

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	26-010
Project title	Know your onions: sustainable plant use in Tajikistan
Country/ies	Tajikistan
Lead organisation	Centre for Middle Eastern Plants, Royal Botanic Garden Edinburgh, UK
Partner institution(s)	Kulob Botanic Garden, Tajikistan Ganji Tabiat, Tajikistan Zam Zam, Tajikistan Fauna & Flora International, UK & Tajikistan
Darwin grant value	£361,440
Start/end dates of project	1 July 2018 – 30 June 2022
Reporting period (e.g. Apr 2020 – Mar 2021) and number (e.g. Annual Report 1, 2, 3)	ARY2 April 2020 – March 2021
Project Leader name	Dr Sophie Neale
Project website/blog/social media	www.tajikistandarwin.cmep.org.uk
Report author(s) and date	Dr Alan Forrest, Dr Gail Stott (RBGE); Dr Mariyo Boboev (Kulob Botanic Garden); Jovidon Boboev, Manizha Boboeva (Ganji Tabiat).

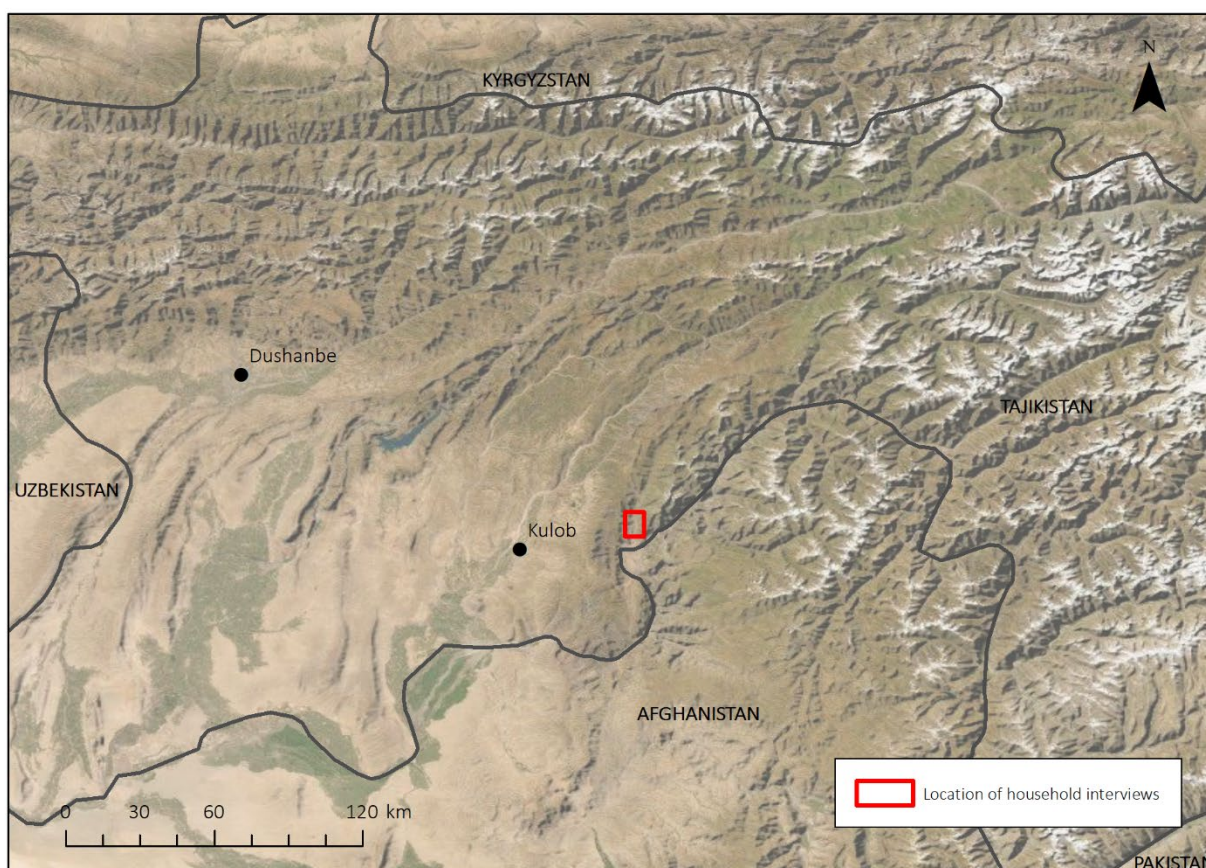
1. Project summary

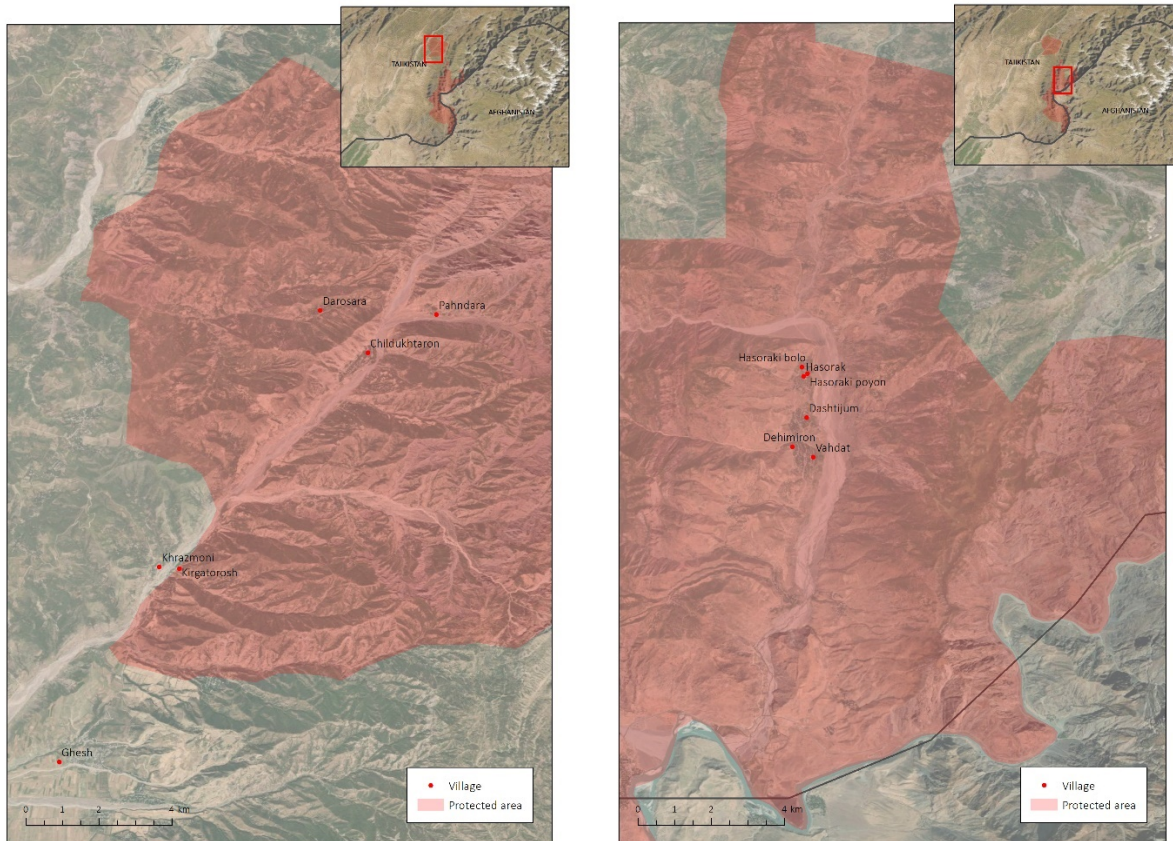
The sustainable use of natural resources is embedded within international conventions and has a significant role to play in conserving biodiversity and improving rural livelihoods. However, biodiversity conservation debates often overlook the importance of local agro-biodiversity and the wide range of non-domesticated species used by people in their day-to-day lives.

Tajikistan is a floristically diverse mountainous country suffering from extreme environmental degradation. Scientists at Kulob Botanic Garden have recognized that while threats to fruit and nut forests are well known, there is a fundamental disconnect between routine harvesting and sale of wild herbaceous plant species and the potentially detrimental amount and methods of that harvesting. For example, in pilot studies, more than 80% of interviewed households were found to collect wild onion bulbs in order to augment their income.

Such poverty and financial insecurity will be compounded if wild plants are collected to extinction locally – as already documented in some areas. While many such species are not globally threatened, they are declining nationally and have been listed in the Red Book of Tajikistan. An alternative method to unsustainable wild harvesting is required. Small scale trials cultivating two species of wild onions in two communities have been successful in reducing wild harvesting by up to 50% and have reported increases in average income by up to 40% by growing wild plants locally. To make a significant difference with concomitant benefits for more communities a wider range of plant species could be cultivated, and markets identified and developed to enable increased financial benefits. Awareness and technical capacity to maintain long term programmes must be gained both in the communities and the organisations that wish to support them.

The project is located in southern Tajikistan, in identified communities in Childukhtaron and Dashtijum Reserves. Project partners Kulob Botanic Garden and Ganji Tabiat are located in the provincial capital Kulob City with partners Zam-Zam located in Dashtijum. The FFI country office is located in the capital Dushanbe with regular travel and communication with the project partners and region. Some communities have been chosen to overlap with Darwin Initiative project 24-006 in order to allow comparison among products, effects and benefits to ascertain any complementarity to be gained to further benefit local communities.





Maps showing study area: Tajikistan highlighting Childuktaron and Dashtijum Protected Areas to the east of Kulob, followed by specific location details of villages inside each area that are the focus of the project.

