives. We take a systematic approach to assessing status and threats to these plants, based on our experience redlisting species according to IUCN categories and criteria (article 5.1a,b).

We support farmers' efforts to manage, conserve and benefit from their cereal and legume varieties on-farm through innovative ecological, soil and water management approaches, including approaches that mobilise underutilised varieties in seed portfolios to enhance management (5.1c). We invest in community and regional seed banks, linked to the ICARDA international seed bank, for ex situ conservation of local and underutilised crops, paying particular attention to documentation and the development of a locally appropriate standard operating procedure manual for high quality seed bank management (5.1e).

We provide gender and youth appropriate capacity building – including training of community trainers – to support the use of agroecological design and techniques for farm management, including agrobiodiversity-based management techniques using local and underutilized crops (6.2e,f). We carry out research that supports the participatory selection and testing of new varieties that promote on-farm resilience to environmental and socioeconomic challenges (6.2b,c), helping to increase the range of genetic diversity available to farmers (6.2d). We support stakeholder participation in policy-making that promotes traditional biodiversity-rich agroecosystem management and the maintenance of local, traditional and underutilised varieties (6.2a; 9.2c). We promote – through biocultural diversity fairs, seed fairs, regional exchanges, access to niche markets and the production of informational materials - the expanded use and knowledge of locally adapted crops, varieties and underutilised species, including in high-end gastronomy (6.2e). We document and promote traditional knowledge and practices related to agrobiodiversity, establishing a Free, Prior and Informed Consent process that protects farmers' rights to that knowledge (9.2a). We promote short commercial value-chains, participatory systems of guarantee and the sale of local and underutilised crop products in regional niche markets to support equitable sharing of benefits from the utilization of traditional varieties (9.2b).

We also contribute to the Convention on Biological Diversity (CBD) Aichi Target 7 by promoting the conservation and sustainable management of agricultural areas.

In addition, we contribute to the CBD's Global Strategy on Plant Conservation, through actions that support:

- Target 2 on conservation assessments, through the characterization and evaluation of varieties of five crop species;
- Target 9 on the conservation of crop genetic diversity by documenting, assessing and conserving crop germplasm and diversity and associated traditional knowledge;

- Target 13 on indigenous and local knowledge maintained by documenting traditional agroecological knowledge and including it in our sustainable agriculture management plans

6. Project support to poverty alleviation

Through our capacity building for rural cooperatives in the High Atlas and our support in providing spaces and events for the sale of their products, we expect to significantly improve the monetary income of at least 500 households. This project supports the economic empowerment of rural women, as the large majority of the cooperatives we work with are all female, which enhances the effectiveness of poverty reduction in our partner communities. In addition, our Farmer Field Schools trainings for Amazigh smallholders and the development of soil, pest and water management plans are aimed at improving agricultural productivity for improved food security as well as increase in rural incomes. Our COVID-19 Rapid Response grant on online local product commercialization, marketing and promotion to sustain biodiversity-friendly livelihoods is giving us with a unique insight into poverty alleviation, as it has provided us with data on annual revenue (and how profit is distributed among members) of 15 rural cooperatives of the High Atlas from 2019 and 2020. We are monitoring if there is a rebound in income in 2021 and a further increase in 2022 that will surpass pre-COVID revenues. These data will serve as a proxy for assessing poverty alleviation, complementing information on non-monetary benefits that accrue to communities through our Darwin project.

7. Consideration of gender equality issues

GDF is committed to ensuring that gender is mainstreamed across all our programmes. We promote equal male and female participation in all community led workshops and consultations and have been actively working towards created gender-balanced teams at all levels through the recruitment of 3 new female team members this reporting year ([Ibtissam Bouseta](#), [Meryem Aakairi](#) and [Tasnim Elboute](#)), and an additional two women, [Elif Eda Tibet](#) and [Hafida Mazoud](#), early in the second year of the project

In addition, we are supporting 6 all-female rural cooperatives through trainings and capacity building in order to increase their sale of agricultural products and improve their livelihoods (Activity 3.1). The female cooperatives are [Taytmatine Cooperative](#), [Yamna Cooperative](#), [Nisae Aska](#), [Al Oulfa cooperative](#), [Amaquar Cooperative](#) and [Doutmaquite Aghbalou](#).

Furthermore, we organised a gender workshop for our Morocco-based team and local partner MBLA, including a gender audit to evaluate to which degree gender issues are addressed and integrated in activities, policies and projects. In order to lead this process internally, Sabah Bahij, MBLA Field Researcher in Social Sciences, has received mentoring from external consultant Najwa Essiari during the past five months, in order to design and carry out the audit, and to co-facilitate a one-day workshop on gender issues (see Annex 14 for the workshop presentation and Annex 15 for recommendations discussed during the audit). Based on this workshop and audit, we will develop a Gender Policy to ensure that gender is mainstreamed across all our activities in Morocco.

We are also exploring new ways to address gender issues in our partner communities through the planning of Gender and Agricultural Caravans (Activity 2.6) with new partner Federation of Democratic League for Women's Rights. In addition, we applied for a Google Impact Challenge grant to support rural women's empowerment. The project title is "Digital Tiwizi: a collective initiative for economic empowerment and inclusion of Moroccan women from rural cooperatives, enterprises and the informal sector" (see Annex 16 for the project proposal). Although unsuccessful, it will be reformulated for resubmission to other funders.

Finally, we ensure that for events, workshops and trainings, gender-disaggregated data is gathered in accurate participant lists. For ethnobotanical and socioeconomic research, gender data is disaggregated in interview and survey protocols and analysis.

