

Darwin Initiative Main and Post Project Annual Report

To be completed with reference to the “Writing a Darwin Report” guidance: (<http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms>). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

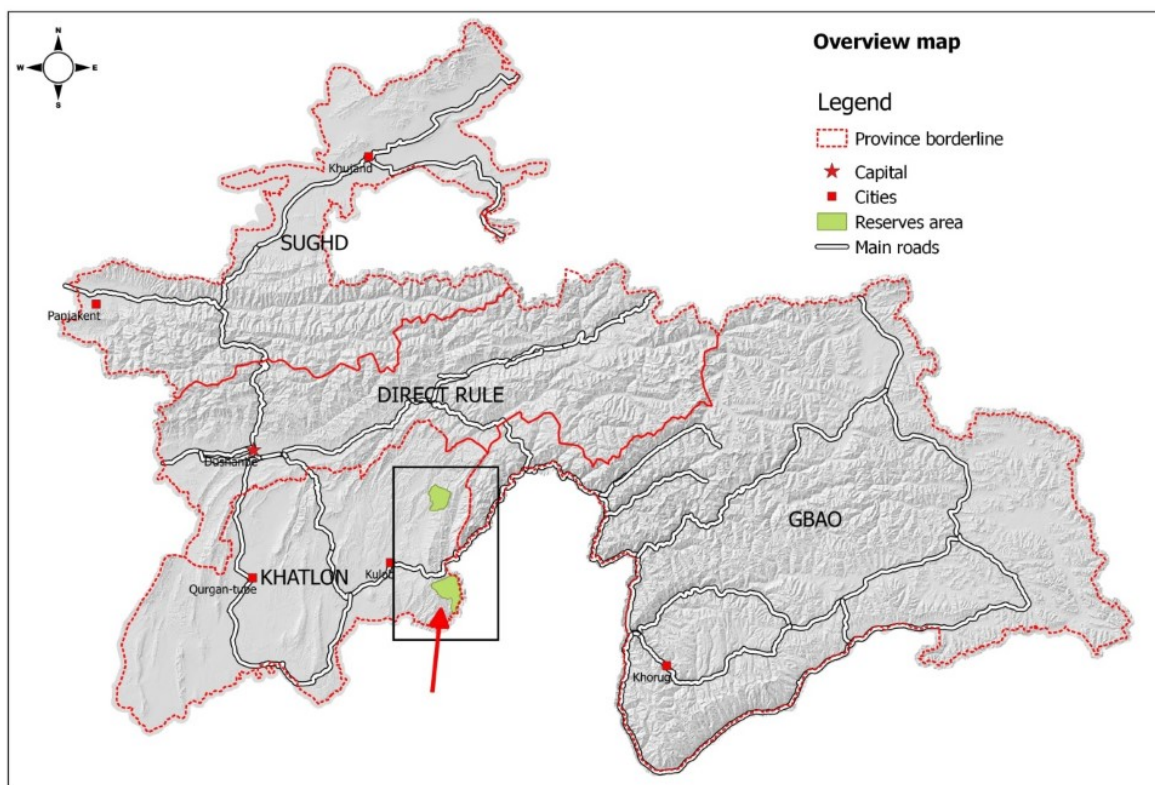
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Darwin Project Information

Project reference	24-006
Project title	Enhancing forest biodiversity and community resilience to Tajikistan’s changing climate
Host country/ies	Tajikistan
Lead organisation	Fauna & Flora International
Partner institution(s)	Zam Zam, Ganji Tabiat (Kulob Botanical Garden), Muminabad Forestry Management Unit, Dashtijum Forestry Management Unit
Darwin grant value	£383,708
Start/end dates of project	1st April 2017 – 31 st March 2021
Reporting period (e.g., Apr 2018 – Mar 2019) and number (e.g., Annual Report 1, 2, 3)	1 st April 2018 – 31 st March 2019
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1. Project rationale

Childukhtaron (14,600ha) and Dashtijum (50,100ha; 13,400ha forest) nature reserves are identified in Tajikistan’s National Biodiversity Strategy Action Plan (NBSAP) as two of the country’s three most valuable walnut-maple forest sites, with a rich variety of wild fruit and nut trees, including pear *Pyrus tadshikistanica* (CR, endemic), *Pyrus korshinskyi* (CR), almond *Amygdalus bucharica* (VU) and apple *Malus sieversii* (VU). These globally significant forests and unique agro-biodiversity sites are increasingly important as genetic reservoirs, as climate-related impacts threaten domesticated varieties grown worldwide. The forests are also essential to the livelihoods of 700 resident households. Mean income in both areas is below \$1.25/person/day (SDG extreme poverty level) with limited income-generating opportunities available. Collection and sale of Non-Timber Forest Products (NTFPs) is a significant and vital livelihood strategy for both women and men.



A map of Tajikistan with locations of the two forest reserves highlighted. Childukhtaron is the more northern reserve and Dashtijum is the southern reserve

Only 3% of Tajikistan is now forested, and fruit-and-nut woodlands are under severe pressure from firewood collection, hay-making, livestock grazing and over-harvesting of some resources. The habitat is extremely degraded, with declining diversity and little natural regeneration. The forest is state-owned but the forest service lacks the capacity to manage it adequately in collaboration with local people, who have user rights but do not perceive that they have a stake or role in conserving the resource. The World Bank identified Tajikistan as the country most vulnerable to climate change in Europe and Central Asia, with very low adaptive capacity. The steeply-sloping project area suffers from landslides, extreme weather events including heavy spring rains, summer drought, and pests; all predicted to worsen. FFI and local stakeholders developed a climate adaptation strategy for Childukhtaron (2013) and participatory market mapping (2015).

These problems were identified through the National Biodiversity Strategy Action Plan and through FFI’s long term biodiversity programme with local partners and government in the region. This project will address the identified problems by strengthening ecosystem resilience and addressing local communities’ urgent need for financial resilience, through increasing access to growing markets for fruit and nut products, and secondary processing.

2. Project partnerships

Project partners include: the NGO Ganji Tabiat linked to Kulob Botanic Gardens in south Tajikistan, led by national botanist Mario Boboev; Muminabad and Dashtijum Forestry Management Units (FMU), the local sections of the Agency for Forestry under the Government of the Republic of Tajikistan, responsible for the management and protection of the reserves and forestry; the local NGO Zam Zam, who lead on livelihood and market development activities and the NGO Centre for Climate Change and Disaster Reduction (CCDR) who have conducted trainings and adaptation planning workshops on climate change.

The project partnership reflects the diversity of skills and knowledge needed to deliver the project. FFI has a permanent office in Tajikistan and our staff are regularly in contact (via email and phone) with all project partners and key stakeholders to monitor progress and to advise on delivery. We set up a steering group in Year 1 who met for the third time in November 2018 (see Evidence folder (EF): Admin – A1 3rd Steering Group Meeting) to ensure information sharing across all project partners and collaborators. FFI also produced a short summary of project progress from Year 1 which was disseminated in English, Russian and Tajik to project partners and collaborators in August 2018 (EF: Admin – A2 Report for Partners-EN-RU-TJ). Sub-grant agreements detailing partner deliverables have been signed with Kulob Botanical Gardens (rather than Ganji Tabiat for administrative reasons but the same personnel are involved) and Zam Zam, and these are renewed each project year, see EF: Admin - SGA1 and 2.

3. Project progress

3.1 Progress in carrying out project Activities

1.1 Conduct habitat and botanical surveys to update (currently weak) baseline biodiversity data for sites and key species at Childukhtaron and Dashtijum

To identify the major habitat types in each reserve, remote sensing was conducted in May 2018, producing GIS maps of the major ground cover types (dense, moderate, scrub/sparse, grass/sparse and agriculture/cleared), see EF: Output 1-1.1 and 1.2. Results from the mapping exercise were subsequently ground-truthed through field surveys conducted by Ganji Tabat in July-December 2018. Data on tree number, regeneration, dominant species, vegetation cover and threats from grazing and wood cutting were collected within 77 20x20m plots in Childukhtaron and 69 20x20 plots in Dashtijum, providing an updated assessment of the habitat condition of each reserve (data available in EF: Output 1-1.3). This information, combined with the data on threatened trees collected in August-September 2017, represents a significantly improved biodiversity baseline. In 2019, these results will be used to inform which areas are most in need of and suitable for restoration, feeding into the reforestation plans (activity 3.2) and ongoing planting (activity 3.4). To help Forest Management Unit staff repeat these surveys in the future, we have produced and disseminated a pocket tree ID guide (printed in Tajik).

1.2 Conduct interviews to collect local knowledge of agro-biodiversity

In Year 2, good progress has been made on analysing data from the household surveys conducted throughout Year 1. Analysis of data – describing perceptions and knowledge of forest condition, forest change, threats, climate change, engagement in forest use and conservation – is near completion and we aim to produce a report of key findings by June 2019, which will be shared with the project steering group. Relevant learning from these surveys include the fact that community members generally believe the forest is in good condition and that this has improved in recent years (contradicting results from the habitat assessments in 1.1). We will continue to explore this in Year 3 and will use our improved understanding of local knowledge, attitudes and perceptions to inform our approach to future awareness raising (3.1).

1.3 Collate data to help establish sustainable harvest levels for key species

As described in the 2017-18 annual report, the project team decided to expand the scope of this activity to address sustainable forest management more broadly, rather than sustainable use in isolation. This has allowed the team to focus on other factors, such as resource use and grazing, which have a critical effect on forest regeneration and health. In 2018, we carried out two activities to generate baseline data on local resource use and forest regeneration.

Firstly, a participatory assessment of community resource use in both reserves was conducted by regional forestry expert, Mr Kamel Chorfi in June 2018, in which 15 local people from each site and local foresters described current use of resources, major threats and challenges and opportunities to improve management (see EF Output 1-1.4). This was followed by two sessions dedicated to the development of a participatory management plan for Dashtijum. As part of this process, a list of management actions was agreed and zones within the reserves for different management purposes were identified (a summary of activities is provided under EF Output 1-1.5). In May 2019, a final draft of the Participatory Management Plan will be presented back to the communities for their validation. This will form the basis for participatory monitoring planned under activity 1.7. This process will be repeated for Childukhtaron in October 2019.

Secondly, in November 2018, a survey of people's perceptions of natural regeneration in their forest plots was conducted with 40 households (20 in each reserve). We are still in the process of analysing these data but one interesting finding is that some plot holders already carried out activities to promote regeneration (e.g. people often leave 2-3kg of seed to regenerate each year) and that many would be willing to participate in fencing and monitoring activities to better protect regeneration in their plot from grazing. These results also informed the regeneration monitoring protocol developed under activity 1.7.