2. Project partnerships

The partnership between Kulob Botanic Garden and Ganji Tabiat with RBGE has been developing over the six years leading up to the start of this project, with multiple visits to Tajikistan for joint expeditions, training and capacity development. This was strengthened through the visit of Dr Mariyo Boboev and Jovidon Boboev to RBGE in November 2019 through support from the UK Embassy to Tajikistan. FFI have been working in Tajikistan for a number of years with local staff managing a range of projects including Darwin Initiative 24-006 on which Dr Boboev has a role. Links between UK partners have been strengthened through visits to both Edinburgh and Cambridge, and the involvement of FFI Tajikistan staff in RBGE expeditions.

The last year of the project has been quite challenging due to the impact of the global COVID-19 pandemic. While the partnerships have not suffered during this period – all partners have been supportive to each other under challenging and diverse circumstances – there is no doubt that communication among partners for a variety of purposes has had to be adjusted due to the inability to travel to Tajikistan to undertake specific tasks. Although communication on routine tasks has still been conducted via email, there has been a significant increase in the use of platforms such as Zoom not only for communication and updates but also specifically for training purposes. This has been equally challenging for all partners – some responsible for the delivery of training components, and some receiving training.

However, as per the first year of the project, the majority of planning, decision-making and actions are made by Tajik partners with support from UK partners. This has lent an element of sustainability to the project, and as restrictions on movements have been less strict in Tajikistan the majority of in country activities have progressed well with some delays.

As additional questions have arisen over the course of the last year, adaptive management has been used to address any issues not addressed directly in the project application or logframe. An example of this has been extensive discussion between partners through development of PMSD approaches, where the difference between assessing existing markets as opposed to the creation of new markets led to involvement with local authorities and the Forest Department about

the harvesting of wild plants and the potential threat of creating markets leading to increased harvesting. Further discussions with communities have led to insights about how people collect and use plants locally as opposed to selling them directly. The strength of the project partnerships has meant that all information has been shared and discussed with all partners and with communities and local stakeholders to give additional insight prior to decision making.

3. Project progress

3.1 Progress in carrying out project Activities

Output 1

BIODIVERSITY: improved conservation status of at least five nationally threatened native plants which are currently over-harvested in the wild.

Activity 1.1.1 Gather and model distribution data for target threatened species (desk and field study).

Desk study for gathering information largely complete. Data gathering from Tajik and Russian institutes (and in Russian language) ongoing and delays in fieldwork and monitoring at critical times due to COVID travel restrictions in 2020 mean that field data is yet to be added. Decision to complete mapping as part of ongoing Red List Assessment training, and involvement of Darwin Fellow who is also mapping target species in the genus *Ziziphora*. Mapping, subsequent spatial assessments and preliminary Red Listing to be completed by end of September 2021 with follow on discussions planned for late 2021 at symposium hosted in Kulob.

Activity 1.1.2 Gather information about levels of wild harvesting from communities.

Community and household interviews collected from 102 respondents (see draft report in ANNEX 1a and 1b including summarized data). The majority of households in target communities gather wild harvested plants, with the majority used for local consumption.

Activity 1.1.3 Undertake formal conservation assessment of six target species.

Formal Red List training due to be given *in situ* was changed due to the inability to travel due to COVID-19. Switch to online training provided through IUCN/Conservation Training with back up support given remotely by UK partners who are certified IUCN Red List Assessors and Trainers. Evidence of this process can be found in certificates of module completion in ANNEX 2. Training will continue “on the job” alongside data acquisition and real national and global assessments, with draft assessments to be completed by end of September 2021.

Activity 1.2.1 Establish long-term monitoring plots for six target species.

Maps and details of monitoring plots established are given in ANNEX 3. Four of the six target species are included in multiple sites, with two additional species known to be wild harvested included as they are also considered to be under threat from overharvesting and are located in close proximity – as such there was an opportunity to gather information about the status of additional taxa to feed into the National Report.

Activity 1.2.2 Field and community monitoring of six target species.

The optimal time for monitoring the target species is April-June. Initial monitoring has been delayed, firstly due to travel restrictions in spring 2020 and in spring 2021 by adverse weather conditions that has delayed the start of spring and therefore delayed the ideal time for monitoring and therefore outside the reporting period. Replicate semi-structured 1m² sampling plots will be used to measure the numbers and condition of plants in a quick survey methodology that is repeatable and easy to employ to track changes on an annual basis, as used in previous work by KBG staff. Added to this will be informal knowledge of project staff and community members on the general trends at specific localities, all of which are well known to local staff and stakeholders and that will feed into Red List Assessments.

Activity 1.3.1 Collection and storage of seeds and plants for *ex-situ* collections.

During the entire project timeframe, weather conditions have been unfavourable for the flowering and setting seed of target species. Seeds from all target species have however been collected, but the number of localities and the amount of seed has not been as high as expected. Therefore,

selected community members have also been trained and are assisting with the collection of seed for project activities. Seeds collected previously are growing well at KBG and some have been transferred to demonstration plots (see ANNEX 4). Due to the inability of the RBGE team to travel to Tajikistan it has not been possible as yet to establish *ex situ* seed or plant collections in the UK. We are exploring ways to export seed. RBGE already has a collection of *A. rosenbachianum* from 2017 during the planning phase for the project application.

Output 2

AWARENESS & CAPACITY DEVELOPMENT: capacity of project partners and local community stakeholders in horticulture and sustainable use of locally used plant species is improved. Awareness of sustainable plant use increased locally and nationally.

Activity 2.1.1 Horticulture training (Certificate in Practical Horticulture, delivered to project staff).

Previous training at Kulob Botanic Garden in the two years prior to the start of this project has resulted in KBG horticulture staff building upon their experience and skills. As such, it was decided that capacity was strong enough to initiate the first stages of horticultural work and community training, with a view to assessing additional requirements and building these into a formal training and qualification programme. This was subsequently been delayed due to postponement of the trip to Tajikistan due to COVID-10 pandemic which is still the case. However training in communities has been largely successful as a testament to the existing skills of the KBG team (see ANNEX 5). If travel to Tajikistan is possible during the lifetime of the project, an assessment will be made of what additional training and/or certification will be possible.

Activity 2.1.2 Project staff training in field survey, monitoring, documentation and reporting.

As per Activity 2.1.1 above. Several KBG staff and especially Dr Mariyo Boboev have extensive experience in survey and monitoring in Tajikistan.

Activity 2.2.1 Horticulture and sustainable harvesting training (delivered by project staff in communities).

See Activities 2.1.1 and 3.1.1. Horticulture training has been delivered to communities during plot establishment. Wild sustainable harvesting will be assessed once levels of wild harvesting are reduced. Harvesting from plots will form part of future horticulture training.

Activity 2.3.1 PMSD and social research skills training (delivered to project staff).

Following preparation of online training materials by FFI staff (see ANNEX 6) Tajik partners took part in three online training sessions accompanied by extensive discussions. Subsequently, all responsibility to gather additional market and local details and decision making on product selection and forward planning has been devolved to Tajik partners. This is an iterative process that has suffered delays due to the COVID-19 pandemic and further training and discussion will be ongoing as details become available.

Activity 2.4.1 Sustainable use awareness workshops held in communities.

See Activity 3.1.1. During community interviews and horticulture training, a range of awareness workshops have been conducted (see ANNEX 7). Further awareness workshops will be conducted with a range of stakeholders during information gathering and decision making during PMSD process.

Activity 2.4.2 Sustainable use events held at KBG (stakeholders, schools, colleges).

Although just outside the reporting period, it is worth mentioning that an awareness event was conducted on 16 April 2021 on the Significance of Wild Plants in Tajikistan with media representatives from Kulob Television and Media Department of Kulob Government attending to cover the event (see ANNEX 8). The TV crew made records from the event and it was transmitted in TV News program of Kulob TV channel on April 17, 2021 at 8:00 PM Tajikistan time. Additional events targeting project achievements and outputs will be planned for Y3.

Activity 2.5.1 Media campaigns on sustainable use of natural resources.

See Activity 2.4.2. Additional events are planned for Y3. President of Tajikistan Mr Emomali Rahmon visited the house of the Director of Zam Zam and was shown displays of Tajik produce and programmes benefitting rural livelihoods (see ANNEX 8).

Activity 2.5.2 Project website online (monitoring of website hits).

Website template designed and content uploaded. However, website currently inactive as suite of CMEP online resources being moved to compliant hosting and managed services, with public access expected to resume in June 2021. Website release will then be promoted and subsequent hits monitored. www.tajikistandarwin.cmeo.org.uk

Activity 2.6.1 Produce and disseminate project success reports.

Not yet applicable.

Activity 2.7.1 Conservation Assessment training.

See ANNEX 2 for example certificates of online module completion. Online support and training ongoing (see 1.1.3 above).

Output 3.

LIVELIHOODS & HEALTH: livelihoods improved for 100 households through increased and diversified income from sustainable plant product sales, with associated food security and social benefits.

Activity 3.1.1 Agro-biodiversity plots established and in production.

To date 100 household plots have been established, with associated horticulture training and awareness of sustainable use workshops undertaken. Following establishment of 20 plots initially via selected households with farming and agricultural experience, the additional plots featured engagement with additional communities, specifically targeting households that are marginalized and in remote locations, and those without significant access to agricultural lands. The local experience of Ganji Tabiat and Zam Zam was essential in this exercise. Theoretical and practical training and establishment of plots was conducted mostly in household areas. Some practical trainings were delayed due to unexpected snowfall (see ANNEX 9).