8. Monitoring and evaluation

We recognise effective Monitoring & Evaluation processes are necessary to ensure successful outcomes of this project. Our external evaluator Najwa Essiari has recommended us to review and improve the current Monitoring & Evaluation mechanisms of our High Atlas Cultural Landscapes programme to make them more efficient and improve design to measure impact. We have set up action plan templates which team members complete for each activity (see Annex 17 for an example) and have developed a new monitoring and reporting table for the project, linked to other projects within the wider HACL programme, to track progress regularly and to provide an overall overview of activity leads and key outputs and indicators. We have included the logframe of this project in our current M&E table to ensure all indicators and project outcomes are regularly addresses. In addition to our weekly field team meetings that address progress against project activities, we also initiated 4-monthly internal collective team evaluations to present progress on different activities, and to identify key challenges that could potentially impact the implementation and/or planning of certain activities.

In order to improve our current M&E system to effectively evaluate the impact of our project using quantitative and qualitative approaches, Project Coordinator Pommélien da Silva Cosme has started a [Monitoring & Evaluation Training from the International Training Center](#). The training includes weekly assignments, which are based on actual project activities and therefore ensure a practical application of the theory. When the training ends on June 4th, Pommélien will organise a series of workshops for the team to share key lessons and to address reporting and dissemination practices to communicate the results of our projects better.

Management Meetings are held on a bi-monthly basis during which project progress is discussed, implementation issues identified and resolved, and forward planning agreed. It is composed of five representatives of GDF and MBLA. All GDF/MBLA teams (including Conservation, Ethnobiology, Communications & Coordination) are represented through the Management Team Membership: Emily Caruso, (GDF-UK Director); Gary Martin (Mediterranean Programme Lead Consultant); Ugo D'Ambrosio (GDF Scientific and Technical Advisor); Rachid Aït Babahmad (MBLA Executive Director); Pommélien da Silva Cosme (Morocco Programme Director), Manish Panjabi (Finance and Admin Manager) and Elif Eda Tibet (Visual Anthropology and Media Outreach Coordinator).

In addition to the ongoing monitoring through meetings and internal evaluations, we organise yearly external evaluations for our High Atlas Cultural Landscapes programme, which includes this project. Our annual evaluation (April 2020-April 2021) is currently being carried out by external evaluator Najwa Es-siari, who carries out a) field visits to our project sites and b) interviews with project partners and beneficiaries. The evaluation report, which provides an important opportunity for team members to assess progress and evaluate and present achievements during the year, will be available by the end of June 2021.

9. Lessons learnt

One of the key lessons we learned is the importance of investing in local capacity in the rural communes that we work. We would recommend similar projects to provide intensive training for community members involved in the project such as community researchers to ensure continuity, and to encourage ownership of the project. Carrying out this intensive Capacity Building process for Community Researchers has allowed us to successfully adapt to the COVID19 situation. We have also sought specific funding to support their capacity building to ensure they can increase their responsibility and ownership of project activities.

In the context of COVID-19 and its related travel and field work restrictions, we learned that some communities (Aït M'hamed and Oukaïmeden) have been more collaborative and flexible in this regard than others (Imegdál). We consider this an important lesson that will be taken into consideration for the planning and organisation of future fieldwork and group gatherings in the area in the future.

We also found that data gathering in the field during interviews or focus groups was often challenging, and sometimes surveys were incomplete. We came to conclusion that especially the data processing and analysis were a very time intensive and non-efficient process. We

have therefore established online questionnaires in English, French and Arabic, using the Kobo Toolbox application, which ensures an efficient data gathering, processing and analysing system that automatically provides key results. The toolbox is user-friendly and can be used offline, which means that the team can use it in areas without access to internet. We now feel more confident to deliver timely data analysis and to develop questionnaires to evaluate other project elements. We plan to include training on this ToolBox during inductions of new staff.

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

N.A.

11. Other comments on progress not covered elsewhere

N.A.

12. Sustainability and legacy

In order to ensure the sustainability and legacy of the project, we are focusing on building strong national and international partnerships through this project. We are especially committed to supporting the institutional strengthening and building the capacity of rural cooperatives and of our main implementing partner Moroccan Biodiversity & Livelihoods Association and their staff. We support trainings in grant-making and leadership to improve their tools and skills to autonomously secure funds to sustain the project and our wider HACL programme in the future. This approach responds to our analysis that donors are increasingly keen to provide direct support to local civil society rather than through international NGOs. Our work has paid off: MBLA has been successful in securing significant autonomous funding for expanding and enhancing the High Atlas Cultural Landscapes Programme from the [Sigrid Rausing Trust](#).

Given the fact that this is the first year of the project, we have been carrying out a lot desk and field work to provide a good understanding and basis to the materials that will support our open access plan (policy briefs, community biodiversity registers, database, etc).

13. Darwin identity

We recognise the support of the UK Darwin Initiative for this project through the development of [a dedicated project page on our website](#), and we reference the Darwin Initiative across our blog updates where relevant and appropriate. We have also included the Darwin Initiative logo to our [High Atlas Cultural Landscapes programme webpage](#), as this project is part of our wider Mediterranean programme.

In addition, GDF actively and regularly shares progress updates and news from our Darwin funded project as part of our wider High Atlas Cultural Landscape Programme on its [stories page](#), social media profiles (with 666 Twitter, 3,941 Facebook, 1,041 Instagram and 476 LinkedIn followers), and in GDF's Annual Report. Please note that our 2020 Annual Report will be shared with Darwin following its publication in June 2021.

GDF has also been actively engaging with the Darwin Initiative on Facebook, [Twitter](#) and LinkedIn. We also contributed to Darwin's December 2020 newsletter '[Hungry for Biodiversity](#)', which we have shared widely on [our social media networks](#) and included in the GDF website stories section.

14. Impact of COVID-19 on project delivery

The COVID19 pandemic has presented a significant challenge for fieldwork due to national travel restrictions in Morocco. We were obliged to postpone the implementation of several activities that involve gatherings, including Farmer Field Schools and Trainings for Community Researchers especially in the best seasons of the year, late spring to early autumn. However, our team has continued to provide remote capacity building for local cooperatives and

community researchers providing greater autonomy. We have used the opportunity of travel restrictions and business closures to begin working on other elements of the programme – in particular related to market development in Marrakech of local products– that were originally slated for later on in the project. For example, we have begun networking with urban chefs, whose restaurants are currently closed, to explore the development of new dishes made with High Atlas food products.