1.4 Produce and disseminate survey reports (in Russian, Tajik and English)

One intern from Tajikistan, based in FFI's Dushanbe office, collated survey data and literature on four threatened tree species including wild pear (*Pyrus korshinskyi* and *P. tadshikistanica*), apple (*Malus sieversii*) and almond (*Amygdalus bucharica*). These status reports (written in Tajik, see EF: Output 1-1.6) were shared with participants of the Species Action Plan workshop (activity 1.7) and were used to inform the workshop discussion. The reports will be turned into handouts in Year 3 and disseminated to project partners and collaborators in Tajikistan

1.5 Compile information on likely climate change impacts on forest ecosystem/ tree species, both from scientific community/ literature and community vulnerability assessments; develop climate change risk assessments for the sites

As part of work to develop climate adaptation plans (see 3.3), the Centre for Climate Change and Disaster Reduction completed climate change profiles for the two sites, based on a desk review and community assessments of vulnerability to climate change. Results emphasised the particular risks of mudflows, flooding, avalanches and landslides caused by heavy rains and snowfall and, during the dry season, fire (see EF: Output 3-3.2).

1.6 Workshops with specialists and local stakeholders to develop Species Action Plans for three Red-List trees (two CR *Pyrus* species); produce and disseminate plan documents

In November 2018, a Species Action Planning workshop was conducted in Muminabad, attended by 20 people including individuals from both FMUs, Zam Zam and Ganji Tabiat (see EF: Output 1-1.7 for workshop photo). Participants reviewed the status reports produced under 1.4, discussed threats and challenges and agreed key actions for four red-listed tree species: *P. korshinskyi*, *P. tadshikistanica*, *M. sieversii* and *A. bucharica*. In 2019, we will integrate the species-level actions into one all-encompassing reforestation plan for each reserve (see activity 3.4). Feedback from the FMUs indicates that implementation of one over-arching plan per reserve will be more effective than producing separate plans for each species.

1.7 Agree protocol for participatory forest monitoring scheme with forest service and communities

Following the regeneration surveys and community resource mapping carried out in 1.3, a monitoring protocol has been drafted (EF: Output 1-1.8). Monitoring will focus on collecting data within individual plots under the management of local families. Data will be collected on

the number of mature and young trees, evidence of threats such as grazing, and the completion (or not) of agreed actions (e.g. tree-planting, quantity of seed left in each plot and erection of fencing). The form is currently being reviewed by the FMUs at each site and data collection by individual plot holders will begin in Year 3.

1.8 Implement monitoring: patrols collect data as per agreed protocol

This is due to start in Year 3 in line with the protocols agreed under 1.7.

1.9 Monitoring data collated, analysed and reported to forest service and local stakeholders (including community forest monitors)

Due to start in Year 3.

1.10 Workshop to disseminate research and learning to local and national Forest Agency and interested stakeholders.

Due to start in Year 4.

2.1 Preliminary work to start the Participatory Market System Development process for Dashtijum in consultation with community representatives and project partners: identification of appropriate products, preliminary market mapping and strategic design, identifying and engaging key market actors (preliminary steps of PMSD roadmap – <http://www.pmsdroadmap.org/>).

Completed and reported on in the Year 1 annual report.

2.2 Small community workshops to empower marginalised market actors (local NTFP collectors in the villages of Dashtijum and Childukhtaron) and prepare them to engage with other market actors in the next steps - with a particular emphasis on women (separate groups if necessary).

Although completed and reported on in the Year 1 annual report, we have continued to support local collectors to engage with other market actors. For example, from July 9th-11th 2018, Zam Zam organised meetings between local producer groups in Dashtijum and Muminibad with traders from the Sughd region of Tajikistan. As a result of this meeting, traders agreed to buy fresh and dry forest products from the local producers at higher prices (described in detail in EF: Output 2-2.1 Zam Zam report).

2.3 Facilitate participatory market mapping at workshops with representatives of all market actors (collectors, local traders, processors, 'big' traders, input providers), help the community members to develop stronger links with traders and processors; followed by participatory planning – resulting in action plans.

This activity was completed and reported on in Year 1 annual report.

2.4 Support the two communities to establish producer cooperatives, ensuring active participation of women

One producer group at each site was established and registered in Year 1 (2017-18), each consisting of 20 members (33 female; 7 male). With facilitation from Zam Zam, the groups are functioning extremely well, meeting on a monthly basis, actively using the equipment provided in Year 1 and successfully reaching new markets for their products (see EF: Output 2-2.1). Total income received for each group for fruit products increased significantly from 2017 to 2018, increasing by 61% in Childukhtaron (equivalent of £10,414 to £16,728) and 88% in Dashtijum (equivalent £10,496 to £19,762) (see EF: Output 2-2.12). They are making plans to reach new markets in 2019 and are currently working on developing new labels for their products to make them attractive for sale across Tajikistan.

Zam Zam is also helping the producer groups to have one common voice when addressing significant barriers to production. For example, a meeting was organised in August 2018, attended by both producer groups and local authorities to request permission to connect the community fruit drier machines to the local electricity line (earlier restrictions had limited the use of the machines delivered 2017). Following the meeting, an official request to connect the machines was approved by district government. The machines are now running effectively, with people using the fruit driers throughout the autumn.

2.5 Run (minimum) 15 practical training events for local women and men involved in fruit and nut collection, processing and sale - provide follow-up support through producer cooperatives to improve product quality through enhanced local processing techniques.

Following the recommendations of the PMSD action plan developed in Year 1, 10 practical training events (five at each site) for the cooperative groups and eight training events (four at each site) (18 in total) for the saving groups have been conducted by Zam Zam. Details of the training are summarised below and in Zam Zam's full report (EF: Output 2-2.1 and 2.3).

Trainings with cooperative groups, attended by 20 people in Childukhtaron (17 female; 3 male) and 20 people in Dashtijum (16 female; 4 male):

- 1) Technology of canning fruits - September 2018
- 2) Costs of fruit collection and techniques for adding value to forest products - September 2018
- 3) Forest management techniques - October 2018
- 4) Family budgeting - November 2018
- 5) Techniques for processing dried fruits – February 2019

Trainings with saving groups by 71 people in Childukhtaron (48 female; 23 male) and 71 people in Dashtijum (48 female; 23 male):

- 1) Family budgeting – August 2018
- 2) Refresher training on the use of saving funds - October 2018
- 3) Effective use of funds for environmental investments - November 2018

2.6 Provide locally appropriate equipment (identified in PMSD action plans) to producer cooperatives to improve processing at local level – for example, this might be drying racks or packaging machine.

Equipment provided and reported on in Year 1 (two electric fruit driers, two packaging machine and 10 local made fruit driers) is now regularly used by the producer groups (thanks to efforts to ensure a regular connection to the local electricity line, described under 2.4). In September 2018, the producer groups were provided with canning tools (glass bottles and caps); this allows the groups to better store collected products, providing a potential source of income in the winter (when prices are higher) or in later years (especially important should crops fail). Producer groups were also provided with a truck which will be used to transport their goods to local markets.

2.7 Research and explore potential for overseas markets and innovative products; follow-up as appropriate.

We have focussed on first developing a stronger national market. The producer groups had a small-scale success in 2018 when their products reached one shop in Dushanbe (pers. comm. Zam Zam). In Year 3 we will work to establish greater trade between the producer groups and markets in the capital city, with visiting tourists also representing a potential market.

2.8 Set up and support at least three local women's saving groups in villages in Childukhtaron, based on and learning from successful model in Dashtijum (initiated by Save the Children)

Six saving groups (three in each site with 15 members each) were established in 2017 with details on the structure/membership provided in the Year 1 annual report. Saving groups have proven to be very popular, with membership increasing to 25 in each of the six groups and two entirely new groups (20 members each) established in 2018. In total there are now 190 members (147 female; 43 male). Savings made by group members have steadily increased throughout the project with a total of 53,314 Tajikistani Somoni (equivalent to ~£4,380) deposited to date (amounts per group range from £986 - £83 (the lowest figure saved by the most recently formed group)). Over 2018, members of the group have withdrawn funds to invest in local development and conservation activities, guided by the PMSD action plan developed under 2.3. This included 35 members purchasing fruit tree saplings to plant out in local gardens, 25 purchasing canning facilities for producing jams, juice and canned vegetables and 25 buying materials to assist with fruit drying. In Year 3, the groups are planning to use funds to fence their plots (which are in addition to the fencing actions detailed under 3.6) and establish a local nursery and greenhouse to increase tree-planting efforts. More detail on the savings groups are included in Zam Zam's report (EF Output 2-2.1 and 2.5)

2.9 Conduct Participatory Impact Assessment (PIA): semi-structured interviews and focal group discussions with women and men to explore the impact the project has really had on participant's lives (using our experience from Darwin post-project in Kyrgyzstan).

To be completed in Year 4.

3.1 Run 16 awareness raising events: seminars for women and men and school activities for children on various topics: biodiversity, climate change, agro-biodiversity and sustainable harvesting.

Four awareness raising events were held in the project year, adding to the four events held in Year 1. Summaries of the events are provided below, a report (with photos inside) for the school awareness raising is available in EF: Output 3-3.1.

- Two events were held at local schools (one at each project site) on 30th and 31st October 2018. In both events local school children (28 10-17 year olds in Dashtijum and 25 15-17 year olds in Childukhtaron) prepared poems and took part in quizzes, roleplays and drawing competitions. Events focussed on celebrating the cultural and economic value of native tree species and forest biodiversity. The events were attended by approximately 250 other people in Dashtijum (150 women; 100 men) and 150 in Childukhtaron (90 women; 60 men)
- Two community awareness raising activities (one at each project site) were organized by Mario Boboev. Events focussed largely on the causes and impacts of soil degradation and provided an introduction to participatory forest management. Both events were attended by 25 people (14 men and 11 women in Childukhtaron; 17 women and 8 men in Dashtijum).

3.2 Organise four community harvest-time festivals to celebrate the forest, its biodiversity and fruit and nut products

No activities scheduled for the current project year. Two harvested festivals were completed and reported on in Year 1 and a further two workshops are scheduled for 2020.

3.3 Conduct at least four climate adaptation planning workshops with community groups (replicating and learning from activity in Darwin Initiative post-project in Kyrgyzstan): exploring together the likely impacts of climate change, assessing vulnerabilities, and identifying feasible adaptation measures for local stakeholders.