Activity 3.2.1 Market appraisal workshops in five communities.

PMSD workshops were planned for the visit of UK partners in May 2020. As this trip was postponed due to COVID-19 pandemic, online training was undertaken. Extensive discussions during PMSD training have uncovered potential complexity and information gathering and decision making is therefore still ongoing.

It has become clear that establishment of wild harvested species in household plots will have benefits to selected households with the potential for upscaling and concomitant benefits through a reduction in wild harvesting. However, growing enough of the target species to warrant the creation of producer groups through liaison with local businessmen – and also businessmen from other parts of Tajikistan that pay individuals to gather wild plants for subsequent processing and sale – is currently under discussion to establish exactly the stakeholders involved. Further, concern has been raised about (a) creating an additional market and income source that could lead to additional wild harvesting of threatened species and how to mitigate this potential, and (b) the legality of growing threatened plants and selling them for profit have both warranted further investigation. While a delay in decision making as per products and methods of wider cultivation is evident, it is important to make the best-informed decisions and still with enough time to establish a well-designed system as necessary before the project conclusion.

Activity 3.2.2 Market chain analysis workshops (with all actors and stakeholders).

See 3.2.1 above.

Activity 3.2.3 "Producer groups" established and operating.

See 3.2.1 above. Additional information about producer groups established through the support and expertise of Zam Zam for local dairy products is being gathered to inform decision making and implementation.

Activity 3.3.1 Participatory Impact Assessments.

Not yet applicable.

Output 4

GENDER EQUALITY: increase in number of women in five communities benefiting from involvement in household and community management and budgeting, with increased horticulture and business skills.

Activity 4.1.1 Horticulture training in communities delivered to women.

All local workshops and training have included a significant number of women (see ANNEX 10).

Activity 4.1.2 Sustainable harvesting training delivered to women.

Planning as per Activity 4.1.1.

Activity 4.1.3 Production and packaging training delivered to women.

Not yet applicable; planning as per Activity 4.1.1.

Activity 4.1.4 Training in agro-biodiversity business management and market access delivered to women.

Not yet applicable; planning as per Activity 4.1.1.

Activity 4.1.5 Participatory Impact Assessments targeting livelihood benefits for women.

Not yet applicable; planning as per Activity 4.1.1.

Output 5

SUSTAINABLE PLANNING: "National Report on Sustainable Use of Plants in Tajikistan" developed to benefit biodiversity and community livelihoods in Tajikistan, including case studies and appropriate governance structures.

Activity 5.1.1 Research and gather data on plant use in Tajikistan.

Published and online information about the uses of plants in Tajikistan and in the wider Central Asia region has been collated. Acquisition of information from local experts and those held at Tajik institutes and in the Russian language is ongoing. Community interviews have indicated levels of plant use for target species (see ANNEX 1), A wider symposium on biodiversity research and conservation is due to be hosted by KBG in late 2021, at which workshops on plant use and the project goals and outcomes will be undertaken: it is not yet clear if UK partners will be able to participate in this event and therefore planning is underway for 100% local delivery and potentially remote participation. The intention is to summarize this information for publication in the National Report on Plants for Livelihoods in Tajikistan.

Activity 5.1.2 National Workshop on sustainable plant use in Tajikistan.

A National Workshop on Plants for Livelihoods will be undertaken in the third year of project to engage stakeholders and discuss potential outcomes locally and nationally in order to ensure the National Report is thoroughly researched and discussed and has potential for up-scaling (see 5.1.1 above).

Activity 5.1.3 Draft National Report on Plants for Livelihoods circulated to stakeholders and reviewers.

This activity has been delayed until plans for the symposium in late 2021 are finalized. The draft National Report will be circulated to partners before the end of 2021.

Activity 5.2.1 Launch events for National Report.

Activity planned for final year of the project.

Activity 5.3.1 Steering Committee (all partners).

Following the COVID-19 pandemic, online meetings, discussions and trainings have taken place frequently.

Activity 5.3.2 Steering committee (Tajikistan partners).

See Activity 5.3.1 Additional meetings between Tajik partners are ongoing especially in relation to PMSD data gathering and decision making.

Activity 5.3.3 Submit reports to Darwin Initiative.

Responsibility of RBGE to submit timely reports to Darwin Initiative. Timing of annual reports slightly delayed due to Ramadan and Eid usually falling within period of report preparation.

Activity 5.3.4 Monitoring and Evaluation plan and reviews.

Online meetings regularly discuss how activities are leading towards project targets. Quarterly reports are measured against activities and any delays or required actions noted and acted upon as necessary. All partners have adopted an adaptive and flexible approach during the COVID-19 pandemic.

3.2 Progress towards project Outputs

0.1 BIODIVERSITY: *by end of project, five plant species threatened by unsustainable harvesting have better actual and projected conservation status through reduction in wild harvesting.*

Six species identified; information on wild harvesting collected; seeds of plants collected, stored, germinated and transferred to demonstration plots, with agrobiodiversity plots established in 100 households. Reductions in wild harvesting will be assessed in Y3.

Evidence: images of seeds and plants *ex-situ* in plots; report from community interviews, conservation assessment training certificates.

0.2 AWARENESS & CAPACITY DEVELOPMENT: at least 100 biodiversity stakeholders (from local to national) in Tajikistan more aware of the sustainable use of natural resources and how to implement benefits at local and national scales.

Communities (numbers: 14 and over 100 households) more aware of sustainable use through introduction to and participation in project; formal awareness and capacity activities underway; capacity development conducted prior to project start and top up training delayed due to coronavirus pandemic – online and remote training delivered and ongoing

Evidence: 14 communities in interview reports, images of workshops and trainings, online training components, Red List training certificates

0.3 LIVELIHOODS & HEALTH: agro-biodiversity programmes established benefiting at least 100 households in terms of increased and more resilient household income, direct access to plant products.

Plots established in 100 households; PMSD planning and remote training/delivery underway, delays due to discussions about development and difference between household plots for local use and expanding to small scale agri-production (latter requires market knowledge and controls in place to prevent increased market leading to increased wild harvesting irrespective of local horticulture).

Evidence: plot images

0.4 GENDER EQUALITY: at least 50 women skilled in horticultural methods and developing and managing niche agri-businesses.

Women have been represented in households/farmers selected in first stage, and in community interviews, workshops and initial training.

Evidence: images of women in training workshops

0.5 SUSTAINABLE PLANNING: national report and roadmap for long term sustainable agro-biodiversity programmes developed, with pilot programmes for six species established and demonstrated to stakeholders.

Not yet applicable. However, published and grey literature on plant uses in Tajikistan and across Central Asia collated, local information sources identified with data collection planned. Symposium to be hosted by Kulob Botanic Garden in late 2021 will allow data gathering, discussion and consolidation locally towards the final report. Summary of interviews and additional info requested will form part of summary in Report.

3.3 Progress towards the project Outcome

Outcome: Increased awareness and capacity locally and nationally to use Tajikistan's plant resources sustainably, leading to improved conservation status and enhanced livelihoods for communities.

Given the challenges and delays brought about by COVID-19 progress is satisfactory towards the project outcome, with a clear path to delivery of outputs following decision making. Awareness is being increased with potential for expansion. The nature of livelihoods benefits will become clear following additional data gathering and implementation of PMSD and the subsequent National Report publication.

Output 1 – conservation assessment of six species delayed, ex-situ seed collections established, monitoring plots established, verification of reduced threat through over-harvesting required further spatial analyses to verify long term and sustainable improvements;

Output 2 – the majority of training has been conducted online or has been managed in a practical sense in Tajikistan including TV events; some delays to implementation;

Output 3 – plots established; much discussion on how to proceed as some disparity among ideas and also among information collected in household interviews and existing/establishing markets and market actors; decisions following additional data gathering during PMSD to dictate whether up-scaling can be managed appropriately; benefits through a reduction in effort in wild harvesting and local food production will occur;

Output 4 – women largely involved in plot establishment and training; following decisions on up-scaling via PMSD further training for women will be undertaken;

Output 5 – planning in place for late 2021, outline contents of report to be disseminated to partners by end of 2021.

3.4 Monitoring of assumptions

Outcome Assumptions

SECURITY: Tajikistan remains a secure location to work, with no risks for Tajik or international partners (Khatlon province is currently a safe location, working with known and trusted partners with UK Embassy advice and support).

This assumption remains valid, but the situation will be closely monitored as and when travel to Tajikistan becomes possible following the COVID-19 pandemic. Travel within Tajikistan during the pandemic has not been restricted, but all project partners and participants in communities have been offered the decision to not travel or receive project workers locally. Routine communication with Tajik partners has been maintained to ensure all partners are aware of the current situation in Tajikistan. International flights have started to resume to Tajikistan, and the potential for secure and safe future travel is being regularly monitored by UK partners.

NATURAL DISASTERS: floods, landslides and poor travel infrastructure may cause access issues (ameliorated through flexible planning and scheduling).

No issues encountered as yet; all communities remain accessible. Occasionally planned community visits have been postponed and rescheduled due to heavy rain or snow. Communities have been offered the right to refuse visitors from then project due to uncertainties about COVID-19.

FINANCE: international transfers and exchange rate variation could impact the timing and cost of in country implementation (exchange rates have been estimated conservatively to take account of Brexit, and routine planning with in-country partners will ensure banking instability is counteracted).

So far, no issues with international transfers have been encountered, with exchange rates remaining within planned assumptions. Exchange rates are however changing in response to Brexit and the COVID-19 pandemic and these changes will be monitored closely and Change Requests submitted if necessary.