We have improved our online communications skills with our team and partners through the use of online meeting platforms such as Zoom. However, we found that ensuring online communications with local communities presented challenges because of weak internet connection and lack of local infrastructure in some areas. We therefore adopted the approach of investing in training for our local community researchers in data gathering, facilitating focus groups and writing reports in order to ensure a continuation of our field activities in case our Marrakech-based team is not allowed to travel. However, our local partner MBLA has managed to maintain strong relationships with local authorities through regular communication, which has facilitated the team to obtain travel permits as well as authorisation for local events (e.g. Farmer Field Schools).

We assure the health and safety of our staff and beneficiaries by taking the necessary precautions such as social distancing, wearing face-masks and providing hand sanitizers when interacting in the field and with community members. We have also opted for organizing activities and trainings outside in open-air wherever possible. We requested that team members in our Marrakech office who don't feel well or who have been in contact with a person that has been tested positive for COVID, to stay home and/or to work remotely until they have passed the recommended one week isolation time. Despite these precautions, four of our team members tested positive for COVID, but fortunately all have recovered.

15. Safeguarding

Please tick this box if any safeguarding or human rights violations have occurred during this financial year.

If you have ticked the box, please ensure these are reported to ODA.safeguarding@defra.gov.uk as indicated in the T&Cs.

In order to provide a safe and trusted environment that safeguards anyone who has contact with GDF, including beneficiaries, project staff, volunteers, and downstream partners, we have the following organisational policies in place:

- 1) GDF Safeguarding Policy (Annex 17)
- 2) GDF Dealing with Safeguarding Policy (Annex 18)
- 3) GDF Code of Conduct (Annex 19)
- 4) GDF Whistle-blower Policy (Annex 20)

None of the policies have been invoked during this project year.

16. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2020 – 31 March 2021)

Project spend (indicative) since last annual report	2020/21 Grant (£)	2020/21 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				

Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				
TOTAL				

The variance on the finances were mainly due to:

- Exchange rate fluctuations between GBP/MAD during the year
- Changing restrictions during the year due to COVID-19

With the constant changing restrictions in the year due to COVID-19, the anticipated work to be completed by consultants was partly carried out by existing staff as consultants were unable to come to Morocco due to travel restrictions. Hence we ended up charging more of team time (circa %) to fill the gap on programme activities against an underspend on consultancy costs of circa %. Additionally, related international travel did not happen resulting in an underspend of %. The programme had to adapt to changes in working that meant additional spend on field operating costs of c. %

Whilst these variances between budgets were significant, overall there was % on the total project budget. We were depending on the restrictions in the pandemic that meant these variances were not planned or approved during the year. We are confident that these variances will set off against Year 2 budget.

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2020-2021

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p>Impact</p> <p>Unique and threatened High Atlas agrobiodiversity is maintained and promoted, leading to healthy agroecosystems, improved Amazigh livelihoods and resilience to environmental change, providing a model for ITPGRFA implementation in Morocco.</p>		<p>In Year 1, our field-work related activities have been impacted by COVID19, which has caused some minor delays in certain activities. However, we managed to carry out research and deliver targeted capacity building to local Amazigh communities, aimed at maintaining High Atlas agrobiodiversity and improving local livelihoods.</p>	
<p>Outcome</p> <p>Agroecological research, farmer participation and capacity-building support the conservation and sustainable commercialisation of High Atlas agrobiodiversity, contributing to food security, poverty reduction and biodiversity-rich agroecosystems in three Amazigh rural communes.</p>	<p>0.1 High Atlas varieties of five crops surveyed, assessed, characterized and conserved in 3 community, 1 regional and 1 international seed banks, by year 3; at least 150 other cultivated plants, arable wild species and wild crop relatives inventoried, with 20% represented in seed banks and 10% with conservation assessments completed, by year 3</p> <p>0.2 At least 30ha of community-owned agricultural land under improved management, by year 3</p> <p>0.3 At least 500 Amazigh households from three communities experience improved livelihoods and enhanced wellbeing, measured using the RHoMIS survey, by Year 3</p> <p>0.4 At least 80 key stakeholders participate in national policymaking on smallholder agriculture and seeds, and implementation of ITPGRFA, by year 3</p>	<p>0.1 Collection of 81 different seed varieties; development of conservation assessment protocol literature review and on-the-job training for community researchers as seed bank managers.</p> <p>0.2 Farmer Field School on plant health and nutrition implemented; baseline data from Imegdal and Aït M'hamed for soil, pest and water management plans established; start of intensive training programme for 8 community researchers as community farmer trainers; DATAR</p> <p>0.3 Targeted capacity building to improve rural incomes for rural cooperatives members; organisation of a High Atlas Food Market to support cooperatives; new questionnaire established to measure socioeconomic impact.</p> <p>0.4 Draft policy brief on ITPGRFA produced to support regional capacity building workshop (July 2021).</p>	<p>Launching the seed surveys</p> <p>Organising a Farmer Field School on livestock management with partner DEAFAL</p> <p>Organising a series of capacity building events for rural cooperatives and community members</p> <p>Organise Marrakech gastronomy fair on 16 October (World Food Day)</p> <p>Publishing final policy brief on ITPGRFA</p> <p>Organising a capacity building workshop on ITPGRFA in July 2021</p>