In March 2019, two climate change adaptation workshops (one at each reserve: attended by 10 women and 10 men in Childukhtaron and 10 women and 10 men in Dashtijum) were conducted by the Centre for Climate Change and Disaster Reduction, with support provided by FFI. Participants mapped key hazards impacting their communities, developed seasonal calendars

(showing key events and livelihood activities) and identified the degree to which key resources and assets are vulnerable to climate change. Participants identified adaptation measures for reducing vulnerability to climate change, with significant discussion dedicated to addressing forest loss and degradation (seen as major factor exacerbating hazards including avalanches and mudslides). A draft report is available in EF: Output 3-3.2. Results from these two workshops were comprehensive and we do not therefore see the need to carry out the additional two workshops as stated in the activity (we had originally intended to deliver four shorter workshops). We will instead focus on feeding the workshop results into awareness raising activities in Year 3 and 4 (activity 3.1) and into the reforestation plan (activity 3.4)

3.4 Following on from activities 1.1 – 1.5, develop strategic, climate-proofed, reforestation plans for both sites jointly with the forest service and other stakeholders, identifying strategic sites for planting (to improve connectivity, reduce risk of erosion/ landslides) and appropriate resilient species and varieties.

Good progress is being made towards the development of reforestation plans for both sites including: completing remote sensing and habitat assessments to identify appropriate areas for planting (see 1.1), establishing and agreeing actions for threatened species to be integrated within these plans (see 1.6) and evaluating which species and areas in the site will be most resilient to climate change (see 3.3). In 2019, we will collate all information into one plan which will be fed back to the FMUs and local communities in stakeholder meetings to be held in June and July 2019.

3.5 Establish stakeholder forum at each site; ensure members are representative of the different groups within the forest user community (including those with more marginal use rights and women); facilitate regular meetings to enable discussions on forest management, conservation and sustainable use issues; provide mediation if necessary; and promote collaborative planning and implementation of actions.

Two stakeholder forums have been established, one at Childukhtaron consisting of 17 local women, 12 local men and two forestry officials and one at Dashtijum consisting of 23 local women, nine local man and four forestry officials. In each case we have ensured representation from marginalised people (including those with limited land and access to forest resources). Each forum had their first meeting in February 2019, and they have since proven to be an extremely useful platform, providing an open space for discussing various topics, including the forest code, barriers to participation in forest management and development of local markets for fruit products (see EF: Output 3-3.3 for a meeting report). Each forum will meet again in 2019, with likely discussion topics including strengthening participatory forest management.

3.6 Work with local forest leaseholders to protect trees in their forest plots, through fencing and other means.

We purchased and distributed fences to 19 leaseholders (nine in Childukhtaron; ten in Dashtijum) in March 2019. Fencing of plots will be completed at the start of Year 3, predominantly in areas containing threatened tree species. Leaseholders will monitor effects of fencing on forest regeneration (following methods developed under 1.7).

3.7 Support local forest service and community groups to grow native fruit and nut trees in nurseries for planting in forest and gardens, promoting diversity of species and local varieties to maintain agro-biodiversity (seed to be collected locally wherever possible) – minimum of two forest service nurseries and two community nurseries.

Four nurseries (each 0.2 ha in size), under the management of the FMU teams (two Childukhtaron; two Dashtijum), were established and reported on in Year 1. These nurseries are still in use and are helping to supply planting efforts this year (see 3.8). In the current project year, one additional school community nursery was established at Dashtijum reserve.

3.8 Support forest service teams to plant 400,000 native trees (10+ species) in protected and strategic locations in Childukhtaron and Dashtijum to reinforce natural populations, including aftercare and monitoring survival.

In the current project year each FMU planted 14 native tree species (including cherry plum, cherry, almond, Bukharan pear, Tajik pear, wild apple, hawthorn, walnut, redbud, briar, pistachio, pomegranate, poplar and apricot) in nurseries (established in Year 1 under 3.7) or out into the forest. Dashtijum FMU planted 14,000 seedlings and 125kg of seed in two nurseries and 23,619 seedlings directly into the forest. Childukhtaron FMU planted 2kg of seed and 37,000 seedlings into one of the nurseries established in 2017, and planted 8,400 seedlings directly into the forest.

Total number of trees planted to date is provided below and detailed information on planting is provided in EF: Output 3-3.4.

	2017-18		2018-19		Total	
	Seedlings	Seed	Seedlings	Seed	Seedlings	Seed
DJ planted in nurseries	25,700	190.5 kg	14,000	125 kg	39,700	315.5 kg
DJ planted in forest	7,171	37 kg	23,619		30,790	37 kg
CH planted in nurseries	9,330	359.5 kg	37,000	2 kg	46,330	361.5 kg
CH planted in forest	10,640		8,400		19,040	0
Total planted in nurseries	35,030	550 kg	51,000		86,030	677 kg
Total planted in forest	17,811	37 kg	32,019		49,830	37 kg
Total planted	52,841	587 kg	83,019	127kg	135,860	704 kg

3.2 Progress towards project Outputs

Output 1: Project team and local and national stakeholders have increased knowledge and understanding of forest habitats, including agro-biodiversity and key species, and likely impacts of climate change, and are engaged in participatory forest monitoring.

At the project start there were no current maps, data or literature for either forest or for the most threatened species present in the reserves. In year 2, we established a baseline of habitat type and quality for both reserves (indicator 1.1) through remote sensing and habitat surveys (EF: 1-1.1 and 1.2). This adds to data collected in Year 1 on threatened tree species. Actions for threatened tree species have been agreed in workshops carried out in November 2018 (EF: 1-1.7) with one all-encompassing action plan (including action individual species and for wider reforestation) due to be completed in 2019 (indicator 1.2). A participatory monitoring scheme has been developed (protocol available in EF 1-1.8); in Year 3 local leaseholders will commence monitoring in 20 plots in each reserve (indicator 1.3).

Output 2: Local market actors supported to implement activities identified through Participatory Market System Development (PMSD) to improve income from fruit and nuts (NTFPs)

The PMSD process (indicator 2.1) was completed in Year 1. In the same year two cooperatives with 40 members (83% women) were established with members actively participating in meetings and using equipment provided throughout Year 2 (see EF: 2-2.1). To date a total of 142 people (67% women) have received training in methods required for sustainable harvesting and processing (indicator 2.2) and collectors are successfully gaining increased price and income for products sold (indicator 2.3 and EF: 2-2.1). Eight saving groups with a total of 190 members (77% women) are active at the end of Year 2 with an equivalent of £4,380 saved so

far. The multi-dimensional well-being benefits generated through local participation in the project will be explored in Year 4 through a Participatory Impact Assessment.

Output 3: Community forest users (women and men) and two forest service units enhancing forest management and promoting resilience to climate change.

Forty people (50% women) have better understanding of climate change risks and adaptation strategies following workshops completed in Year 2 and over 400 people have become more aware of the wider importance of agro-biodiversity through four awareness raising events carried out in Year 2 (indicator 3.1) – see EF: Output 3. Information required to develop a climate-proofed reforestation plan is now in place (e.g. habitat assessment, climate adaptation plans, species action plans) and this will be completed in Year 3 (indicator 3.2). Two stakeholder fora (one at each site) with a total of 61 members (65% women) have been established with participation of marginalised people prioritised. Initial feedback on the fora is positive and its effectiveness at helping people influence forest policy will be assessed in Year 4 (indicator 3.3). Nineteen forest users are taking actions on their plots to protect trees through involvement in fencing (initiated at end of Year 2) with greater involvement expected following completion of the participatory management plan completed under Output 1. To date more than 135,860 seedlings and 704kg have been planted in nurseries or in the forest.

3.3 Progress towards the project Outcome

Outcome: Forest users at Childukhtaron and Dashtijum empowered and incentivised to work collaboratively with forest service to enhance fruit-and-nut management; conserving agro-biodiversity, improving well-being and increasing resilience to climate change.

Indicator 0.1 Members of 25% of the total 695 households at project sites are engaged and active in forest conservation by Year 4 (40 HH by end Year 1; 80 HH by end Year 2; 120 HH by end Year 3; 175 by end Year 4).

Forest users are becoming more engaged in forest conservation at a number of levels. Most directly, members from 19 HHs are taking part in fencing to protect plots from over-grazing and 40 HHs participated in surveys of regeneration in their plots in Year 2 (as a step towards participatory monitoring set to start in Year 3). As participatory forest management plans are finalised in Year 3, we expect to see greater local participation in forest management, with collaboration between communities and the Forest Service boosted through stakeholder fora established at each site (61 local people are currently engaging with the FMU staff). Training in forest management, seed collection and tree maintenance (97 people Year 1; 40 people in Year 2), awareness raising events (reaching more than 400 people in Year 2) and exchange of information (facilitated through surveys with 202 households in Year 1) are all helping to create the enabling conditions to achieve this outcome by the end of the project.

Indicator 0.2 Diversity of planting in forest increased by 50% by Year 4 (by 50% in nurseries by Year 2), including all identified local native varieties, preserving genetic diversity of wild crop relatives.

The project is focussing on 14 local native tree species, all of which have been produced by project nurseries in Year 1 and 2 and 11 of which have been planted out directly in the forest. Eight species in Dashtijum (pomegranate, almond, two pears, apples, apricots, cherry plum and pistachio) and four in Childukhtaron (two pears, cherry plum and apples) were rarely or never produced before the project (pers. comm. U. Gulamadshoev); this represents a significant increase in diversity of trees being planted. The project is helping to significantly increase the scale at which these species are planted out with 135,860 seedlings and 704kg of seed planted in nurseries or in the forest in the first two project years (compared to less than 20,000 seedlings per year for both reserves before the project started). In Year 3, we will continue to support diverse plantings, adding new species and varieties to this mix wherever possible and following the soon to be developed reforestation plan to maximise diversity and climate resilience of the forests

Indicator 0.3 Number of individuals of 3 threatened tree species (including 2 CR *Pyrus*) at project sites increased four-fold from known current baseline.

Baselines for four threatened tree species were reported at the end of Year 1: *Pyrus korshinskyi* (11 trees), *Pyrus tadshikistanica* (10 trees), *Amygdalus bucharica* (18 trees) and *Malus sieversii* (19 trees); however – as reported in the more recent mid-year report – these surveys only covered a proportion of the reserve and more comprehensive baselines needs to be established. For the purpose of this report, it is reasonable to assume that population size for the both *Pyrus* sp. are extremely low and are likely to be less than 100; none were found in the habitat assessments carried out in Year 2 and local knowledge indicates that few trees remain. Efforts to increase population size of these species are ongoing with all four grown in nurseries and planted out into the forest; this is summarised below and recorded in planting records in EF: Output 3-3.4. Survival rates of trees planted will be reported in future years.

Species	Grown in nurseries			Planted in forests		
	2017	2018	Total	2017	2018	Total
<i>Pyrus korshinskyi</i>	10kg seed and 5,000 seedlings	2,500 seedlings	10kg seed and 7,500 seedlings	200 seedlings	330 seedlings	530 seedlings
<i>Pyrus tadshikistanica</i>	10.5kg seed and 600 seedlings	300 seedlings	10.5kg seed and 900 seedlings	624 seedlings	320 seedlings	944 seedlings
<i>Amygdalus bucharica</i>	37kg seed and 4,730 seedlings	15kg seed	52kg seed and 4,730 seedlings	32kg and 625 seedlings	15,000 seedlings	32kg and 15,625 seedlings
<i>Malus sieversii</i>	5.5 kg and 6000 seedlings	25,500 seedlings	5.5 kg and 31,500 seedlings	3,296 seedlings	954 seedlings	4,250 seedlings

Indicator 0.4 Male and female members of 120 participating households report 10% increase in income from Year 1 baseline by Year 4 as a result of project activities.