STAFF RETENTION: continuity of staff at all partner organizations (Tajik partners have provided named individuals for all positions, and have assured these are trusted and respected staff who demonstrate long-term commitment, although if staff did move on there are a number of young graduates already known to the project team who could fulfil those roles).

All staff remain engaged and working in collaboration on the project. We do not anticipate any changes at this stage.

Output 1 Assumptions.

On the ground, measurable improvements in species numbers will not be feasible with the project, but a direct reduction in a specific threat coupled with *ex situ* collections will allow a re-assessment of status alongside a future projection of persistence.

Assumption still valid.

Output 2 Assumptions.

Participation of stakeholders at awareness raising and media events can be dependent on various factors - however KBG have held such events previously, and good relations with the UK Embassy in Tajikistan and the National Academy of Sciences make this a low risk.

Not yet applicable as no formal events will be organised and implemented until later in the project.

Output 3 Assumptions.

Community engagement (existing working relations between Tajik partners and several communities make this a low risk).

No issues encountered; community engagement has been positive thus far. Communities were given the option to not receive visits from project staff during the global pandemic, but thus far this option has not been taken up: project staff follow local guidelines strictly and no threat to health has been encountered from project activities.

Land tenure (some communities and households may be limited in the availability of land for establishment of agro-biodiversity plots, however existing pilot projects suggest that solutions can be found and are likely to increase as benefits accrue).

Despite increased numbers of communities engaged, no households have yet been encountered that do not have access to land directly. Given the success of establishing plots locally, this assumption remains positive. Discussions on upscaling production will mean land tenure factors are under increased scrutiny to ensure inclusivity is maintained.

Output 4 Assumptions.

Social and cultural issues (involvement of women in increased responsibility in responsibility for agro-biodiversity plots and benefits has the potential to present cultural resistance).

So far this issue has not been encountered but will monitor as PMSD and PIA training and implementation increases. Training and plot establishment and management has strongly featured women, but management of business and associated benefits will be a consideration moving forwards.

Output 5 Assumptions.

Inability to engage with all relevant stakeholders (to be ameliorated by early and thorough planning).

No issues encountered as yet.

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

Impact Statement:

Plant diversity is conserved through sustainable use, providing long term enhancement of well-being and livelihoods in local communities.

This impact statement remains valid, but it is too early in the project to assess direct or future effects. With all project components on track we envisage the impact statement to remain valid and the project to contribute to this through awareness, engagement and direct benefits that can be measured, monitored and expanded beyond the project boundaries and timeline.

We consider the National Report to be critical to ensuring potential for long term benefits after completion of the project. Part of the success of this will depend upon decisions and recommendations as to whether upscaling horticultural plots can significantly increase community benefits or whether this will create a market that potential increases demand and illegal wild harvesting. This has been a topic of much discussion and has been led primarily by Tajik partners.

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

The following SDGs were cited in the project application. The second year of the project has progressed towards direct contribution in some areas. The relevant SDG targets are annotated below: it is understood that SDG indicators are not always measurable at the local scale but that the project activities contribute to national goals in a local context.

SDG1 No Poverty - through addressing the details of land tenure and access to land for growing food plants (Target 1.4) and through avoiding the direct and indirect effects of extreme events on the availability of wild harvested food in mountain ecosystems through making food plants available locally (Target 1.5).

SDG2 Zero Hunger - through establishing sustainable food provision in local agro-biodiversity plots to grow variable food items, thereby increasing food security (Target 2.1). Consideration of up-scaling to small-scale agricultural plots for specific target species may contribute to Targets 2.3 and 2.4. *Ex-situ* and community collections of seeds and plants of crop wild relatives contribute to Target 2.5.

SDG3 Healthy Lives – the project does not directly contribute to the Targets for this SDG.

SDG5 Gender Equality - through inclusiveness of the work programme and women's participation; several training and awareness workshops targeting women have been undertaken and further work to include women specifically in managing food production and concomitant financial benefits will contribute to Target 5.5.

SDG12 Responsible Consumption & Production - through awareness of the sustainable use of natural resources, taking into consideration wild harvested resources and ecosystem service conservation (Target 12.8).

SDG13 Climate Action – by reducing the need to access unstable and dangerous areas for wild harvesting (Target 13.1) and also through addressing habitat degradation by reducing the unsustainable removal of key habitat species such as *Bunium persicum*; discussions about restoration of this species at a single exemplar location are underway.

SDG15 Life on Land - through preventing species loss and conserving ecosystem services through sustainable use (Targets 15.1, 15.5), which is especially relevant as Tajikistan has a high level of degraded vegetation especially in mountain ecosystems (Target 15.4). Awareness of overharvesting has increased during Year 2, and the balance between accessing markets with cultivated rather than wild harvested plants has been discussed in Year 2 for future development and positive outcomes. Presentation of the National Report on Native Plants for Livelihoods will contribute towards Target 15.9.

The above goals will be addressed at the national level by incorporating lessons learnt and benefits accrued through local interventions, through the National Report on Plants for Livelihoods, with recommendations for meeting SDG targets nationally and up-scaling project outcomes. Planning for the draft contents of this report are underway.

5. Project support to the Conventions, Treaties or Agreements

This project will directly address all three main objectives of the Convention on Biological Diversity (conservation, sustainable use, equitable benefit sharing), and in particular the following articles:

Article 7 through identifying species at risk through unsustainable harvesting and monitoring the effects of interventions designed to improve conservation status; six species identified and awareness and intervention to mitigate unsustainable harvesting ongoing and being monitored.

Article 8 through proposing interventions to reduce unsustainable use of resources leading to better *in-situ* conservation outcomes, especially for threatened species; interventions proposed, with potentially confounding circumstances (ie creation of markets potentially leading to increased wild harvesting) under specific consideration to ensure best practice.

Article 9 through establishment of *ex-situ* collections (plants and seeds) of taxa threatened through unsustainable harvesting, in Tajikistan and globally; achieved locally at Kulob Botanic Garden, planned for RBGE when international travel resumes (RBGE holds living collections of *A. rosenbachianum* but will increase collections by the end of the project).

Article 10 through establishing sound practices that both ensure sustainable use and also contribute to community livelihoods, while also benefiting target threatened species in their natural habitats; livelihood benefits of the above interventions being established and monitored.

The project will also addressing Article 12 through capacity development of key partners, Article 13 through education and awareness events in communities, schools and other institutes, Article 17 through the exchange of information about threatened plant species, and Article 18 through international cooperation.

The project will contribute directly to achieving the following Aichi Targets:

A1 by increasing awareness of biodiversity values through community, school and stakeholder and media events;

A2 by integrating biodiversity values into community level planning for livelihood and conservation benefits; this has occurred in Year 2 through community nworkshops and discussions about harvesting, horticulture and markets leading to more formal PMSD approaches.

B5 through a reduction in unsustainable wild harvesting leading to better conservation status for target species and the ecosystem services they provide;

C12 by actively monitoring improvements in the conservation status of target threatened species; monitoring plots have been established and mapped.

C13 through *ex-situ* collections of target species maintained in active community programs and in appropriate institutions; achieved at KBG.

D16 through awareness and discussion with stakeholders about the equitable sharing of biodiversity resources nationally and internationally, and ensuring and trade respects the Nagoya Protocol;

E18 by respecting the practices of local communities and working with them to ensure the benefits of biodiversity are used sustainably; this is being achieved through close collaboration with target communities.

E19 by facilitating workshops and a National Report on Plants for Livelihoods in Tajikistan that will make knowledge about plant use and case studies of sustainable resource use available nationally.

Project benefits will be documented against each Aichi target.

The project will be framed within the Global Strategy for Plant Conservation, and in particular will address the following targets (new targets following GSPC review and planning will be considered if implemented during the timeframe of the project):

Target 8 (*ex situ* collections, in communities as well as in national and international collections); achieved at KBG.

Target 9 (socioeconomically valuable plant species and knowledge conserved);

Target 12 (all wild harvested plant products sourced sustainably, through training in sustainable harvesting and agro-biodiversity plots); training achieved during Year 2 and being implemented.

Additionally targets 14 (awareness), 15 (capacity) and 16 (networks and partnerships) are being developed as core components of the project.

Target 12 is especially pertinent as a balance between sustainable harvesting for those with no land to cultivate against agro-biodiversity plots in communities will ensure sustainable resource use alongside benefits for all community members. This has been a specific consideration and discussion point among Tajik partners during Year 2.

Reporting documents detailing the individual targets and indicators relevant to the project will be constructed for the final report.

The Nagoya Protocol will be fully respected, and additional local and national recommendations developed, to ensure any *ex situ* collections adhere to the principles and procedures of Access and Benefit Sharing in Tajikistan and with international partners.

The Focal Point for Tajikistan has not been contacted during the second year of the project. Direct interaction and for the National Symposium is planned for Year Three to ensure national benefits are targeted and met.

6. Project support to poverty alleviation

At the end of Year 2 of the project it is becoming possible to predict some benefits related to poverty alleviation.

Agro-biodiversity plots have been established with 100 households engaged. Therefore, additional food sources will become available as plots mature giving easier access to produce locally and reducing the requirement for dangerous and time-consuming harvesting trips. Social and health benefits will be documented in Year 3. Additional horticulture skills are transferable to different and additional crops and plants.

Whether a significant financial benefit can be established is still under development.

In Year 2 additional effort was made to engage with marginalised and isolated communities and individuals.