<p>Output 1. High Atlas agrobiodiversity surveyed, assessed, characterised and conserved</p>	<p>1.1 One regional seed survey of High Atlas cereals, fodder and grain legumes and wild relatives completed, including gender disaggregated data where relevant, by Year 2; selected varieties of 5 crop species biometrically characterised by year 3</p> <p>1.2 100 accessions of landraces of 5 species (increased from a baseline of 25) and seeds of 30 species of accompanying biodiversity conserved within 3 community seed banks, 1 regional seed bank and 1 international seed bank, by year 3</p> <p>1.3 Adapted IUCN conservation assessments carried out for High Atlas varieties of the 5 selected crops, by Year 2, and IUCN conservation for 15 species of accompanying biodiversity completed by year 3</p> <p>1.4 One standard operating procedure manual for High Atlas community seed banks established and implemented by Year 2</p> <p>1.5 Community Biodiversity Registers established by each community by Year 1 and completed with all available data by Year 3</p> <p>1.6 At least 150 men, women and youth (at least 50% women) trained in seed collection, post-harvest processing and conservation, by Year 3</p> <p>1.7 Six community researchers (at least 3 women) trained as CSB managers, actively implementing management plans, by Year 2</p> <p>1.8 Manuscript submitted for peer-reviewed publication on the diversity,</p>	<p>1.1 The data gathering for this activity has been delayed due to COVID19. The data gathering for this activity has been delayed due to COVID19. However, we have carried out research on the 5 species (<i>Hordeum vulgare</i>, <i>Triticum durum</i>, <i>Vicia faba</i>, <i>Pisum sativum</i> and <i>Medicago sativa</i>) in preparation of the survey (Annex 2).</p> <p>1.2 We collected 14 different seed varieties of the 5 species in our three partner communes: Imegdal, Aït M'hamed and Oukaïmeden (see Annex 1).</p> <p>1.3 We developed an adapted conservation assessment protocol for agrobiodiversity (Annex 3), and produced a literature review on the agrobiodiversity of the 5 species (<i>Hordeum vulgare</i>, <i>Triticum durum</i>, <i>Vicia faba</i>, <i>Pisum sativum</i> and <i>Medicago sativa</i>) (Annex 4).</p> <p>1.4 To be completed in Year 2 as set out in project implementation plan.</p> <p>1.5 Data gathering to support the community biodiversity registers is ongoing. The final product will be completed in Year 3, as set out in project implementation plan.</p> <p>1.6 This activity has been delayed due to COVID19. We are planning a series of capacity building events during the next months.</p> <p>1.7 Six community researchers (2 women) have received on-the job training in the community seed banks in partner communes Aït M'hamed, Imegdal and Oukaïmeden.</p> <p>1.8 To be completed in Year 3 as set out in project implementation plan.</p>
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	status and conservation of High Atlas agrobiodiversity, by year 3	
Activity 1.1 Regional seed survey and biometric characterisations completed	The data gathering for this activity has been delayed due to COVID19. However, we have carried out research on the 5 species (<i>Hordeum vulgare</i> , <i>Triticum durum</i> , <i>Vicia faba</i> , <i>Pisum sativum</i> and <i>Medicago sativa</i>) in preparation of the survey.	Field work for the survey is planned for summer 2021.
Activity 1.2 Seeds of landrace accessions of selected and species of accompanying biodiversity collected and conserved in community, regional and international seed banks	Collection of 14 different seed varieties of the 5 species in our three partner communes: Imegdaj, Ait M'hamed and Oukaïmeden, in addition to 67 different seed varieties.	Collect remaining seeds of landrace accessions.
Activity 1.3 Conservation assessments for High Atlas crop varieties and species of accompanying biodiversity completed compiled and published	Development of a conservation assessment protocol for agrobiodiversity and a literature review on the agrobiodiversity of the 5 species (<i>Hordeum vulgare</i> , <i>Triticum durum</i> , <i>Vicia faba</i> , <i>Pisum sativum</i> and <i>Medicago sativa</i>).	Carrying out fieldwork to finalise the conservation assessments.
Activity 1.4 Standard operating procedure manual for High Atlas community seed banks compiled and published	N/A to this reporting period.	To be completed in Year 3 as set out in project implementation plan.
Activity 1.5 Community Biodiversity Registers established and completed with available data by project end	Data gathering that will support the community biodiversity registers is ongoing throughout the project.	To be completed in Year 3 as set out in project implementation plan.
Activity 1.6 Community capacity-building events on seed collection, post-harvest processing and conservation implemented	This activity has been delayed due to COVID19.	We are planning a series of capacity building events during the next months, depending on availability of community members.
Activity 1.7 Capacity-building for community seed bank managers implemented	6 community researchers (2 women), have received on-the job training in the community seed banks in partner communes Ait M'hamed, Imegdaj and Oukaïmeden.	Continue training for community researchers in seed bank management and developing tools for support (Activity 1.4).
Activity 1.8 Peer reviewed manuscript submitted	N/A to this reporting period.	To be completed in Year 3 as set out in project implementation plan.