In year 2 significant steps were made to support income increases among 190 households who are either participating in producers groups or in saving groups established by the project. Producers are successfully adding value to fruit products through canning of fruit and through production of juice and jams (sold in the winter time for almost ten times the price compared to fruit sold in the summer) and have made agreed prices with traders travelling from the Sughd region which were higher than prices previously offered by other traders. In total, income received by communities at each reserve for fruit products increased significantly from 2017 to 2018, growing by 61% in Childukhtaron and 88% in Dashtijum, see EF: Output 2-2.1 and 2.2. In year 4 we will compare data on income against baselines collected in household surveys and will complete Participatory Impact Assessments to analysis growth of income over the project and how this has been distributed across households at each reserve.

Indicator 0.5 At end of project 50% of both male and female respondents feel they now have an increased stake in the management of their local forest resources, compared with project start.

Significant steps have been taken in Year 2, including the establishment of stakeholder fora each site – attended by 61 local people (65% women) – and through the involvement of 30 people (only 7% women) in community mapping of forest resources and in three workshops where actions to be included in participatory management plans were jointly identified by community members and representatives of the Forest Service Units. Finalisation of participatory management plans and the commencement of participatory monitoring of plots managed by local households in Year 3 should significantly contribute to people having an increased local stake in resources. We will measure this in Year 4 when we complete a Participatory Impact Assessment.

Indicator 0.6 Approved reforestation and Species Action Plans reflect climate change predictions and include appropriate adaptation measures to increase resilience which are being implemented.

Information on the habitat condition, climate profile and the actions required for threatened species at each site were completed in Year 2. These provide a strong scientific basis to develop and begin the implementation of the approved reforestation plan (which will encompass actions for four threatened species) in Year 3.

3.4 Monitoring of assumptions

Assumption 1: Government policy continues to permit collaborative forest management and greater practical involvement of local forest users.

Current national, regional and local policies still permit collaborative forest management.

Assumption 2: Substantial numbers of forest users are willing and able to engage in conservation and management.

The project continues to have good success in engaging forest users. People are actively engaging in planning, stakeholder fora, trainings and awareness raising.

Assumption 3: Market for fruit and nut products (e.g. dried fruit, compote, oils) continues to grow (trend is currently upwards) and new product and market opportunities can be identified.

There is a strong market for fruit and nut products and the producers groups have successfully secured an increase in price for products sold in Year 2, and have reached new markets in Dushanbe and in the Sughd region (EF: Output 2).

Assumption 4: Income from non NTFP sources does not significantly change during project period.

Income from NTFP sources increased in Year 2 improving the situation for local producers (EF: Output 2-2.2).

Assumption 5: Local forest service remains interested and open to learning and collaboration (we currently have very positive relationship with both forestry units).

Both FMUs remain engaged through tree-planting and active participation in stakeholder fora and participatory planning (see EF Outputs 1-1.4 and 1.5 and Output 3-3.3 and 3.4).

Assumption 6: No major economic or political crises in Tajikistan.

There are no major economic or political crises in Tajikistan. Tajikistan is scheduled to hold presidential parliamentary elections in 2020. We do not expect this to have significant impact on the project but will be ready to adapt the timing of field activities if required.

Assumption 7: Forest users willing to share local knowledge on varieties.

Forest users have shared information on local varieties with project partner Ganji Tabiat,

Assumption 8: Survey team able to integrate local knowledge into ecological survey methods.

The survey team – including Mario Boboev – have excellent relationships with local people, having worked in the area for many years. Local people provided input on the survey design.

Assumption 9: Adequate and sustainable incentives can be found for forest users to take part in participatory monitoring; and they have time to do so.

Incentives to take part in participatory monitoring and management were reviewed in the community resource mapping report (EF: Output 1-1.4). This remains a key assumption that we will monitor in Year 3 as we test whether community members are able to dedicate time to monitoring resources in their plots. The strong link between income derived from NTFPs and the health and regeneration of the forest is one incentive that should support greater participation in monitoring and management.

Assumption 10: Local forest service willing to commit effort to joint monitoring (they have indicated that they are in discussions with project team).

Both FMUs remain willing to do this. Plans are in place to implement joint monitoring in Year 3.

Assumption 11: Market actors (e.g. traders, processors) see the value of, and are willing to engage in, participatory market mapping - we will cultivate relationships to ensure this happens.

Mapping was successfully completed in Year 1 with engagement of traders and processors.

Assumption 12: Women as well as men feel able to join and engage meaningfully in producer cooperatives (project coordinators will empower and encourage women's participation).

Two producer cooperatives formed in Year 1 remain highly active in Year 2. In order to encourage women to participate, there are two mobilisers in each reserve, one man and one woman. Eighty-three percent of the producer group members are women.

Assumption 13: Trained collectors are able to apply new knowledge and skills to improve product quality and/ or market access.

Market access and product quality improved in Year 2 as direct results of the training and market mapping completed (see EF: Output 2–2.1).

Assumption 14: Actions taken, e.g. to improve product, will result in significant increase in price – we do have evidence that better quality dried fruit commands a higher price.

Producer groups are able to command a higher price as a result of adding value to fruit products as evidenced by the data on fruit sales from 2018 (see EF: Output 2–2.2).

Assumption 15: Significant climate proofing is possible given limited resources.

Climate proofing activities have been identified through climate adaptation workshops carried out in March 2019 (see EF Output 3-3.2). Many of the recommended activities (e.g. planting of climate resilient trees to reduce risks of landslides in the landscape and increasing community participation in forest management and protection) are in line with project plans.

Assumption 16: Stakeholders willing to formalise relationship and meet regularly.

The first stakeholder fora established in Year 2 received very positive feedback and are seen as a very important means for better information sharing between the Forest Service and local forest users (pers. comm. Zam Zam),

Assumption 17: Forest users willing and able to protect trees in their plots.

Nineteen forest users requested fencing to protect their plots, which was purchased and distributed at the end of Year 2. Surveys with plot holders also indicate that people already carry out some activities to protect trees and encourage regeneration in their plots, indicating their will to continue and enhance this

Assumption 18: Given adequate resources, sourcing of seedlings with increased variety is possible

The project is yet to collect seedlings with different genetic varieties but we will explore this in Year 3.

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

The project is contributing to the conservation of four globally threatened tree species: *Amygdalus bucharica*, *Pyrus korshinskyi*, *Malus sieversii* and *Pyrus tadshikistanica*. We are working to ensure that these remaining trees are not lost or damaged to grazing activity and that they are able to regenerate; fences purchased at the end of year 2 will be erected in plots

containing these species. Populations of all four species have been boosted by planting, with 110kg of seed and 65,979 seedlings planted in nurseries and in the forest in Year 1 and Year 2. The project is supporting restoration of wider forest biodiversity; in the first two years, 135,860 seedlings and 704kg from 14 native species have been planted in nurseries and in the forest. This has more than doubled original restoration levels, which were previously ~ 20,000 trees per year (both reserves) and lower (see EF Output 3-3.4 for planting records).

The project is addressing poverty alleviation through extensive activities designed to increase income, improve access to markets and increase local stake in management of forest resources. Income received from NTFPs has increased significantly at each reserve and producers groups are successfully adding value to products and reaching new markets (see EF Output 2-2.1 and 2.2). We are addressing factors that have limited production of dried fruit in the past (e.g. securing transport to deliver products to market and ensuring an electricity supply for drying and processing machines) and, through establishing eight savings groups, have helped producers gain access to a source of finance for investing in their production (see EF Output 2-2.1 and 2.4). Communities have also actively been involved in participatory forest management planning and in local fora, providing a platform for them to influence local forest policy to meet their own needs and aspirations (see EF Output 1-1.4 and 1.5 and Output 3-3.4).

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

SDG 1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day

The project has increased total incomes received by communities for NTFPs in year 2. By the end of the project we will have analysed changes to income levels on a household basis.

SDG 1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions, 5.5, 5a: equal relief of poverty and resource rights) to improve productivity and market access (2.3, 2a, 2c)

In addition to increases in income cited above, local producer groups have been supported to add value to production of fruit products (through use of drying and canning machines) and have been supported to sell their products to new markets (e.g. sale of products to traders from the Sughd region of Tajikistan).

SDG 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance community management of resources

Eight saving groups established in each reserve (190 members; of which 60 are categorised as marginalised) are enabling people to access micro-finance to invest in local enterprises.

SDG 1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

Climate change adaptation planning has been completed for two communities. We are now reviewing these documents and will apply recommendations into forest restoration plans and in awareness raising activities planned for Year 3.

SDG 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

The project is supporting planting of 14 native fruit tree species, at least 9 of which are edible. This will help to promote local food production in the long-term and will also promote adaptation to climate change (e.g. diverse tree plantings provides greater resilience should one

species be affected by disease or climate change). We will ensure further planting considers which species are most likely to be resilience to future climate change and which are most appropriate for mitigating impacts of soil erosion and landslides.

SDG 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed

The project is collecting seeds from a total of 14 native species of local provenance. We plan to explore adding several local varieties to planting work in Year 3.

SDG 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

The project has carried out significant awareness raising, sharing relevant information on sustainable management of forest resources and biodiversity to more than 400 people.

SDG 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

The project is supporting conservation, restoration and sustainable use of two high priority forest sites. A participatory forest management plan will be developed and implemented for each reserve in Year 3 and fencing will be established to help improve regeneration. Significant restoration of the reserves has been carried out: more than 135,860 seedlings and 704kg have been planted in nurseries or in the forest.

SDG 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

Activities to support sustainable management include ongoing development of participatory management plans for both reserves (due for completion and implementation in Year 3).

SDG 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed

Producer groups at each reserve are being supported to realise greater benefits from genetic resources in the reserves. They are being supported to add value and increase income from NTFPs collected in their gardens and in their forest plots.

5. Project support to the Conventions, Treaties or Agreements

The CBD National Focal Point Dr. N.Safarov which we the national project manager has introduced to him during meetings and seminars attended throughout 2018.

Aichi targets 1 By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Four hundred people (240 women; 160 men) participated in awareness raising events specifically highlighting the importance of forest biodiversity.

Target 4 By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

Sustainable production of dried fruit products from two forest sites is being supported by addressing factors that limit the regeneration of these species. A participatory management plan for each reserve is under development and this will guide resource use and implementation of protection measures (e.g. fencing to restrict grazing) within the reserves.