The project will demonstrate these benefits in target communities with target species but is designed to collate enough additional information and lessons learned to enable expansion to additional species and additional areas at minimal expense or effort during up-scaling. It can already be seen that species outside the six target species have been highlighted and some are being monitored as part of the project – there will be a focus on gathering additional information and horticulture potential for these species in Year 3. These plans will be co-constructed and shared nationally in the National Report on Plants for Livelihoods.

7. Consideration of gender equality issues

During Year 2 the project team made specific efforts to engage directly with female community members and their roles in harvesting plants. Women have featured strongly in workshops and horticultural training; it is evident that while women rarely if ever harvest plants alone, and often do so closer to home, this gives an automatic role in household plots and the potential to expand female involvement in such activities at a range of scales.

8. Monitoring and evaluation

Monitoring and Evaluation has been based upon a sound communication strategy, with known and trusted partners. This was evident before and during the application process, and immediately after the project started when Kulob Botanic Garden Director Dr Mariyo Boboev and Ganji Tabiat Director Jovidon Boboev visited the UK with funds from the Global Britain Fund administered through the UK Embassy in Dushanbe.

Communication has been regular and productive. As a result of the inability of UK partners to travel to Tajikistan, communications have been expanded and the online and remote component has been expanded. This has made communications somewhat more formal, allowing more direct record-keeping of interactions and discussions. There is no doubt that this has increased the time allocated to capacity development materials, and to application of adaptive management.

Project reporting by all partners follows the logframe and associated indicators.

9. Lessons learnt

There is no doubt that achieving certain technical and planning components have been more challenging due to COVID-19 and the inability to travel. This has certainly resulted in some delays, as certain project trainings and activities would have been conducted in person with the opportunity for quick discussion and resolution of any issues. This has been more time consuming conducted remotely and has necessitated behavioural change for some partners who are used to giving or receiving training in different formats. There is no doubt that this will be a valuable lesson, as the ability to deliver remote training (with associated language issues in some circumstances) can be used successfully due to travel restrictions resulting from the global pandemic or alternatively in locations affected by security issues.

One planning issue has been taking into consideration that the working schedules of partners may differ significantly. This could be due to cultural, societal or religious factors or due to the difference between staff employed full-time on project activities yet needing to take into account additional roles and responsibilities outside the project – both in the UK and in other countries. It is our experience that such issues, when discussed, are not considered in enough depth or detail. The importance of co-constructed logframes and timetables cannot be over-stressed, also taking into account adaptive changes during the project. With the COVID-19 pandemic this has been especially challenging over the last 12 months.

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

Comments requiring action from report on Annual Report for Year 1:

Comment 1

“Which methods are being used to help ensure that training remains effective while using online methods, as opposed to the in-person workshops that were originally planned?”

Generally, we are measuring success through the field activities and monitoring this through regular discussions – the field activities are the important component. It is difficult to ascertain whether these activities would have proceeded in a different or more satisfactory way had training been undertaken in person, but in fact as this is not currently an option we are attempting to ensure the field activities meet their targets irrespective of the training methodology employed. Feedback from Tajik partners has been important in this respect.

Comment 2

“As training of five staff in field data collection and related activities was no longer required at the start of the project, to which other project activities will this saving in time and resources be directed?”

Remote training is requiring additional staff time, with the preparation of materials suitable for remote delivery and remote support through routine contact or arising from questions that would ordinarily have been dealt with swiftly in person. That has been at no extra cost from FFI but has certainly taken extra time for staff at FFI and CMEP-RBGE. Additional time has been spent in online support to a range of activities and discussion subjects and involving additional staff/fellows in these processes.

Comment 3

“The report explains that project activities have contributed to eight SDGs. In addition to the Goal level, it would also be helpful if specific SDG Targets contributed to could be cited in future reporting.”

This is addressed in the report on SDGs above. We welcome comments from the reviewer if this has been met satisfactorily.

11. Other comments on progress not covered elsewhere

Not applicable.

12. Sustainability and legacy

Communication with the UK Ambassador to Tajikistan is being maintained, and advice about travel and logistics sought as and when necessary as well as providing project updates and the potential for direct involvement as and when desired. UK partners have not visited Tajikistan since the new UK Ambassador took up his posting, but no doubt this will occur when travel becomes available again.

A Darwin Fellowship has been awarded to Kobil Bobokalonov, who is associated with Kulob Botanic Garden and assisting with the project remotely. He has taken part in a range of trainings and expeditions with RBGE staff and is an excellent young botanist and researcher based at the National Herbarium in Dushanbe. His Fellowship will be publicised, and all project partners are delighted that he will receive further training in the UK when this becomes possible.

The President of Tajikistan visited the home of Zam Zam Director Tojiniso Odinaeva, and the opportunity was used to showcase the sustainable use of biodiversity in the remote rural communities of Tajikistan.

The exit strategy remains valid. The National Report on Plants for Livelihoods will be used to promote the benefits of project outcomes and how these can be up-scaled beyond the life of the project. Further, the production of cultivation guides for specific plants – project target species– will enable this up-scaling. All these approaches will be discussed with stakeholders at the National Symposium in Kulob in late 2021.

13. Darwin identity

The project has been mentioned in some social media channels: most often on the Twitter accounts of CMEP and several other staff and research groups at RBGE. The launch of the project website will feature in partner media. www.tajikistandarwin.cmep.org.uk

The Darwin Initiative is recognised in Tajikistan as a distinct thing, due to pre-existing projects funded through FFI and also through the work of the UK Ambassador. The project partners see DI as a way to further their own ideas with priming funds, and to support conservation and development in ways that would not otherwise be possible. This has resulted in the successful application for a young Tajik botanist as a Darwin Fellow

Some work of Ganji Tabiat is included in the below website, including Darwin Initiative logo: http://ganjitablet.tj/?page_id=1500

14. Impact of COVID-19 on project delivery

The impact of the COVID-19 pandemic on project activities and planning is covered throughout the report, most notably in Sections 2, 9 and 15. In short, the ability of UK partners to travel to give direct support to Tajik partners has been impacted: this has led to adaptive planning to achieve such support using alternate methods (mostly online) and has resulted in delays to some components. It is not believed that this will affect achievement of the project outcomes and delivery of outputs significantly.

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.

RBGE and UK project partners have safeguarding policies in place.

No safeguarding issues have been encountered during the second year of the project.

Community engagement has been implemented through trusted and pre-existing relationships between Tajik partners and those communities.

During the COVID-19 pandemic, all partners and beneficiary communities have been given the option to dictate what they are comfortable with according to the project interventions. The wearing of facemasks has been compulsory in Tajikistan for some part of the project activities. All staff were offered the choice to work as normal, or to reduce work or travel or interaction to whatever degree was dictated by National Policy or through personal choice. As yet, no issues have been reported that suggest any safeguarding issues under the global pandemic have arisen.

FFI staff in Tajikistan were at times asked to cease national travel under conditions allow for safe travel. As such, modification of training plans from in-country to remote – both internationally and within Tajikistan – have been implemented. Some delays have resulted, but project outcomes and outputs remain unaffected.

International travel for UK partners was suspended during the reporting period to ensure control under pandemic conditions.

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				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others				
TOTAL				

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 Plant diversity is conserved through sustainable use providing long-term enhancement of wellbeing and livelihoods in local communities.</p>		<p>The second year of the project has accomplished a number of practical outputs and trainings locally; some delays and adaptive management have resulted from the COVID-19 pandemic but the impact statement remains valid and progress towards it is satisfactory.</p>	
<p>Outcome Increased awareness and capacity locally and nationally to use Tajikistan's plant resources sustainably, leading to improved conservation status and enhanced livelihoods for communities.</p>	<p>0.1 BIODIVERSITY: By end of project, five plant species threatened by unsustainable harvesting have better actual and projected conservation status through reduction in wild harvesting.</p> <p>0.2 AWARENESS & CAPACITY DEVELOPMENT: At least PMSDiodiversity stakeholders (from local to national) in Tajikistan more aware of the sustainable use of natural resources and how to implement benefits at local and national scales.</p> <p>0.3 LIVELIHOODS & HEALTH: Agro-biodiversity programmes established benefiting at least 100 households in terms of increased and more resilient household income, direct access to plant products.</p> <p>0.4 GENDER EQUALITY: At least 50 women skilled in horticultural methods and developing and managing niche agri-businesses.</p>	<p>Six target species identified, seeds and plants collected and in <i>ex-situ</i> collections, data gathered to enable conservation assessments, field monitoring sites identified.</p> <p>Local communities more aware of sustainable harvesting and use.</p> <p>100 community horticulture plots established; 102 household interviews detailing plant use and benefits complete and summarised.</p> <p>Training and PMSD approaches developed and focusing on women.</p> <p>Information on plant use in Tajikistan and regionally collated through literature and through community interviews and workshops.</p>	<p>Undertake draft conservation assessments and training; Planning for additional awareness campaigns and events; Focus on PMSD decision making and implementation following adaptive management; Further information from local partners, and from communities generated through PMSD to inform development of guides for cultivation programmes; engagement with national experts at symposium; coordinate development of National Report.</p>