<p>Output 2. Sustainable and climate resilient agroecosystem and crop management implemented</p>	<p>2.1 At least 3 crop varieties selected and tested by farmers through Participatory Varietal Selection (PVS), by year 3</p> <p>2.2 Baseline research for innovative soil, pest and water management carried out, by year 1</p> <p>2.3 Soil, pest and water management plans established in 3 communities, by year 2</p> <p>2.4 Three farmer field schools, benefitting 100 farmers (at least 30 women), implemented in Year 1, Year 2 and Year 3</p> <p>2.5 Three community researchers (at least 1 woman) trained as community farmer trainers by Year 1</p> <p>2.6 Approximately 60 men and 140 women participate in 'Gender and Agriculture' caravans by Year 2</p> <p>2.7 100 farmers engaged in the use of the Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR), by Year 2</p>	<p>2.1 To be completed in Year 2 as set out in project implementation plan; additional co-funding obtained through a partnership with Lebende Samen for PV of fava beans and peas.</p> <p>2.2 Baseline research for Imegdral and Oukaïmeden established.</p> <p>2.3 The plans will be completed in Year 2, with support from our partner DEAFAL who is collaborating with us on the management plans by providing expertise advice.</p> <p>2.4 1 Farmer Field School on plant nutrition and health implemented in April 2021 (including 7 women) (see Annex 5).</p> <p>2.5 We are training 8 community researchers, including 2 women, based on a long-term training programme (Annex 6). Community researchers have so far received training in agroecology and water management, and have participated in the Farmer Field School in April.</p> <p>2.6 We have organised two meetings with new partner Federation of Leagues for Women's Rights (FLDF) to organise and plan Gender and agricultural caravans (Activity 2.6). Such event has not yet been approved by local authorities and must take place in-person in order to ensure participating of the targeted groups.</p> <p>2.7 Three GDF members have received training in the use of DATAR, and will be applying the tool in the field with farmers starting July 2021.</p>
<p>Activity 2.1. Locally-adapted crop varieties selected and tested using PVS</p>	<p>To be completed in Year 2 as set out in project implementation plan.</p>	<p>Meeting with Loubna Belqadi from the Agronomic and Veterinary Institute in Rabat.</p>
<p>Activity 2.2. Baseline research for innovative soil, pest and water management carried out</p>	<p>Baseline research for Imegdral and Aït M'hamed established.</p>	<p>Gathering additional data in third commune (Oukaïmeden).</p>
<p>Activity 2.3 Soil, pest and water management plans developed and implemented, including in Farmer Field Schools and other capacity-building events</p>	<p>The plans will be completed in Year 2 with support from partner DEAFAL.</p>	<p>Partner DEAFAL has been invited to our project sites in Morocco to elaborate the management plans.</p>
<p>Activity 2.4 Farmer Field Schools, including one on topics of importance for women, implemented</p>	<p>Farmer Field School on plant nutrition and health implemented in April 2021 with 28 participants (including 7 women).</p>	<p>Partner DEAFAL has requested to facilitate the Farmer Field School on livestock management in person in Morocco, given their expertise in the matter.</p>

<p>Activity 2.5 Training for community farmer trainers implemented</p>	<p>8 community researchers (including 2 women) are involved in a 10-module training programme. Two trainings have already been implemented.</p>	<p>Implementing the trainings of the 8 remaining modules.</p>
<p>Activity 2.6 Gender and agriculture caravans organised</p>	<p>We have organised two meetings with new partner Federation of Leagues for Women's Rights (FLDF) to organise and plan Gender and agricultural caravans.</p>	<p>Submitting a request to local authorities for the organisation of a caravan.</p>
<p>Activity 2.7 Training on the use of the Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR) implemented</p>	<p>Three GDF members received training in the use of DATAR, and will be applying the tool in the field with farmers starting July 2021.</p>	<p>Applying DATAR in the field starting July 2021.</p>
<p>Output 3. Livelihood improvements through valorisation, commercialisation and exchange of local agrobiodiversity and increased collaboration within and between communities and regional support networks, achieved</p>	<p>3.1 Five rural cooperatives increase their sale of agricultural products (including from the target species) by 30%, leading to livelihood benefits for at least 500 households, by year 3, as compared to project start baseline</p> <p>3.2 4000 Amazigh farmers (at least 50% women) provided access to seed of locally appropriate crop varieties and accompanying biodiversity through 3 community seed banks, by year 3</p> <p>3.3 Useable crop biomass increased by at least 10% on average in private agricultural plots tended by 300 households, benefitting approximately 1800 community members (about 50% women), by year 3</p> <p>3.4 At least 5 community youth (at least 3 women) trained and mentored as 'seed entrepreneurs' by year 2</p> <p>3.5 Three provincial seed fairs and community exchanges implemented, serving an audience of at least 300 Amazigh farmers and cooperative members (at least 30% women), by year 3</p>	<p>3.1 We provided targeted capacity building to 8 community cooperatives on product quality, branding, marketing and social media after the High Atlas Food Market (see Annex 10a). We are also supporting these cooperatives through our COVID19 response grant on online product commercialisation.</p> <p>3.2 Seeds of local crop varieties are being collected and stored in our 3 community seed banks, to which community members have access.</p> <p>3.3 To be completed in Year 3 as set out in project implementation plan.</p> <p>3.4 We will focus on this activity in Year 2 of this project.</p> <p>3.5 Due to COVID19 group gatherings and events have not been allowed until recently. However, we organised a High Atlas Food Market in Marrakech on World Biodiversity Day to celebrate High Atlas food products and to provide 8 rural cooperatives a space to sell their products and interact with urban customers.</p> <p>3.6 To be completed in Year 2 as set out in project implementation plan.</p> <p>3.7 To be completed in Year 3 as set out in project implementation plan.</p> <p>3.8 We have developed a new questionnaire (Annex 11) more relevant to measure the impact of our work, and identified a list of participants (all project beneficiaries with varying degrees of participation in our programs). To carry out the survey, we will use an online data gathering tool called Kobo Toolbox. This activity will be completed in Year 3 as set out in project implementation plan.</p>

	<p>3.6 At least one regional gastronomic event organized in Marrakech on High Atlas agrobiodiversity, with at least 50 participants (at least 50% women) by Year 2, leading to at least 10 new dishes based on High Atlas community products and local agrobiodiversity developed and served by leading chefs by Year 3</p> <p>3.7 Model for the development, processing, marketing and sale of locally selected, climate-resilient crop varieties in regional niche markets developed and disseminated throughout the High Atlas, by Year 3</p> <p>3.8 Second RHoMIS survey carried out, data published online and analysed in comparison with existing baseline</p>	
<p>Activity 3.1. Capacity-building and institutional strengthening for rural cooperatives implemented</p>	<p>We provided targeted capacity building to 8 community cooperatives on product quality, branding, marketing and social media (see Annex 10a).</p>	<p>Organise additional trainings for community cooperatives in the next few months.</p>
<p>Activity 3.2. Access to seed of locally appropriate crop varieties and accompanying biodiversity provided</p>	<p>Seeds of local crop varieties are being collected and stored in our 3 community seed banks, to which community members have access.</p>	<p>To be completed in Year 3 as set out in project implementation plan.</p>
<p>Activity 3.3. Increase in net useable crop biomass measured</p>	<p>N/A to this reporting period.</p>	<p>To be completed in Year 3 as set out in project implementation plan.</p>
<p>Activity 3.4. Young seed entrepreneurs trained and mentored</p>	<p>We will focus on this activity in Year 2 of this project.</p>	<p>Select participating seed entrepreneurs in partner communes.</p>
<p>Activity 3.5. Provincial seed and biocultural diversity fairs, including community exchanges, organised</p>	<p>We organised a High Atlas Food Market in Marrakech on World Biodiversity Day (22 May) to celebrate</p>	<p>Organise a seed and biocultural diversity fair in Autumn 2021.</p>