Aichi target 7 By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Development of participatory management plans for each reserve (to be finalised in Year 3) will help to ensure forest resources at two sites are used sustainably.

Aichi target 12 By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained

The project is contributing to the conservation of four globally threatened tree species: *Amygdalus bucharica*, *Pyrus korshinskyi*, *Malus sieversii* and *Pyrus tadshikistanica*. Fencing has been purchased and will be erected in Year 3 to protect trees from grazing and populations of all four species have been boosted by planting (110kg of seed and 65,979 seedlings planted into nurseries and the forest)

Aichi target 13 By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

Fourteen native species are under production by local forest reserves. The project has not yet adequately explored seed collection and planting and protection of local genetic varieties.

Target 18 By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

Local knowledge was explored through household surveys during Year 1, with a deeper understanding of resource use achieved through community resource mapping exercise carried out in Year 2. These results are being integrated into forest management plans.

Target 14 By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

An overall increase in the diversity and health of the forest ecosystems is being achieved through an improved planting and restoration regime by the FMUs; future year planting efforts will be informed by restoration plans that will be developed.

The project is also helping to meet the core objectives of ITPGRFA (International Treaty on Plant Genetic Resources for Food and Agriculture)

Article 5 - Conservation, Exploration, Collection, Characterization, Evaluation and Documentation of Plant Genetic Resources for Food and Agriculture

The project is documenting information on the presence of native species across the reserves and is supporting communities to map and understand natural resources.

Article 6 - Sustainable Use of Plant Genetic Resources

Sustainable use of plant genetic resources is being achieved through enabling more sustainable management, helping to address critical factors impacting forest regeneration such as grazing. In the next project year, participatory monitoring and management of resources, alongside the introduction of fencing in 19 forest plots will help to achieve this,

Article 8 - Technical Assistance

We have supported communities to achieve technical assistance to map forest genetic resources through community mapping exercises delivered with support of a Forest Specialist.

Article 9 - Farmers' Rights

Local collectors are being supported to increase their stake and say in management of agrobiodiversity. Establishment of local stakeholder fora at each reserve and the inclusion of community representatives in forest management planning is helping to ensure the rights of forest users are effectively accounted for.

Wider targets

The delivery under the Aichi targets are also contributing to a series of wider aligned NBSAP Tajikistan targets including 3.11 Conservation of Mid-Mountain Mesophyllic Forest Ecosystems, 3.16 Conservation of Agro-ecosystem Biodiversity, 3.18 In situ Species Conservation in Natural Habitats, Target 4 sustainable use, Target 5 (preservation of zones of natural habitats and genetics), Target 7 Sustainable Use, Target 12 Inventory of rare species, Target 16 Genetic Resource Access, Target 18 Traditional Knowledge; and the CBD Expanded Programme of Work on Forest Biological Diversity (Goals 1.1-1.4, 2.1-2.3).

6. Project support to poverty alleviation

These forests are essential to the livelihoods of 700 households, which have a mean income below \$1.25/person/day (SDG extreme poverty level) and that have limited income-generating opportunities available. Building on work carried out in Year 1 (including market development workshops, dried fruit processing training and establishment of two producer groups and six savings groups), in Year 2 we have carried out the following activities to alleviate poverty:

- We have supported two existing producer groups to (a) gain new skills (e.g. family budgeting and adding value to NTFPs), (b) address major barriers to production (e.g. sourcing a vehicle to support transport of products to market and ensuring an electricity supply for use of canning and drying machines) and (c) build relationships with new market actors (e.g. traders from the Sughd region buying products at a higher price than before). As a result, income from NTFPs at the community level has increased by 61% in Childukhtaron and 88% in Dashtijum.
- Two producer groups are actively using equipment provided in Year 1 to add value and prolong the storage life of fruit products (e.g. canning and making juices and jams). This also provides people with an additional source of income in the winter (when prices are higher) and in future years (an insurance against failed harvests in future years).
- Two new saving groups were established adding to six established in Year 1 (total membership now 190). Saving groups are proving to be highly effective; more than £4,380 have been deposited and members are using funds to invest in equipment and machinery to support local enterprises and tree-planting.

Results from Year 2 represent encouraging progress towards poverty alleviation. We will continue to strengthen and support the cooperatives and saving groups in Year 3-4 and expect to see sustained increased in income over that period. The overall impact will be measured in Year 4 through Participatory Impact Assessments to be carried out in both communities.

7. Project support to gender equality issues

The project has recognised the different roles, responsibilities, needs and aspirations of men and women within the local communities, and has tailored activities accordingly. The project has been consciously engaging women who are often marginalised in these communities in terms of decisions around markets and produce sale. The project decided to have two mobilisers in each reserve, one man and one woman, to ensure inclusivity. At the end of Year 2, women constituted 83% of the producer group members, 77% of the saving group members 67% of the people to benefit from training and 65% of the participants in the stakeholder fora. Gender equality impacts of the project are likely to be an increase in empowerment of local women to control and influence the income received from dried fruit processing; through training on processing, engagement in producer and saving groups, as well as wider market development activities. Men, who tend to spend significantly more time carrying out activities within the forest reserve, have been more involved in activities directly related to forest management (just 7% of participants in the forest resource mapping exercise were women). In

Year 3, we will continue to use the stakeholder fora as a means to better involve women in discussions and decisions around forest management.

8. Monitoring and evaluation

A project steering group, with a representative from each partner is overseeing project implementation. The group met once in Year 2 (following two meetings in Year 1) allowing the group to review progress against the work plan and output indicators. The steering group has worked well, engaging partners and wider stakeholders with project, providing support, innovation and driving forward activities (see the meeting minutes in the Admin EF).

Each partner organisation is responsible for monitoring and maintaining records of activity outputs, including numbers of community participants, disaggregated by gender and these were outlined in their reports. The project manager has been responsible for collating this data. Many of these reports can be seen in the evidence folders provided with this report.

Data collected by the project partners is allowing us to effectively monitor progress against the output-level indicators, with maps, survey data, literature reviews, training reports, workshop reports, reports on use of equipment and planting records compiled in Year 2 allowing us to verify progress against all outputs in line with the log-frame. All supporting evidence is included in the Evidence Folder.

Data also indicate good progress towards outcome-level indicators, although in many cases it is still too early to demonstrate whether these have been achieved yet. For example, evidence at the output level suggests good progress is being made towards increased local engagement in forest conservation (0.1), increased income (0.4) and local people feeling they have a greater stake in forest management (0.5), but we will be able to carry out more robust and comprehensive evaluation of progress in year 4, when we complete a thorough Participatory Impact Assessment. No changes have been made to the M&E plan during this period.

9. Lessons learnt

The project has provided communities with a platform to voice their own views and attitudes towards forest condition and conservation (through household surveys in year 1 and through the establishment of stakeholder fora and the completion of community resource mapping in Year 2). Through these activities we learned that communities already carry out various activities to promote forest regeneration (e.g. ad hoc fencing and leaving behind fruit in their plots to encourage regeneration) and that they tend to believe that the forest, in general terms, is in good condition (which contrasts with the habitat assessments completed by Ganji Tabaat, which indicate high levels of degradation). In Year 3 we will further explore why local perception on forest condition contrast the ecological data collected by the project (potentially related to shifting baselines) and will feed this learning into the project strategy (especially in relation to awareness raising). We will also consider testing more positive messaging, which celebrates and acknowledges what communities are already doing for forest conservation and which seeks to motivate behaviours that enhances forest condition.

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

Provide an update as to the potential change in focus from ‘sustainable harvesting’ to ‘sustainable management’.

Described under Activity 1.3.

Provide an update on the delay to measuring the baseline for Output indicator 3.1.

An assessment of the climate vulnerability of each site and the potential adaptation measures that could be adopted were completed at the end of Year 2 (attended by 40 people). Now that this activity is complete, we will use the findings to inform awareness raising events in Year 3.

We will then measure increases in awareness through records of attendance at these events and through knowledge and attitude surveys.

Outline project support towards the ITPGRFA in Section 5.

Described under section 5.

Increase the reach of the communication of the project through FFIs social media portals.

Although FFI did promote its wider work in the fruit and nut forest online and through various social media postings in 2018, no posts specifically promoted this project in the latest project year. Instead we focussed efforts to promote the project nationally (e.g. distributing handouts on project progress to key stakeholders) and regionally (e.g. the national project manager presented the Darwin project at a major international conference, 'Conservation Asia' held in Bishkek in August 2018). We will develop a plan with FFI's communications team to increase reach of the project in 2019.

11. Other comments on progress not covered elsewhere

12. Sustainability and legacy

We are building sustainability in to all aspects of the project. Information collected and action plans developed under Output 1 have been carried out in participation with staff from the Forest Service Unit who will be responsible for monitoring changes in forest condition in the future against these baselines. We have avoided developing overly complex methodologies, databases and action plans to make long-term replication and implementation simple and cost-effective. Activities completed under Output 2 have a strong focus on empowering communities to develop local enterprise without the need for external support or finance. Producer groups, with guidance and mentoring from Zam Zam, are effectively following PMSD active plans developed in Year 1 and are actively using skills learnt to add value to local products. Saving groups are proving to be highly effective and will provide a long-term means for supporting ongoing investment into local enterprise post-project. The significant focus on awareness raising in Output 3, coupled with active participatory conservation planning, will lead to changes in attitudes and behaviours towards forest conservation, which will continue to have an effect post-project. The Forest Service Units are highly engaged in participatory planning, problem solving and planting activities and we are currently reviewing how we can best support them to continue high divers planting post-project. We are supporting our local partners Zam Zam and Ganji Tabat on data recording methods for gathering community and ecological datasets and are providing advice on report writing. Both partners are performing activities to a high standard are benefiting significantly from participation in the Darwin project.

13. Darwin identity

This profile of the project in Tajikistan is high and the environmental sector in Tajikistan is small, so through the local events and national steering group meetings, the project has already gained a good profile being known by the key government departments and other NGOs.

The Darwin Initiative logo is used on all project documents and presentations that are given during project work. The logo is used consistently by all project partners and a requirement for this is clearly outlined in their sub-grant agreements.

The national project manager, Ubayd Gulamadshoev presented the project at a major international conference, 'Conservation Asia', held in Bishkek in August 2018. The Darwin logo was used on the presentation slides.

FFI has a Twitter, Facebook, Instagram accounts and the project will be highlighting the project and the Darwin Initiative funding in future years. We will revise communication targets for the project to ensure wider dissemination.