	0.5 SUSTAINABLE PLANNING: National report and roadmap for long term sustainable agro-biodiversity programmes developed, with pilot programmes for six species established and demonstrated to stakeholders.		
Output 1 BIODIVERSITY: improved conservation status of at least five nationally threatened native plants which are currently over-harvested in the wild.	1.1 Baseline National IUCN Red List status of six species established by end of year 1, and status improved by end of project as a result of a reduction in unsustainable harvesting. 1.2 By end of project, long term monitoring programme for six species established. 1.3 By end of year 2, ex situ seed and plant collections of six species established at KBG.	1.1 Majority of distribution data gathered for target species, awaiting additional inferred and modelled distribution information and national threats for completion of conservation assessments early in Y3; 1.2 Collection areas and monitoring plots identified and surveys under way; 1.3 <i>Ex situ</i> collections of seeds for all target species collected, stored, living collections established; UK collections require export and implementation;;	
Activity 1.1.1 Gather and model distribution data for target threatened species (desk and field study)		Majority of distribution data acquired.	Additional field and Russian language herbarium data to be acquired, mapped and modelled by HYR3
Activity 1.1.2 Gather information about levels of wild harvesting from communities		102 community interviews complete, with summary analyses.	Small number of additional questions and clarification required prior to preparation of publication.
Activity 1.1.3 Undertake formal conservation assessment of six target species		IUCN Red List raining started, data capture ongoing.	Draft assessments at national and global level to be completed by HYR3
Activity 1.2.1 Establish long-term monitoring plots for six target species		Monitoring plots located, established and mapped covering four target species and two additional species threatened by over-harvesting.	Surveys delayed by adverse weather conditions and COVID-19 pandemic, methodology established and planned for completion by HYR3
Activity 1.2.2 Field and community monitoring of six target species		Surveys delayed due to adverse weather and COVID-19. Community seed collection completed.	Surveys continuing into spring and summer 2021.
Activity 1.3.1 Collection and storage of seeds and plants for <i>ex-situ</i> collections		Seeds collected for all target species; stored at KBG, germinated and living collection establishment ongoing.	Explore export of seed to UK collections by HYR3.
Output 2. AWARENESS & CAPACITY DEVELOPMENT: capacity of project	2.1 By end of year 1, at least five project staff trained in field collection,	2.1 KBG staff already trained to sufficient levels prior to start of project due to previous work programmes; additional training postponed until May 2020 then	

<p>partners and local community stakeholders in horticulture and sustainable use of locally used plant species is improved. Awareness of sustainable plant use increased locally and nationally.</p>	<p>documentation, horticulture skills and links between biodiversity and poverty alleviation via adapted RBGE Practical Certificate in Horticulture; staff are co-training at workshops in years 2 and 3</p> <p>2.2 By end of project, 100 community members (50% women) trained in horticulture skills for agro-biodiversity programmes involving multiple plant species and including sustainable collection</p> <p>2.3 By end of year 1, at least 5 staff trained in social and rural research and monitoring and PMSD methods; successfully gathering and assessing data in years 2 and 3</p> <p>2.4 By end of project, at least six awareness raising workshops/events held for stakeholders at KBG and in communities.</p> <p>2.5 By end of project, at least two media awareness campaigns held highlighting sustainable use of natural resources; project website live.</p> <p>2.6 By end of project, dissemination of successful project activity summaries to at least 40 communities outwith the project to raise awareness of practical solutions to unsustainable harvesting that benefit communities directly.</p> <p>2.7 By end of project, at least five people trained in formal conservation assessment.</p>	<p>further postponed due to COVID-19 pandemic. KBG staff have instructed communities in care of target species;</p> <p>2.2 Complete;</p> <p>2.3 PMSD training complete, workshops imminent followed by Tajik-led decision making and implementation;</p> <p>2.4 One event held, planning for additional events scheduled for Y3</p> <p>2.5 Planning for events scheduled for Y3.</p> <p>2.6 Not yet applicable.</p> <p>2.7 Not yet applicable; planning for national workshop in Kulob in October 2021.</p>	
<p>Activity 2.1.1 Horticulture training (Certificate in Practical Horticulture, delivered to project staff)</p>	<p>In country training not possible due to COVID-19 pandemic. Existing capacity at KBG sufficient to complete project activities.</p>	<p>If travel is possible before end of Y3 then assessment will be made as to whether training and certification can be completed to fulfil project objectives for capacity development.</p>	
<p>Activity 2.1.2 Project staff training in field survey, monitoring, documentation and reporting</p>	<p>As above, with KBG staff experienced in survey methodology.</p>	<p>As above.</p>	

Activity 2.2.1 Horticulture and sustainable harvesting training (delivered by project staff in communities)	Project staff delivering in country.	If agrobiodiversity plots expand to a larger scale, assessment of additional training requirements will be made.
Activity 2.3.1 PMSD and social research skills training (delivered to project staff)	Training delivered online.	As above.
Activity 2.4.1 Sustainable use awareness workshops held in communities	Workshops held during horticulture training, introductions and plot establishment.	
Activity 2.4.2 Sustainable use events held at KBG (stakeholders, schools, colleges)	Event hosted in April 2021 and featured on TV.	Planned for final six months of project in 2022.
Activity 2.5.1 Media campaigns on sustainable use of natural resources	See 2.4.2 above.	Planned for final six months of project in 2022.
Activity 2.5.2 Project website online (monitoring of website hits)	Website established. Currently offline due to hosting changes to ensure online compliance.	Updates and development to be posted and hits monitored in Y3.
Activity 2.6.1 Produce and disseminate project success reports	Not yet applicable.	Planned for final six months of project in 2022.
Activity 2.7.1 Conservation Assessment training	Online training underway and supported remotely by certified IUCN Red List assessors and trainers.	Complete training alongside completion of draft assessments in first half of Y3.
Output 3. LIVELIHOODS & HEALTH: livelihoods improved for 100 households through increased and diversified income from sustainable plant product sales, with associated food security and social benefits.	3.1 By end of project, agro-biodiversity plots of six species established in five communities. 3.2 Co-produced solutions to create sustainable market niches identified through five community workshops in year 1 and implemented in years 2 and 3. 3.3 By end of project, participatory well-being impact assessments show evidence of (1) average 10% increase in local income from plant product sales, (2) 20% increase in locally grown produce and concomitant financial saving, and (3) 25% reduction in	3.1 100 plots established, including in remote and inexperienced communities. 3.2 Imminent following PMSD decision making. 3.3 Not yet applicable.

	lengthy and potentially dangerous wild harvesting trips.	
Activity 3.1.1 Agro-biodiversity plots established and in production		Total of 100 plots established.
Activity 3.2.1 Market appraisal workshops in five communities		Online training lead to detailed discussion and adaptive planning. Workshops and additional fact finding and stakeholder engagement imminent. Additional information will lead to product selection and decision making as to ways forward prior to HYR3, lead by Tajik partners.
Activity 3.2.2 Market chain analysis workshops (with all actors and stakeholders)		Imminent. To be completed by HYR3
Activity 3.2.3 "Producer groups" established and operating		Decisions on best ways forward to be made by HYR3.
Activity 3.3.1 Participatory Impact Assessments		Not yet applicable.
Output 4. GENDER EQUALITY: increase in number of women in five communities benefiting from involvement in household and community management and budgeting, with increased horticulture and business skills.	4.1 By end of project, at least 50 of 100 people trained in horticulture, managing agro-biodiversity plots and subsequent production methods, access to markets and financial benefits (indicator 2.2) are women.	4.1 Women trained in horticulture, with PMSD based training imminent.
Activity 4.1.1 Horticulture training in communities delivered to women		Training undertaken.
Activity 4.1.2 Sustainable harvesting training delivered to women		Training undertaken in some localities.
Activity 4.1.3 Production and packaging training delivered to women		Not yet applicable.
Activity 4.1.4 Training in agro-biodiversity business management and market access delivered to women		Not yet applicable.
Activity 4.1.5 Participatory Impact Assessment (women)		Not yet applicable.

Output 5. SUSTAINABLE PLANNING: "National Report on Sustainable Use of Plants in Tajikistan" developed to benefit biodiversity and community livelihoods in Tajikistan, including case studies and appropriate governance structures.	5.1 Draft report completed and circulated to national and international stakeholders for review by end of year 2. 5.2 By end of project, final report completed and disseminated at national launch event.	5.1 Draft report to be sent to stakeholders by end of 2021 following symposium in October 2021. 5.2 Not yet applicable.	
Activity 5.1.1 Research and gather data on plant use in Tajikistan	Published data collated, field data from community interviews collated and summarized.	Awaiting additional information from national symposium in Kulob in October 2021.	
Activity 5.1.2 National Workshop on sustainable plant use in Tajikistan	Not yet applicable.	Planned for October 2021 – planning for delivery entirely by Tajik partners underway in case UK partners cannot travel or join remotely.	
Activity 5.1.3 Draft National Report on Plants for Livelihoods circulated to stakeholders and reviewers	Not yet applicable.	To be drafted and sent to all partners by end of 2021.	
Activity 5.2.1 Launch events for National Report	Not yet applicable	Planned for final 6 months of project in 2022.	
Activity 5.3.1 Steering Committee (all partners)	All meetings and discussions held online; routine quarterly reporting established.	Scheduled for early summer 2021.	
Activity 5.3.2 Steering committee (Tajikistan partners)	Routine communication between all partners. Specific planning for PMSD process ongoing.		
Activity 5.3.3 Submit reports to Darwin Initiative	Half year report submitted slightly late; annual report slightly delayed due to Ramadan and Eid in host country.		
Activity 5.3.4 Monitoring and Evaluation plan and reviews	Continual discussion following specific schedule items and quarterly reports.		