		High Atlas food products and to provide 8 rural cooperatives a space to sell their products and interact with urban customers.	
Activity 3.6. Regional gastronomic event in Marrakech organised and new dishes by urban chefs developed and served		N/A to this reporting period.	The event is planned for 16 October 2021 (World Food Day).
Activity 3.7. Model for the development, processing, marketing and sale of locally-selected, climate resilient crop varieties developed and shared with seed entrepreneurs in targeted trainings		N/A to this reporting period.	To be completed in Year 3 as set out in project implementation plan.
Activity 3.8. Second RHoMIS survey carried out, data published online and analysed in comparison with existing baseline		We have developed a new questionnaire more relevant to measure the impact of our work, using an online data gathering tool called Kobo Toolbox.	To be completed in Year 3 as set out in project implementation plan.
Output 4. Stakeholder participation in national policy-making on smallholder agriculture and seeds, and implementation of ITPGRFA, accomplished	<p>4.1 One regional capacity-building workshop on ITPGRFA and its interactions with the Green Morocco Plan (around 30 participants, at least 15 women), by Year 1</p> <p>4.2 One national policy making workshop on the Moroccan agricultural legal and policy frameworks and their interactions with ITPGRFA (50 participants, at least 20 women), by Year 2</p> <p>4.3 Case study of the High Atlas agroecosystem and agrobiodiversity management and policy implications compiled, published and disseminated by year 2</p> <p>4.4 One policy brief on Morocco's compliance with the ITPGRFA, by Year 3</p> <p>4.5 Community-oriented dissemination products (short brochure and video) in Arabic and Tamazight by Year 3</p>	<p>4.1 We have produced a draft of a policy brief on the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) in preparation of the workshop which is planned for July 2021.</p> <p>4.2 To be completed in Year 2 as set out in project implementation plan.</p> <p>4.3 To be completed in Year 2 as set out in project implementation plan.</p> <p>4.4 To be completed in Year 3 as set out in project implementation plan.</p> <p>4.5 To be completed in Years 2 and 3 as set out in project implementation plan.</p>	

Activity 4.1 Regional capacity building workshop on the ITPGRFA and its interactions with the Green Morocco Plan implemented	New Policy Consultant recruited (Tasnim Elboute).	Workshop planned for July 2021.
Activity 4.2 National policy-making workshop on the Moroccan agricultural legal and policy frameworks and their interactions with the ITPGRFA implemented	To be completed in Year 2 as set out in project implementation plan.	This workshop has been included in the Year 2 workplan of the Policy Consultant.
Activity 4.3 Case study of the High Atlas agroecosystem and agrobiodiversity management and policy implications compiled, published and disseminated	To be completed in Year 2 as set out in project implementation plan	This case study has been included in the Year 2 workplan of the Policy Consultant.
Activity 4.4 Policy brief, including policy recommendations, compiled, published and disseminated	To be completed in Year 3 as set out in project implementation plan	These outputs have been included in the Year 3 workplan of the Policy Consultant.
Activity 4.5 Community-oriented video and brochure developed and disseminated widely	To be completed in Years 2 and 3 as set out in project implementation plan	These outputs have been included in the Year 2 workplan of our Communications & Programme Officer.

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: Unique and threatened High Atlas agrobiodiversity is maintained and promoted, leading to healthy agroecosystems, improved Amazigh livelihoods and resilience to environmental change, providing a model for ITPGRFA implementation in Morocco.</p>			
<p>Outcome: Agroecological research, farmer participation and capacity-building support the conservation and sustainable commercialisation of High Atlas agrobiodiversity, contributing to food security, poverty reduction and biodiversity-rich agroecosystems in three Amazigh rural communes.</p>	<p>0.1 High Atlas varieties of five crops surveyed, assessed, characterized and conserved in 3 community, 1 regional and 1 international seed banks, by year 3; at least 150 other cultivated plants, arable wild species and wild crop relatives inventoried, with 20% represented in seed banks and 10% with conservation assessments completed, by year 3</p> <p>0.2 At least 30ha of community-owned agricultural land under improved management, by year 3</p> <p>0.3 At least 500 Amazigh households from three communities experience improved livelihoods and enhanced wellbeing, measured using the RHoMIS survey, by Year 3</p> <p>0.4 At least 80 key stakeholders participate in national policymaking on smallholder agriculture and seeds, and implementation of ITPGRFA, by year 3</p>	<p>0.1 Seed bank accession records, inventory database, regional survey datasets, characterisation reports, IUCN conservation assessments, manuscript for peer-review</p> <p>0.2 Soil and agroecological monitoring datasets (baselines developed in 2019); DATAR datasets; training manual; photo essays</p> <p>0.3 RHoMIS survey datasets (baselines for 250 HH produced in 2019); participatory appraisals; blog posts for fairs and exchanges; video for gastronomy event; reports and participant lists for capacity-building events</p> <p>0.4 Case study, policy brief, workshop reports and participant lists, community dissemination products Local varieties of the five crops are available and farmers are willing to share associated knowledge and seeds At least 150 species of accompanying agroecological biodiversity identified Farmers are committed to improving their soil, water and pest management and to use agrobiodiversity-based management techniques Existence and ongoing expansion of Marrakech niche markets for High Atlas cultural products and local varieties Community members eager to produce and trade agrobiodiversity-based products G</p>	<p>Local varieties of the five crops are available and farmers are willing to share associated knowledge and seeds</p> <p>At least 150 species of accompanying agroecological biodiversity identified</p> <p>Farmers are committed to improving their soil, water and pest management and to use agrobiodiversity-based management techniques</p> <p>Existence and ongoing expansion of Marrakech niche markets for High Atlas cultural landscape products and local varieties</p> <p>Community members eager to produce and trade agrobiodiversity-based products</p> <p>Government agencies and actors are interested in collaborating for the national implementation of ITPGRFA</p>