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2018 – 31 March 2019)

Project spend (indicative) since last annual report	2018/19 Grant (£)	2018/19 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)			-	
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2018-2019

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
<p>Impact</p> <p>Healthy and diverse Tajik fruit-and-nut forests provide agro-biodiversity goods and ecosystem services, and are sustainably conserved, used and collaboratively managed by local stakeholders, contributing to poverty alleviation and increased resilience.</p>		<p>The project is contributing to a healthy and diverse forest ecosystem through planting of 135,860 seedlings and 704kg from 14 native species, including four threatened tree species. Communities have actively been involved in participatory forest management planning and in local fora, providing a platform for them to influence local forest policy to meet their own needs and aspirations. Income received from NTFPs by local communities have increased significantly at each site and access to new markets has improved, representing strong progress towards alleviating poverty.</p>	

<p>Outcome Forest users at Childukhtaron and Dashtijum empowered and incentivised to work collaboratively with forest service to enhance fruit-and-nut forest management: conserving agro-biodiversity, improving well-being and increasing resilience to climate change.</p>	<p>0.1 Members of 25% of the total 695 households at project sites are engaged and active in forest conservation by Year 4 (40 HH by end Year 1; 80 HH by end Year 2; 120 HH by end Year 3; 175 by end Year 4).</p> <p>0.2 Diversity of planting in forest increased by 50% by Year 4 (by 50% in nurseries by Year 2), including all identified local native varieties, preserving genetic diversity of wild crop relatives.</p> <p>0.3 Number of individuals of 3 threatened tree species (including 2 CR <i>Pyrus</i>) at project sites increased four-fold from known current baseline.</p> <p>0.4 Male and female members of 120 participating households report 10% increase in income from Year 1</p>	<ul style="list-style-type: none"> - 19 HHs are taking part in fencing activities to protect plots from over-grazing. - 40 HHs participated in surveys of regeneration in their plots in Year 2 (as a step towards participatory monitoring set to take place in Year 3). - 61 HHs are currently engaging with the Forest Service staff on forest conservation discussions in stakeholder fora. <p>14 local native tree species produced by project nurseries and 11 planted out directly in the forest. Only six of these were regularly produced before in Dashtijum and only 10 were regularly produced in Childukhtaron.</p> <p>The project is helping to significantly increase the scale at which these species are planted out with 135,860 seedlings and 704kg of seed planted in nurseries or in the forest in the first two project years (compared to less than 20,000 seedlings per year for both reserves before the project started).</p> <p>Comprehensive baseline not yet in place (see full report) but population estimate for 2 CR <i>Pyrus</i> = <100 each. 530 <i>P. korshinskyi</i> and 944 <i>P. tadshikistanica</i> planted directly into the forest over course of project. Other threatened species planted into the forest include wild apple (4,250 seedlings) and wild almond (15,625 seedlings).</p> <p>Producers are successfully adding value to fruit products through canning of fruit and through production of juice and jams (sold in the winter time for</p>	<p>Finalise participatory management plans for both reserves and support implementation of participatory monitoring led by community members with support from the forest service.</p> <p>Continue to support diverse plantings, adding new species and varieties to this mix wherever possible, following the soon to be developed reforestation plan.</p> <p>Explore options for improving baseline on threatened species, continue planting threatened species following the reforestation plan and introduce fences to protect remaining trees from grazing.</p> <p>Continue to mentor and provide training to producer and saving groups to help them sustain income increases.</p>
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	<p>baseline by Year 4 as a result of project activities.</p> <p>0.5 At end of project 50% of both male and female respondents feel they now have an increased stake in the management of their local forest resources, compared with project start.</p> <p>0.6 Approved reforestation and Species Action Plans reflect climate change predictions and include appropriate adaptation measures to increase resilience which are being implemented.</p>	<p>almost ten times the price compared to fruit sold in the summer) and have agreed higher prices with traders from the Sughd region. In total, income received by communities at each reserve for fruit products increased significantly from 2017 to 2018, growing by 61% in Childukhtaron and 88% in Dashtijum.</p> <ul style="list-style-type: none"> - Stakeholder fora at each site – attended by 61 local people (65% women) - Involvement of 30 people (7% women) in community mapping of forest resources and in three workshops where actions to be included in participatory management plans were jointly identified by community members and representatives of the Forest Service Units. <p>Information required to develop the reforestation plan - habitat condition, climate profile and actions required for threatened species at each site - were all completed.</p>	<p>We will continue to facilitate stakeholder fora, finalise participatory management plans and initiate participatory monitoring of plots managed by local households. We will measure perceptions on local stake in management in Year 4 when we complete a Participatory Impact Assessment</p> <p>Develop and begin the implementation of an approved reforestation plan (which will encompass actions for four threatened species).</p>
<p>Output 1. Project team and local and national stakeholders have increased knowledge and understanding of forest habitats, including agro-biodiversity and key species, and likely impacts of climate change, and are engaged in participatory forest monitoring.</p>	<p>1.1 Baseline habitat and botanical surveys undertaken at both project sites in Year 1, incorporating local knowledge on agro-biodiversity.</p> <p>1.2 Species Action Plans for three Red List tree species (two CR <i>Pyrus</i>) developed in Year 2 and actions being implemented by Year 4.</p>	<p>1.1 At the project start there were no current maps, data or literature for either forest or for the most threatened species present in the reserves. In year 2, we established a baseline on habitat type and quality for both reserves through remote sensing and habitat surveys (EF: 1-1.1 and 1.2). This adds to data collected in Year 1 on threatened tree species.</p> <p>1.2 Actions for threatened tree species have been agreed in workshops carried out in November 2018 (EF: 1-1.7) with one all-encompassing action plan (including action individual species and for wider reforestation) due to be completed in 2019.</p>	

	<p>1.3 Participatory monitoring scheme developed in Year 2, designed to pick-up climate, anthropogenic and management induced change, and data collected through joint implementation by forest service and community members in Years 2, 3 & 4.</p> <p>1.4 In Year 4, 20 Forestry Agency and other national stakeholders have attended dissemination workshops held to share knowledge outputs, and are aware of and understand project approaches and results for potential replication.</p>	<p>1.3 A participatory monitoring scheme has been developed (protocol available in EF 1-1.8); in Year 3 local leaseholders will commence monitoring in 20 plots in each reserve.</p> <p>1.4 Not due to start, although project approaches and results have been shared in steering group meetings and through reports produced by FFI (EF Administration: A1 and A2)</p>
<p>Activity 1.1 Conduct habitat and botanical surveys to update (currently weak) baseline biodiversity data for sites and key species at Childukhtaron and Dashtijum.]</p>	<p>Remote sensing was conducted in May 2018, producing GIS maps of the major ground cover types (dense, moderate, scrub/sparse, grass/sparse and agriculture/cleared). Results were subsequently ground-truthed through field surveys conducted by Ganji Tabat in July-December 2018. Data on tree number, regeneration, dominant species, vegetation cover and threats from grazing and wood cutting were collected within 77 20x20m plots in Childukhtaron and 69 20x20 plots in Dashtijum.</p>	<p>Information collected on habitat condition, combined with the data on threatened trees collected in August-September 2017, will be used to inform which areas are most in need of and suitable for restoration, feeding into the reforestation plans (3.2) and ongoing planting (3.4).</p>
<p>Activity 1.2 Conduct interviews to collect local knowledge of agro-biodiversity</p>	<p>In Year 2, we focussed on analysing data from the household surveys conducted throughout Year 1, which is near completion.</p>	<p>Complete analysis and use results to inform awareness raising events (3.1) and participatory forest management (1.7) in Y3 and 4</p>
<p>Activity 1.3 Collate data to help establish sustainable harvest levels for key species</p>	<p>A participatory assessment of community resource use in both reserves was conducted by regional forestry expert, Mr Kamel Chorfi in June 2018.</p>	<p>Information collected used to inform completion of participatory management plans for both reserves and participatory monitoring in forest plots (1.7).</p>

	In November 2018, a survey on people's perceptions on natural regeneration in their forest plots was conducted with 40 households (20 in each reserve).	To complete the participatory management plans, zonation of the reserves will be completed, and the final plans will be presented back to communities in June 2019.
Activity 1.4 Produce and disseminate survey reports (in Russian, Tajik and English)	One intern from Tajikistan, based in FFI's Dushanbe office, collated survey data and wider literature on four threatened tree species including wild pear (<i>Pyrus korshinskyi</i> and <i>P. tadshikistanica</i>), apple (<i>Malus sieversii</i>) and almond (<i>Amygdalus bucharica</i>). The reports (were shared with participants of the Species Action Plan workshop and were used to inform the workshop discussion.	The reports will be turned into handouts in Year 3 and disseminated to project partners and collaborators in Tajikistan
Activity 1.5 Compile information on likely climate change impacts on forest ecosystem/ tree species, both from scientific community/ literature and community vulnerability assessments; develop climate change risk assessments for the sites	As part of work to develop climate adaptation plans (see 3.3), the Centre for Climate Change and Disaster Reduction completed climate change profiles for the two sites, based on a desk review and community assessments of vulnerability to climate change.	Results will be used to inform awareness raising activities in Year 3, scheduled in 3.1.
Activity 1.6 Workshops with specialists and local stakeholders to develop Species Action Plans for three Red-List trees (two CR <i>Pyrus</i> species); produce and disseminate plan documents	In November 2018, a Species Action Planning workshop was conducted in Muminabad, attended by 20 people including the FMUs teams from both reserves, Zam Zam and Ganji Tabiat. Participants reviewed the status reports produced under 1.4, discussed threats and challenges and agreed key actions for four red-listed tree species: <i>P. korshinskyi</i> , <i>P. tadshikistanica</i> , <i>M. sieversii</i> and <i>A. bucharica</i> .	In 2019, we will integrate the species-level actions into one all-encompassing reforestation plan for each reserve (see activity 3.4). Feedback from the FMUs indicates that implementation of one over-arching plan per reserve will be more effective than producing separate plans for each species
Activity 1.7 Agree protocol for participatory forest monitoring scheme with forest service and communities	Following the regeneration surveys, community resource mapping and participatory management plans	The monitoring form is currently being reviewed by the FMUs at each site.