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
Impact: Plant diversity is conserved through sustainable use providing long-term enhancement of wellbeing and livelihoods in local communities.			
Outcome: Increased awareness and capacity locally and nationally to use Tajikistan's plant resources sustainably, leading to improved conservation status and enhanced livelihoods for communities.	<p>0.3 BIODIVERSITY: By end of project, five plant species threatened by unsustainable harvesting have better actual and projected conservation status through reduction in wild harvesting.</p> <p>0.4 AWARENESS & CAPACITY DEVELOPMENT: At least 100 biodiversity stakeholders (from local to national) in Tajikistan more aware of the sustainable use of natural resources and how to implement benefits at local and national scales.</p> <p>0.3 LIVELIHOODS & HEALTH: Agro-biodiversity programmes established benefiting at least 100 households in terms of increased and more resilient household income, direct access to plant products.</p> <p>0.4 GENDER EQUALITY: At least 50 women skilled in horticultural methods and developing and managing niche agri-businesses.</p> <p>0.5 SUSTAINABLE PLANNING: National report and roadmap for long term sustainable agro-biodiversity programmes developed, with pilot programmes for six species established and demonstrated to stakeholders.</p>	<p>0.1 BIODIVERSITY: Conservation status for at least five species assessed and projected nationally at start and end of project; ex-situ seed and plant collections established in communities, KBG and RBGE.</p> <p>0.2 AWARENESS & CAPACITY DEVELOPMENT: Workshop and demonstration attendance lists and photographs, media documented, training schedules and attendances recorded, participants feedback documented.</p> <p>0.3 LIVELIHOODS & HEALTH: Agro-biodiversity programmes established and photographed, benefits documented through community interviews and financial records.</p> <p>0.4 GENDER EQUALITY: Involvement and benefits documented through monitoring of project impacts on women.</p> <p>0.5 SUSTAINABLE PLANNING: National Report published and disseminated, pilot programmes established and documented.</p>	<p>SECURITY: Tajikistan remains a secure location to work, with no risks for Tajik or international partners (Khatlon province is currently a safe location, working with known and trusted partners with UK Embassy advice and support);</p> <p>NATURAL DISASTERS: floods, landslides and poor travel infrastructure may cause access issues (ameliorated through flexible planning and scheduling);</p> <p>FINANCE: international transfers and exchange rate variation could impact the timing and cost of in country implementation (exchange rates have been estimated conservatively to take account of Brexit, and routine planning with in-country partners will ensure banking instability is counteracted);</p> <p>STAFF RETENTION: continuity of staff at all partner organizations (Tajik partners have provided named individuals for all positions, and have assured these are trusted and respected staff who demonstrate long-term commitment, although if staff did move on there are a number of young graduates already known to the project team who could fulfil those roles).</p>

<p>Output 1 BIODIVERSITY: improved conservation status of at least five nationally threatened native plants which are currently over-harvested in the wild.</p>	<p>1.1 Baseline National IUCN Red List status of six species established by end of year 1, and status improved by end of project as a result of a reduction in unsustainable harvesting. 1.2 By end of project, long term monitoring programme for six species established. 1.3 By end of year 2, <i>ex situ</i> seed and plant collections of six species established at KBG.</p>	<p>1.1 Conservation status assessed, projected and published by end of project. 1.2 Project report, monitoring methodology and evidence of first monitoring undertaken. 1.3 <i>Ex-situ</i> collections documented, demonstration plots constructed and planted, photographed.1.3 etc.</p>	<p>On the ground, measurable improvements in species numbers will not be feasible within the project, but a direct reduction in a specific threat coupled with ex-situ collections will allow a re-assessment of status alongside a future projection of persistence.</p>
<p>Output 2 AWARENESS & CAPACITY DEVELOPMENT: capacity of project partners and local community stakeholders in horticulture and sustainable use of locally used plant species is improved. Awareness of sustainable plant use increased locally and nationally.</p>	<p>2.1 By end of year 1, at least five project staff trained in field collection, documentation, horticulture skills and links between biodiversity and poverty alleviation via adapted RBGE Practical Certificate in Horticulture; staff are co-training at workshops in years 2 and 3 2.2 By end of project, 100 community members (50% women) trained in horticulture skills for agro-biodiversity programmes involving multiple plant species and including sustainable collection 2.3 By end of year 1, at least 5 staff trained in social and rural research and monitoring and PMSD methods; successfully gathering and assessing data in years 2 and 3 2.4 By end of project, at least six awareness raising workshops/events held for stakeholders at KBG and in communities. 2.5 By end of project, at least two media awareness campaigns held highlighting sustainable use of natural resources; project website live. 2.6 By end of project, dissemination of successful project activity summaries to at least 40 communities outwith the project to raise awareness of practical</p>	<p>2.1 Training materials, courses and workshops documented through photographs, videos and text and publicised online and in print. 2.2 Training attendance records, workshop photographs, training schedules, attendee feedback documented. 2.3 Training schedule, attendance records and photographs, attendee feedback documented; project reports. 2.4 Event reports, attendee lists and photographic documentation. 2.5 Photographic, film and text evidence of campaigns, stakeholder attendees documented and feedback collected, outreach of campaigns documented; website online. 2.6 Dissemination materials translated and published, dissemination locations recorded and delivery documented. 2.7 Training schedule, attendance records and photographs, attendee feedback documented; project reports.</p>	<p>Participation of stakeholders at awareness raising and media events can be dependent on various factors - however KBG have held such events previously, and good relations with the UK Embassy in Tajikistan and the National Academy of Sciences make this a low risk.</p>

	<p>solutions to unsustainable harvesting that benefit communities directly.</p> <p>2.7 By end of project, at least five people trained in formal conservation assessment.</p>		
<p>Output 3 LIVELIHOODS & HEALTH: livelihoods improved for 100 households through increased and diversified income from sustainable plant product sales, with associated food security and social benefits.</p>	<p>3.1 By end of project, agro-biodiversity plots of six species established in five communities.</p> <p>3.2 Co-produced solutions to create sustainable market niches identified through five community workshops in year 1 and implemented in years 2 and 3.</p> <p>3.3 By end of project, participatory well-being impact assessments show evidence of (1) average 10% increase in local income from plant product sales, (2) 20% increase in locally grown produce and concomitant financial saving, and (3) 25% reduction in lengthy and potentially dangerous wild harvesting trips.</p>	<p>3.1 Horticultural guides for six target species, photographs and maps of community plots.</p> <p>3.2 Workshop reports, photographs and attendance lists, sales records from implementation phase.</p> <p>3.3 Participatory well-being impact assessments (across multiple indicators of well-being eg. material, freedom of choice and action, social relations) reported and shared with communities; reports on produce grown and financial records from sales.</p>	<p>Community engagement (existing working relations between Tajik partners and several communities make this a low risk);</p> <p>Land tenure (some communities and households may be limited in the availability of land for establishment of agro-biodiversity plots, however existing pilot projects suggest that solutions can be found and are likely to increase as benefits accrue).</p>
<p>Output 4 GENDER EQUALITY: increase in number of women in five communities benefiting from involvement in household and community management and budgeting, with increased horticulture and business skills.</p>	<p>4.1 By end of project, at least 50 of 100 people trained in horticulture, managing agro-biodiversity plots and subsequent production methods, access to markets and financial benefits (indicator 2.2) are women.</p>	<p>4.1 Training schedules, attendance registers and photographs, community interviews, feedback documented.</p>	<p>Social and cultural issues (involvement of women in increased responsibility in responsibility for agro-biodiversity plots and benefits has the potential to present cultural resistance).</p>
<p>Output 5 SUSTAINABLE PLANNING: "National Report on Sustainable Use of Plants in Tajikistan" developed to benefit biodiversity and community livelihoods in Tajikistan, including case studies and appropriate governance structures.</p>	<p>5.1 Draft report completed and circulated to national and international stakeholders for review by end of year 2.</p> <p>5.2 By end of project, final report completed and disseminated at national launch event.</p>	<p>5.1 Report available online</p> <p>5.2 Reports and documentation of workshops.</p>	<p>Inability to engage with all relevant stakeholders (to be ameliorated by early and thorough planning).</p>

Activity 1.1.1 Gather and model distribution data for target threatened species (desk and field study)

Gather and model distribution data for six target threatened species (desk and field study). This will involve assessing collections at several Tajik and international herbaria, online and expert data sources, and discussions with Tajik and international botanists with field experience. Species distribution modelling will be conducted by UK experts and verified with Tajik botanists, with a direct view to incorporation into IUCN Red List assessments. Gathering information on threats to plant species will be undertaken simultaneously.

Activity 1.1.2 Gather information about levels of wild harvesting from communities

Gather information about levels of wild harvesting from communities. This will involve community interviews at five target communities, to assess the amount of material gathered, who gathers and processes collections, distances and times associated with harvesting, and both historical and contemporary information about the location and abundance of target species to inform conservation assessment and planning, as well as hitting targets for harvesting and collection time/distance reductions.

Activity 1.1.3 Undertake formal conservation assessment of six target species

Undertake formal conservation assessment of six target species. Following data gathering, a formal training workshop on IUCN Red Listing of Plants (national, regional, global) will be undertaken. This will primarily target KBG staff for use in Khatlon Province, with invited guests from other institutes nationally in order to input into the revision of the Red Book of the Republic of Tajikistan.

Activity 1.2.1 Establish long-term monitoring plots for six target species

Establish long-term monitoring plots for six target species. Following discussions with local experts and communities that routinely harvest the six target species, monitoring plots to assess the impact of harvesting reductions will be established, with protocols established to give evidence of biodiversity status improvements.

Activity 1.2.2 Field and community monitoring of six target species

Field and community monitoring of six target species. Annual visits to monitoring plots will be undertaken to assess population status of six target species. Changes in levels of harvesting, population status and abundance metrics will be used to assess project impact and conservation status.