<p>Output 1 High Atlas agrobiodiversity surveyed, assessed, characterised and conserved</p>	<p>1.1 One regional seed survey of High Atlas cereals, fodder and grain legumes and wild relatives completed, including gender disaggregated data where relevant, by Year 2; selected varieties of 5 crop species biometrically characterised by year 3</p> <p>1.2 100 accessions of landraces of 5 species (increased from a baseline of 25) and seeds of 30 species of accompanying biodiversity conserved within 3 community seed banks, 1 regional seed bank and 1 international seed bank, by year 3</p> <p>1.3 Adapted IUCN conservation assessments carried out for High Atlas varieties of the 5 selected crops, by Year 2, and IUCN conservation for 15 species of accompanying biodiversity completed by year 3</p> <p>1.4 One standard operating procedure manual for High Atlas community seed banks established and implemented by Year 2</p> <p>1.5 Community Biodiversity Registers established by each community by Year 1 and completed with all available data by Year 3</p> <p>1.6 At least 150 men, women and youth (at least 50% women) trained in seed collection, post-harvest processing and conservation, by Year 3</p> <p>1.7 Six community researchers (at least 3 women) trained as CSB managers, actively implementing management plans, by Year 2</p> <p>1.8 Manuscript submitted for peer-reviewed publication on the diversity,</p>	<p>1.1 Regional survey dataset, biometric characterisations</p> <p>1.2 Community seed bank accession records</p> <p>1.3 IUCN conservation assessments for selected species</p> <p>1.4 CSB standard operating procedure manual</p> <p>1.5 Community Biodiversity Registers for Ait M'hamed, Imegdhal, and Oukaimeden</p> <p>1.6 Capacity-building workshop reports, photo essays and participant lists</p> <p>1.7 Photo essays, workshop reports, and training manual for community seed bank managers</p> <p>1.8 Manuscript and confirmation email for submission</p>	<p>Farmers willing to participate in the regional survey</p> <p>Viable seed or other germplasm available and not affected by drought, insect predation or other environmental factors</p> <p>Community researchers motivated to train as CSB managers</p> <p>Community members interested in and available for participating in capacity building events, and provide permission for photographs taken at events</p> <p>Community permission granted to use survey results and data from community-based interviews in publication</p>
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	status and conservation of High Atlas agrobiodiversity, by year 3		
Output 2 Sustainable and climate resilient agroecosystem and crop management implemented	2.1 At least 3 crop varieties selected and tested by farmers through Participatory Varietal Selection (PVS), by year 3 2.2 Baseline research for innovative soil, pest and water management carried out, by year 1 2.3 Soil, pest and water management plans established in 3 communities, by year 2 2.4 Three farmer field schools, benefitting 100 farmers (at least 30 women), implemented in Year 1, Year 2 and Year 3 2.5 Three community researchers (at least 1 woman) trained as community farmer trainers by Year 1 2.6 Approximately 60 men and 140 women participate in 'Gender and Agriculture' caravans by Year 2 2.7 100 farmers engaged in the use of the Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR), by Year 2	2.1 PVS process reports 2.2 Baseline data 2.3 Soil, pest and water agroecological management plans 2.4 Farmer field school event reports, photo essays and participant lists 2.5 Workshop reports, photo essays, interviews and blog post on capacity-building of 'Community Farmer Trainers' 2.6 Gender and agriculture caravan reports and photostories 2.7 DATAR dataset	Material Transfer Agreements successfully negotiated and obtained for crop variety testing Climatic conditions allow for varieties to be grown in PVS trials Farmers available and interested in learning about and implementing innovative soil, pest and water management approaches and DATAR Community researchers available and interested in training as 'Community Farmer Trainers'
Output 3 Livelihood improvements through valorization, commercialization and exchange of local agrobiodiversity and increased collaboration within and between communities and regional support networks, achieved	3.1 Five rural cooperatives increase their sale of agricultural products (including from the target species) by 30%, leading to livelihood benefits for at least 500 households, by year 3, as compared to project start baseline 3.2 4000 Amazigh farmers (at least 50% women) provided access to seed of locally appropriate crop varieties and	3.1. Sales records of rural cooperatives 3.2 Seed distribution records, publicity materials 3.3 Useable crop biomass monitoring results; RhoMIS survey 3.4 Training manual for seed entrepreneurs exchange and sales records	Increase in number of Marrakech food/retail actors and networks interested in organic food, agroecology and cultural products Farmers available and interested in engaging in seed fairs and knowledge exchange Agricultural intensification delivers expected increase in yield under diverse conditions