		developed in 1.3, a monitoring protocol has been drafted.	
Activity 1.8 Implement monitoring: patrols collect data as per agreed protocol		This is due to start Year 3	Data collection by individual plot holders will begin in Year 3. Data will be collected on the number of trees and young trees, evidence of threats such as grazing, and the completion (or not) of agreed actions (e.g. tree-planting, quantity of seed left in each plot and erection of fencing).
Activity 1.9 Monitoring data collated, analysed and reported to forest service and local stakeholders (including community forest monitors)		This is due to start Year 3	FFI will support the FMUs with data analysis.
Activity 1.10 Workshop to disseminate research and learning to local and national Forest Agency and interested stakeholders.		Due to start in Year 4.	A workshop will be organised in Year 4.
<p>Output 2: Local market actors supported to implement activities identified through Participatory Market System Development (PMSD) to improve income from fruit and nuts (NTFPs)</p>	<p>2.1 Steps 1 – 7 in the PMSD roadmap¹ completed with market actors for Dashtijum in Year 1 and locally specific actions identified.</p> <p>2.2 Producer cooperatives established in Childukhtaron in Year 1 and Dashtijum in Year 2 with a total of 120 active members (at least 50% female) by Year 4.</p> <p>2.3 By end of year 4, 300 local collectors (at least 60% female) trained and applying new skills to sustainably harvest, process and sell NTFPs and increase sales value of fruit and nut products (e.g. dried fruit, compote, oils from nuts and seeds): 80 in Year 1; 120 in Year 2; 100 in Year 3.</p> <p>2.4 50% of respondents report that participation in savings groups has increased their ability to cope with shocks and lean months and enabled</p>	<p>2.1 The PMSD process from steps 1-7 was completed in Year 1.</p> <p>2.2 Two cooperatives with a total of 40 members (83% women) were established in Year 1 and all members remained active in Year 2 (see EF Output 2-2.1).</p> <p>2.3 A total of 142 people (67% women) have received training in methods required for sustainable harvesting and processing ((see EF Output 2-2.1) and collectors are successfully gaining increased price for products sold (see EF Output 2-2.2).</p> <p>2.4. Eight saving groups with a total of 190 members (77% women) are active at the end of Year 2 with an equivalent of £4,380 saved so far and funds used to invest in several agreed actions (see report in in EF 2-2.1).</p>	

	<p>them to invest, including in improved NTFP techniques, by Year 4.</p> <p>2.5 Multi-dimensional well-being benefits explored, understood and captured through Participatory Impact Assessment (PIA) with gender-disaggregated data, in Year 4.</p>	<p>2.5 The multi-dimensional well-being benefits generated through local participation in the project will be explored in Year 4 through a Participatory Impact Assessment.</p>	
<p>Activity 2.1. Preliminary work to start the Participatory Market System Development process for Dashtijum in consultation with community representatives and project partners: identification of appropriate products, preliminary market mapping and strategic design, identifying and engaging key market actors (preliminary steps of PMSD roadmap – http://www.pmsdroadmap.org/).</p>	<p>Completed and reported on in the Year 1 annual report.</p>	<p>Continue to support producer groups to follow the PMSD action plans developed in Year 1.</p>	
<p>Activity 2.2 Small community workshops to empower marginalised market actors (local NTFP collectors in the villages of Dashtijum and Childukhtaron) and prepare them to engage with other market actors in the next steps - with a particular emphasis on women (separate groups if necessary).</p>	<p>Although this activity was completed and reported on in the Year 1 annual report, we have continued to support local collectors to engage with other market actors. For example, from July 9th-11th, Zam Zam organised meetings between local producer groups at each site (held in Dashtijum and Muminibad) with traders from the Sughd region of Tajikistan. As a result of this meeting, traders agreed to travel to the villages to buy fresh and dry forest products from the local producers at higher prices.</p>	<p>Continue to support producer groups to follow the PMSD action plans developed in Year 1.</p>	
<p>Activity 2.3 Facilitate participatory market mapping at workshops with representatives of all market actors (collectors, local traders, processors, 'big' traders, input providers), help the community members to develop stronger links with traders and processors; followed by participatory planning – resulting in action plans</p>	<p>Completed and reported on in the Year 1 annual report.</p>	<p>Continue to support producer groups to follow the PMSD action plans developed in Year 1.</p>	
<p>Activity 2.4 Support the two communities to establish producer cooperatives, ensuring active participation of women.</p>	<p>With support and facilitation from Zam Zam, the two producer groups established in Year 1 (each consisting of 20 members (33 female; 7 male)) met on a monthly basis to discuss progress made against the PSMD action plans</p>	<p>Zam Zam are supporting the producer groups to reach new markets in 2019 and are currently working on developing new labels for their products to make them attractive for sale across Tajikistan. If there is demand, we will</p>	

	<p>developed in Year 1. The groups are functioning extremely well, are actively using equipment provided in Year 1 and are reaching new markets for their products. Total income received for each group for fruit products increased from 2017 to 2018, increasing by 61% in Childukhtaron and 88% in Dashtijum.</p>	<p>also explore expanding the membership number of the producer groups.</p>
<p>Activity 2.5 Run (minimum) 15 practical training events for local women and men involved in fruit and nut collection, processing and sale - provide follow-up support through producer cooperatives to improve product quality through enhanced local processing techniques.</p>	<p>Following the recommendations of the PMSD action plan developed under 2.3 in Year 1, 10 practical training events (five at each site) for the cooperative groups and eight training events (four at each site) for the saving groups have been conducted by Zam Zam. Details of are summarised in the main report.</p>	<p>We are in discussion with Zam Zam to define what needs the producer groups have identified for further training in Year 3.</p>
<p>Activity 2.6 Provide locally appropriate equipment (identified in PMSD action plans) to producer cooperatives to improve processing at local level – for example, this might be drying racks or packaging machine.</p>	<p>Equipment provided and reported on in Year 1 (two electric fruit driers, two packaging machine and 10 local made fruit driers) is regularly used by the producer groups. In September 2018, the producer groups were provided with canning tools (glass bottles and caps); this allows the groups to better store collected products, providing a potential income source in the winter time (when prices are higher) or in later years (especially important should crops fail). Producer groups were also provided with a truck which will be used to transport there good to local markets.</p>	<p>We will focus on supporting continued use of existing equipment, providing additional training where required.</p>
<p>Activity 2.7 Research and explore potential for overseas markets and innovative products; follow-up as appropriate.</p>	<p>We have focussed on first developing a stronger national market. The producer groups had a small-scale success in 2018 when their products reached one shop in Dushanbe (pers. comm. Zam Zam).</p>	<p>In Year 3 we will work to establish greater trade between the producer groups and markets in the capital city, with visiting tourists representing a potential market.</p>

<p>Activity 2.8 Set up and support at least three local women's saving groups in villages in Childukhtaron, based on and learning from successful model in Dashtijum (initiated by Save the Children)</p>	<p>Six saving groups (three in each site with 15 members each) were established in 2017; details on their make-up were provided in the Year 1 annual report. Saving groups have proven to be very popular, with membership increasing to 25 in each of the six groups and two entirely new groups (20 members each) established in 2018. In total there are now 190 members (147 female; 43 male). Savings made by group members have steadily increased throughout the project with a total of 53,314 Tajikistani Somoni (equivalent to ~£4,380) deposited to date (amounts per group ranging from £986 - £83 (the lowest figure saved by the most recently formed group)). Over 2018, members of the group have withdrawn funds to invest in local development and conservation activities, guided by the PMSD action plan developed under 2.3 (details of this are provided in the full report).</p>	<p>In Year 3, the groups are planning to use funds to fence their plots and establish a local nursery and greenhouse to increase tree-planting efforts. Zam Zam will continue to provide mentoring and advice to the groups and will support training as needs are identified.</p>
<p>Activity 2.9 Conduct Participatory Impact Assessment (PIA): semi-structured interviews and focal group discussions with women and men to explore the impact the project has really had on participant's lives (using our experience from Darwin post-project in Kyrgyzstan).</p>	<p>To be completed in Year 4.</p>	
<p>Output 3: Community forest users (women and men) and two forest service units enhancing forest management and promoting resilience to climate change.</p>	<p>3.1 300 people report an increased awareness of climate change and the importance of forest agro-biodiversity in climate resilience (100 by end of Year 1; 200 by end Year 2; 300 by end Year 3).</p> <p>3.2 Strategic, climate-proofed, reforestation plan developed for both project sites by Year 2 and priority actions being implemented by Year 4.</p>	<p>3.1 Forty people (50% women) have better understanding of climate change risks and adaptation strategies following workshops completed in Year 2 and more than 400 people have become more aware of wider importance of agro-biodiversity through four awareness raising events carried out in Year 2.</p> <p>3.2 Information required to develop a climate-proofed reforestation plan is now in place (e.g. habitat assessment, climate adaptation plans, species action plans) and this will be completed in Year 3.</p>

	<p>3.3. Local stakeholder fora established and meeting quarterly at both project sites by Year 2 with membership comprising at least 40% women and 15% from poorer households. By Year 4 at least 60% of both male and female forum members feel they are more able to influence forest management compared with project start.</p> <p>3.4 60 local forest users taking actions to protect trees in their lease plots (20 by end of Year 2; 40 by end Year 3; 60 by end Year 4).</p> <p>3.5 Over 400,000 native trees grown in nurseries and planted out in priority locations by Year 4.</p>	<p>3.3 Two stakeholder fora (one at each site) with a total of 61 members (65% women) have been established with participation of marginalised people prioritised. Initial feedback on the forum is positive and its effectiveness at helping people influence forest policy will be assessed in Year 4</p> <p>3.419 local forest users are taking actions on their plots to protect trees through involvement in fencing activity (initiated at end of Year 2) with greater involvement expected following completion of the participatory management plan completed under Output 1.</p> <p>3.5 To date more than 135,860 seedlings and 704kg have been planted in nurseries or in the forest.</p>
<p>Activity 3.1 Run 16 awareness raising events: seminars for women and men and school activities for children on various topics: biodiversity, climate change, agrobiodiversity and sustainable harvesting.</p>	<p>Four awareness raising events were held in the project year, adding to four events held in Year 1. Events focussed on celebrating the cultural and economic value of native tree species and forest biodiversity, and were designed to further encourage local support for sustainable forest management.</p>	<p>Four more awareness raising events will be completed in Year 3; these will focus on climate change adaption.</p>
<p>Activity 3.2 Organise four community harvest-time festivals to celebrate the forest, its biodiversity and fruit and nut products</p>	<p>Two completed in Year 1 but no activities were scheduled for the current project year.</p>	<p>Two further workshops are scheduled for 2020.</p>
<p>Activity 3.3 Conduct at least four climate adaptation planning workshops with community groups (replicating and learning from activity in Darwin Initiative post-project in Kyrgyzstan): exploring together the likely impacts of climate change, assessing vulnerabilities, and identifying feasible adaptation measures for local stakeholders.</p>	<p>In March 2019, two climate change adaptation workshops (one at each reserve: attended by 10 women and 10 men in Childukhtaron and 10 women and 10 men in Dashtijum) were conducted by the Centre for Climate Change and Disaster Reduction, with support provided by FFI. Participants identified adaptation measures for reducing vulnerability to climate change,</p>	<p>Results from these two workshops were comprehensive and we do not plan to carry out the additional two workshops as stated in the activity. We will instead focus on feeding the results from the workshops into awareness raising activities in Year 3 and 4 (activity 3.1) and to the reforestation plan (activity 3.4)</p>