Activity 1.3.1 Collection and storage of seeds and plants for *ex-situ* collections

Collection and storage of seeds and plants for *ex-situ* collections. Seed collections of six target species (and additional species at similar locations) will be collected from at least three localities and stored at KBG. These stores will be used as source populations for community agro-biodiversity programmes. Following agro-biodiversity plot establishment, communities will collect and store seed to ensure a sustainable horticulture programme long term. Living plants will be collected and grown in demonstration plots at KBG for horticulture training and for demonstration of the useful plants of Tajikistan. These collections will consider a range of species beyond the six target species.

Activity 2.1.1 Horticulture training (Certificate in Practical Horticulture, delivered to project staff)

Horticulture training (Certificate in Practical Horticulture, delivered to at least five project staff). RBGE horticulture training experts will adapt the RBGE Certificate in Practical Horticulture and train KBG staff in relevant disciplines. Training will directly apply to further training of communities in the cultivation of useful plants but will also increase capacity at KBG in general terms with specific benefits for the demonstration and education garden areas.

Activity 2.1.2 Project staff training in field survey, monitoring, documentation and reporting

At least five project staff training in field survey, monitoring, documentation and reporting. KBG and associated staff and students will undertake field exercises to collect plants and seeds, to monitor population status of target species, and in documenting and analysing resultant information.

Activity 2.2.1 Horticulture and sustainable harvesting training (delivered by project staff in communities)

Horticulture and sustainable harvesting training (delivered by project staff in communities). KBG staff who have been trained by RBGE staff will undertake horticulture training in five target communities benefiting at least 100 individuals, overseen in the first instance by RBGE advisers and subsequently independently. These skills can be applied beyond the life of the project, with community training delivered in communities or at KBG as required.

Activity 2.3.1 PMSD and social research skills training (delivered to project staff)

PMSD and social research skills training (delivered to project staff). At least five staff at Zam-Zam and Ganji Tabiat will receive further training from FFI experts in a range of socio-economic and market analysis skills, that will be used directly to assess impact and establish agro-biodiversity niche businesses. Skills learned during Darwin Initiative project 24-006 will be built upon. Zam-Zam are already implementing these skills, and Gani Tabiat staff will learn these skills and apply them to the function and outputs from KBG, leading to livelihoods benefits from botanical expertise.

Activity 2.4.1 Sustainable use awareness workshops held in communities

Sustainable use awareness workshops held in communities. Raising awareness of the value of biodiversity will be delivered at the same time as practical horticultural training. The benefits of local production, sustainable harvesting, and the value plant species bring to habitats through ecosystem services - as well as direct values - will be addressed and impacts of awareness campaigns monitored.

Activity 2.4.2 Sustainable use events held at KBG (stakeholders, schools, colleges)

Sustainable use events held at KBG (stakeholders, schools, colleges). Following establishment and population of demonstration plots at KBG with associated interpretation and knowledge products, events will be held targeting the sustainable use of natural resources and the value of plant biodiversity engaging school children, college and university students, and stakeholders and decision makers locally and nationally. Events will be delivered by Tajik project staff.

Activity 2.5.1 Media campaigns on sustainable use of natural resources

Media campaigns on sustainable use of natural resources. Local newspapers and television channels will be engaged to cover the project, both at the outset and at the end of the project when outputs and impacts can be documented. At least two events will be held, and routine contact with media sources maintained.

Activity 2.5.2 Project website online (monitoring of website hits)

Project website online (monitoring of website hits). A project website will be designed, populated and online by the end of year one. Progress towards project goals will be regularly updated, and content shared on social media. Downloads of physical outputs will be made available on the project website, and on other online platforms available in Tajikistan.

Activity 2.6.1 Produce and disseminate project success reports

Produce and disseminate project success reports. At the end of the project, a summary of what can be achieved from the cultivation of useful plants will be produced and disseminated to at least 40 communities outside the project target areas. This will enable up-scaling of the methods to be encouraged and supported by the capacity developed at project partners as necessary.

Activity 2.7.1 Conservation Assessment training

Formal training in IUCN Conservation Assessment (Red Listing) will be delivered by RBGE staff to at least five Tajik partners. Places on this training course will be offered to additional Tajik institutes outside the project partners.

Activity 3.1.1 Agro-biodiversity plots established and in production

Agro-biodiversity plots established and in production. Five target communities will be engaged and agro-biodiversity plots established by the end of year one in order to grow a range of useful plants. Assessment of available land and potential benefits will be conducted for each participating household.

Activity 3.2.1 Market appraisal workshops in five communities

Market appraisal workshops in five communities. Each community will discuss who the market actors are for each selected useful plant and develop the establishment of "producer groups" to interact with market actors.

Activity 3.2.2 Market chain analysis workshops (with all actors and stakeholders)

Market chain analysis workshops (with all actors and stakeholders). Market actors identified by community market appraisal workshops will be invited to attend market chain analysis workshops to identify opportunities and establish systems to benefit households and market actors through participatory planning.

Activity 3.2.3 "Producer groups" established and operating

"Producer groups" established and operating - following from market appraisal and chain analyses these will be established in line with workshop recommendations. A budget has been included as seed funding for producer groups.

Activity 3.3.1 Participatory Impact Assessments

Participatory Impact Assessments. PIA methods (including community mapping and profiling, well-being rating, financial benefits)) will be undertaken early during the project and set out targets for impact assessment through a participatory approach.

Activity 4.1.1 Horticulture training in communities delivered to women

Horticulture training in communities (Activity 2.2.1) will include at least 50% women attendees in order to ensure gender equality.

Activity 4.1.2 Sustainable harvesting training delivered to women

Training on sustainable harvesting in plots and in the wild will include at least 50% women to ensure gender equality.

Activity 4.1.3 Production and packaging training delivered to women

Training on the harvesting, production and packaging of plant products for sale or use will include at least 50% women to ensure gender equality.

Activity 4.1.4 Training in agro-biodiversity business management and market access delivered to women

Establishment of "producer groups" will include discussion with both genders, and groups will have representation from at least 50% women in running and managing such groups.

Activity 4.1.5 Participatory Impact Assessment (women)

PIA will specifically address gender dis-aggregated information to ensure that gender equality is improved for women, including those that are currently at the lower end of the poverty scale (as identified through community profiling).

Activity 5.1.1 Research and gather data on plant use in Tajikistan

Research and gather data on plant use in Tajikistan. RBGE Project Manager will initiate data gathering on published uses of plants in Tajikistan (and adjacent states as appropriate) and interact with local and international experts to gather additional information. Community plant use data will also be included. All data will be summarized as part of the National Report on Native Plants for Livelihoods and made available online and in print.

Activity 5.1.2 National Workshop on sustainable plant use in Tajikistan

Following data gathering and establishment of agro-biodiversity plots, a national workshop on plants for livelihoods will engage stakeholders and discuss potential outcomes locally and nationally in order to ensure the National Report is thoroughly researched and discussed and has potential for up-scaling. The workshop will include discussions on how to increase awareness nationally and what outputs can help to achieve this.

Activity 5.1.3 Draft National Report on Plants for Livelihoods circulated to stakeholders and reviewers

The RBGE project Manager will draft the National Report by the end of year two and circulate to stakeholders and reviewers for feedback prior to finalization, publication and launch.

Activity 5.2.1 Launch events for National Report

The National Report will be published and launched at a national event, with associated media coverage.

Activity 5.3.1 Steering Committee (all partners)

The Steering Committee including all Tajik and international partners and external M&E reviewers will convene annually in Tajikistan. This is essentially an internal M&E exercise to ensure all project partners and associated input into the monitoring and subsequent success of the project.

Activity 5.3.2 Steering committee (Tajikistan partners)

Tajik project partners will meet at six-month intervals in between international committee meetings, in order to evaluate and address project activities locally as necessary.

Activity 5.3.3 Submit reports to Darwin Initiative

RBGE, in consultation with all project partners, will write and submit Half Year and Annual reports to Darwin Initiative.

Activity 5.3.4 Monitoring and Evaluation plan and reviews

A M&E plan will be established at the project inception, with relevant targets against outputs and international conventions set. The importance of continual re-evaluation of project activities against this M&E plan will be stressed, and training in M&E activities given to Tajik staff by UK experts.

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
3	Number of people to attain other qualifications (i.e. Not standard measures 1 or 2 above)		Tajik	0	10	0	0	10
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above) *		Tajik	20	80	0	100	100
7	Number of (i.e., different types - not volume - of material produced) training materials to be produced for use by host country			0	2	1	1	3
14A	Number of conferences/seminars/workshops to be organised to present/disseminate findings			0	0	1	0	1
14B	Number of conferences/seminars/workshops attended at which findings from Darwin project work will be presented/ disseminated.			0	0	1	0	1
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)			█	█	█	█	█
22	Number of permanent field plots and sites to be established during the project and continued after Darwin funding has ceased			6	2	0	6	8

Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

ANNEX 1 Household interview summary with report on data disaggregated by region.

ANNEX 2 Evidence of ongoing IUCN Red List training through module completion certificates.

ANNEX 3 Maps and details of monitoring plots.

ANNEX 4 Evidence of collection, storage, sowing, germination and growing on of seeds and plants in ex situ collections.

ANNEX 5 Image evidence of community horticulture training.

ANNEX 6 Example presentation as basis of PMSD online training.

ANNEX 7 Image evidence of sustainable use workshops in communities.

ANNEX 8 Image evidence of awareness events.

ANNEX 9 Image evidence of plot establishment.

ANNEX 10 Image evidence of training women in communities.

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.	