	<p>accompanying biodiversity through 3 community seed banks, by year 3</p> <p>3.3 Useable crop biomass increased by at least 10% on average in private agricultural plots tended by 300 households, benefitting approximately 1800 community members (about 50% women), by year 3</p> <p>3.4 At least 5 community youth (at least 3 women) trained and mentored as 'seed entrepreneurs' by year 2</p> <p>3.5 Three provincial seed fairs and community exchanges implemented, serving an audience of at least 300 Amazigh farmers and cooperative members (at least 30% women), by year 3</p> <p>3.6 At least one regional gastronomic event organized in Marrakech on High Atlas agrobiodiversity, with at least 50 participants (at least 50% women) by Year 2, leading to at least 10 new dishes based on High Atlas community products and local agrobiodiversity developed and served by leading chefs by Year 3</p> <p>3.7 Model for the development, processing, marketing and sale of locally-selected, climate-resilient crop varieties in regional niche markets developed and disseminated throughout the High Atlas, by Year 3</p>	<p>3.5 Blog posts, workshop reports and participant lists</p> <p>3.6 Video and blog post on the gastronomy event; chef dish descriptions and restaurant menus</p> <p>3.7 Draft model for the development, processing, marketing and sale of locally-selected climate-resilient varieties</p>	<p>At least 5 young community members eager to develop their skills and capacities in the seed market Leading chefs are committed to putting dishes with High Atlas products on their menus</p> <p>Climate-resilient crop varieties are available, do not suffer from germination issues in multiplication process, and are marketable</p> <p>Permission granted by participants at events, and government agency responsible for film permits, for filming and taking photographs at events.</p>
<p>Output 4</p> <p>Stakeholder participation in national policy-making on smallholder agriculture and seeds, and implementation of ITPGRFA, accomplished</p>	<p>4.1 One regional capacity-building workshop on ITPGRFA and its interactions with the Green Morocco Plan (around 30 participants, at least 15 women), by Year 1</p> <p>4.2 One national policymaking workshop on the Moroccan agricultural legal and policy frameworks and their</p>	<p>4.1 Workshop report, participant list and blog post</p> <p>4.2 Workshop report, participant list and blog post</p> <p>4.3 Published case study</p>	<p>Stakeholders are interested in participating in capacity building and policy-making events on ITPGRFA and Green Morocco Plan Government agencies and actors are interested in collaborating in the national implementation of ITPGRFA</p>

	<p>interactions with ITPGRFA (50 participants, at least 20 women), by Year 2</p> <p>4.3 Case study of the High Atlas agroecosystem and agrobiodiversity management and policy implications compiled, published and disseminated by year 2</p> <p>4.4 One policy brief on Morocco's compliance with the ITPGRFA, by Year 3</p> <p>4.5 Community-oriented dissemination products (short brochure and video) in Arabic and Tamazight by Year 3</p>	<p>4.4 Policy brief on Morocco's compliance with ITPGRFA</p> <p>4.5 Video and brochure in Arabic and Tamazight</p>	
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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)

Output 1. High Atlas agrobiodiversity surveyed, assessed, characterised and conserved

- 1.1 Regional seed survey and biometric characterisations completed
- 1.2 Seeds of landrace accessions of selected and species of accompanying biodiversity collected and conserved in community, regional and international seed banks
- 1.3 Conservation assessments for High Atlas crop varieties and species of accompanying biodiversity completed compiled and published
- 1.4 Standard operating procedure manual for High Atlas community seed banks compiled and published
- 1.5 Community Biodiversity Registers established and completed with available data by project end
- 1.6 Community capacity-building events on seed collection, post-harvest processing and conservation implemented
- 1.7 Capacity-building for community seed bank managers implemented
- 1.8 Peer reviewed manuscript submitted

Output 2. Sustainable and climate-resilient agroecosystem and crop management implemented

- 2.1 Locally-adapted crop varieties selected and tested using PVS
- 2.2 Baseline research for innovative soil, pest and water management carried out
- 2.3 Soil, pest and water management plans developed and implemented, including in Farmer Field Schools and other capacity-building events
- 2.4 Farmer Field Schools, including one on topics of importance for women, implemented
- 2.5 Training for community farmer trainers implemented
- 2.6 Gender and agriculture caravans organised
- 2.7 Training on the use of the Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR) implemented

Output 3. Livelihoods improvements through valorization, commercialization and exchange of local agrobiodiversity and increased collaboration within and between communities and regional support networks, achieved

- 3.1 Capacity-building and institutional strengthening for rural cooperatives implemented
- 3.2 Access to seed of locally appropriate crop varieties and accompanying biodiversity provided
- 3.3 Increase in net useable crop biomass measured

- 3.4 Young seed entrepreneurs trained and mentored
- 3.5 Provincial seed and biocultural diversity fairs, including community exchanges, organised
- 3.6 Regional gastronomic event in Marrakech organised and new dishes by urban chefs developed and served
- 3.7 Model for the development, processing, marketing and sale of locally-selected, climate resilient crop varieties developed and shared with seed entrepreneurs in targeted trainings
- 3.8 Second RHoMIS survey carried out, data published online and analysed in comparison with existing baseline
- Output 4. Stakeholder participation in national policy-making on smallholder agriculture and seeds, and in the implementation of the ITPGRFA, delivered**
- 4.1 Regional capacity building workshop on the ITPGRFA and its interactions with the Green Morocco Plan implemented
- 4.2 National policy-making workshop on the Moroccan agricultural legal and policy frameworks and their interactions with the ITPGRFA implemented
- 4.3 Case study of the High Atlas agroecosystem and agrobiodiversity management and policy implications compiled, published and disseminated
- 4.4 Policy brief, including policy recommendations, compiled, published and disseminated
- 4.5 Community-oriented video and brochure developed and disseminated widely

Annex 3: Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
5	Training for rural cooperatives	F + M	Moroccan	16				
5	Training to Amazigh Farmers	F + M	Moroccan	28				
7	Training manual for farmers on soil practices	F + M	Moroccan	1				

Table 2 Publications

Title	Type (e.g. journals, manual, 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)
Which plants matter? A comparison of academic and community assessments of plant value and conservation status in the Moroccan High Atlas	Peer-review journal	Irene Teixidor-Toneu, Soufiane M'Sou, Hajar Salamat, Hamid Ait Baskad, Fadma Ait Illigh, Touda Atyah, Hafida Mouhdach, Hassan Rankou Rachid Ait Babahmad, Emily Caruso, Gary Martin, Ugo D'Ambrosio	Female	Spanish	AMBIO: A Journal of the Human Environment	Accepted for publication.

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	Yes
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	No
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.	Yes
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	