	with significant areas of discussion dedicated to addressing forest loss and degradation (seen as major factor exacerbating hazards including avalanches and mudslides). More detail is included in the main report.	
Activity 3.4 Following on from activities 1.1 – 1.5, develop strategic, climate-proofed, reforestation plans for both sites jointly with the forest service and other stakeholders, identifying strategic sites for planting (to improve connectivity, reduce risk of erosion/ landslides) and appropriate resilient species and varieties.	We have completed several steps towards the development of reforestation plans for both sites: completing remote sensing and habitat assessments to identify appropriate areas for planting (see 1.1), agreeing actions for threatened species to be integrated within these plans (see 1.6) and evaluating which areas in the site will be most resilient to climate change (see 3.3).	In Year 3, we will collate all information into one plan which will be fed back to the FMUs and local communities in stakeholder meetings to be held in June and July 2019.
Activity 3.5 Establish stakeholder forum at each site; ensure members are representative of the different groups within the forest user community (including those with more marginal use rights and women); facilitate regular meetings to enable discussions on forest management, conservation and sustainable use issues; provide mediation if necessary; and promote collaborative planning and implementation of actions.	Two stakeholder forums have been established, one at Childukhtaron consisting of 17 local women, 12 local men and two forestry officials and one at Dashtijum consisting of 23 local women, nine local man and four forestry officials. In each case we have ensured representation from marginalised people. Each forum had their first meeting in February 2018, and they have proven to be an extremely useful platform, providing an open space for discussion on various topics, including the local forest code, barriers to participation in forest management and development of local markets for fruit products.	Each forum will meet again in 2019, with likely discussion topics including strengthening participatory forest management.
Activity 3.6 Work with local forest leaseholders to protect trees in their forest plots, through fencing and other means.	We have purchased and distributed fencing equipment to 19 leaseholders (nine in Childukhtaron; ten in Dashtijum) in March 2019.	Fencing of plots will be completed at the start of Year 3, predominantly in areas containing threatened tree species. Leaseholders will carry out monitoring (following methods developed under 1.7) to measure any subsequent effects on forest regeneration.

<p>Activity 3.7 Support local forest service and community groups to grow native fruit and nut trees in nurseries for planting in forest and gardens, promoting diversity of species and local varieties to maintain agro-biodiversity (seed to be collected locally wherever possible) – minimum of two forest service nurseries and two community nurseries.</p>	<p>Four nurseries (each 0.2 ha in size), under the management of the FMU teams (two Childukhtaron; two Dashtijum), were established and reported on in Year 1. These nurseries are still in use and are helping to supply planting efforts this year (see 3.8). In the current project year, one additional school community nursery was established at Dashtijum reserve.</p>	<p>Ongoing management of existing nurseries by the FMUs with advice from FFI.</p>
<p>Activity 3.8 Support forest service teams to plant 400,000 native trees (10+ species) in protected and strategic locations in Childukhtaron and Dashtijum to reinforce natural populations, including aftercare and monitoring survival.</p>	<p>In the current project year each FMU was supported to plant a total of 14 native tree species (including cherry plum, cherry, almond, Bukharan pear, Tajik pear, wild apple, hawthorn, walnut, redbud, briar, pistachio, pomegranate, poplar and apricot) in nurseries established in Year 1 or out into the forest. Dashtijum FMU planted 14,000 seedlings and 125kg of seed in two nurseries established in Year 1 and 23,619 seedlings directly into the forest. Childukhtaron FMU planted 2kg of seed and 37,000 into one of the nurseries established in 2017 and planted 8,400 seedlings directly into the forest.</p>	<p>We are developing agreements with the FMUs covering planting, after-care and monitoring planned for Year 3.</p>

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: Healthy and diverse Tajik fruit-and-nut forests provide agro-biodiversity goods and ecosystem services, and are sustainably conserved, used and collaboratively managed by local stakeholders, contributing to poverty alleviation and increased resilience.</p>			
<p>Outcome: Forest users at Childukhtaron and Dashtijum empowered and incentivised to work collaboratively with forest service to enhance fruit-and-nut forest management: conserving agro-biodiversity, improving well-being and increasing resilience to climate change.</p>	<p>0.1 Members of 25% of the total 695 households at project sites are engaged and active in forest conservation by Year 4 (40 HH by end Year 1; 80 HH by end Year 2; 120 HH by end Year 3; 175 by end Year 4).</p> <p>0.2 Diversity of planting in forest increased by 50% by Year 4 (by 50% in nurseries by Year 2), including all identified local native varieties, preserving genetic diversity of wild crop relatives.</p> <p>0.3 Number of individuals of 3 threatened tree species (including 2 CR <i>Pyrus</i>) at project sites increased four-fold from known current baseline.</p> <p>0.4 Male and female members of 120 participating households report 10% increase in income from Year 1 baseline by Year 4 as a result of project activities.</p> <p>0.5 At end of project 50% of both male and female respondents feel they now</p>	<p>0.1 Stakeholder survey, activity records/ project updates, meeting attendance records.</p> <p>0.2 Nursery and planting records, baseline surveys and forest monitoring, local forest service annual report to Forestry Agency.</p> <p>0.3 Planting records, monitoring reports.</p> <p>0.4 Household survey in Years 1 & 4, participatory impact assessment report.</p> <p>0.5 Interview records, participatory impact assessment report.</p>	<p>Government policy continues to permit collaborative forest management and greater practical involvement of local forest users.</p> <p>Substantial numbers of forest users are willing and able to engage in conservation and management.</p> <p>Market for fruit and nut products (e.g. dried fruit, compote, oils) continues to grow (trend is currently upwards) and new product and market opportunities can be identified.</p> <p>Income from non NTFP sources does not significantly change during project period.</p> <p>Local forest service remains interested and open to learning and collaboration (we currently have very positive relationship with both forestry units).</p> <p>No major economic or political crises in Tajikistan.</p>

	<p>have an increased stake in the management of their local forest resources, compared with project start.</p> <p>0.6 Approved reforestation and Species Action Plans reflect climate change predictions and include appropriate adaptation measures to increase resilience which are being implemented.</p>	0.6 Plan documents, climate change risk assessments.	
<p>Output 1</p> <p>1. Project team and local and national stakeholders have increased knowledge and understanding of forest habitats, including agro-biodiversity and key species, and likely impacts of climate change, and are engaged in participatory forest monitoring.</p>	<p>1.1 Baseline habitat and botanical surveys undertaken at both project sites in Year 1, incorporating local knowledge on agro-biodiversity.</p> <p>1.2 Species Action Plans for three Red List tree species (two CR <i>Pyrus</i>) developed in Year 2 and actions being implemented by Year 4.</p> <p>1.3 Participatory monitoring scheme developed in Year 2, designed to pick-up climate, anthropogenic and management induced change, and data collected through joint implementation by forest service and community members in Years 2, 3 & 4.</p> <p>1.4 In Year 4, 20 Forestry Agency and other national stakeholders have attended dissemination workshops held to share knowledge outputs, and are aware of and understand project approaches and results for potential replication.</p>	<p>1.1 Survey reports, GPS tracks, local knowledge interview records.</p> <p>1.2 Action plan documents; Year 4 progress review/survey/activity records.</p> <p>1.3 Monitoring protocol document, climate change risk assessment, consultation meeting reports, patrol records, collected data, reports.</p> <p>1.4 Workshop presentations, participant lists, meeting report, workshop feedback surveys (participants report an increase in knowledge).</p>	<p>Forest users willing to share local knowledge on varieties.</p> <p>Survey team able to integrate local knowledge into ecological survey methods.</p> <p>Adequate and sustainable incentives can be found for forest users to take part in participatory monitoring; and they have time to do so.</p> <p>Local forest service willing to commit effort to joint monitoring (they have indicated that they are in discussions with project team).</p>
<p>Output 2</p> <p>2. Local market actors supported to implement activities identified through</p>	2.1 Steps 1 – 7 in the PMSD roadmap ² completed with market actors for	2.1 Workshop reports, attendance records and participants feedback; Action Plan document.	Market actors (e.g. traders, processors) see the value of, and are willing to engage in, participatory market

<p>Participatory Market System Development (PMSD) to improve income from fruit and nuts (NTFPs).</p>	<p>Dashtijum in Year 1 and locally specific actions identified.</p> <p>2.2 Producer cooperatives established in Childukhtaron in Year 1 and Dashtijum in Year 2 with a total of 120 active members (at least 50% female) by Year 4.</p> <p>2.3 By end of year 4, 300 local collectors (at least 60% female) trained and applying new skills to sustainably harvest, process and sell NTFPs and increase sales value of fruit and nut products (e.g. dried fruit, compote, oils from nuts and seeds): 80 in Year 1; 120 in Year 2; 100 in Year 3.</p> <p>2.4 50% of respondents report that participation in savings groups has increased their ability to cope with shocks and lean months and enabled them to invest, including in improved NTFP techniques, by Year 4.</p> <p>2.5 Multi-dimensional well-being benefits explored, understood and captured through Participatory Impact Assessment (PIA) with gender-disaggregated data, in Year 4.</p>	<p>2.2 Official documentation (Charter) for cooperatives, membership rolls, equipment purchased, activity and sales records.</p> <p>2.3 Training attendance records, follow-up survey of attendees (whether they are using new skills).</p> <p>2.4 Semi-structured interview and focal group records; PIA report.</p> <p>2.5 Semi-structured interview and focal group records; PIA report.</p>	<p>mapping - we will cultivate relationships to ensure this happens.</p> <p>Women as well as men feel able to join and engage meaningfully in producer cooperatives (project coordinators will empower and encourage women's participation).</p> <p>Trained collectors are able to apply new knowledge and skills to improve product quality and/ or market access.</p> <p>Actions taken, e.g. to improve product, will result in significant increase in price – we do have evidence that better quality dried fruit commands a higher price.</p>
<p>Output 3</p> <p>3. Community forest users (women and men) and two forest service units enhancing forest management and promoting resilience to climate change.</p>	<p>3.1 300 people report an increased awareness of climate change and the importance of forest agro-biodiversity in climate resilience (100 by end of Year 1; 200 by end Year 2; 300 by end Year 3).</p> <p>3.2 Strategic, climate-proofed, reforestation plan developed for both project sites by Year 2 and priority actions being implemented by Year 4.</p> <p>3.3. Local stakeholder fora established and meeting quarterly at both project</p>	<p>3.1 Knowledge and attitude survey, awareness event records.</p> <p>3.2 Plan documents, climate change risk assessment, activity reports, photos, local forest service annual report to Forestry Agency</p> <p>3.3 Forum terms of reference, meeting attendance records and minutes,</p>	<p>3.1 Knowledge and attitude survey, awareness event records.</p> <p>3.2 Plan documents, climate change risk assessment, activity reports, photos, local forest service annual report to Forestry Agency</p> <p>3.3 Forum terms of reference, meeting attendance records and minutes,</p>

	<p>sites by Year 2 with membership comprising at least 40% women and 15% from poorer households. By Year 4 at least 60% of both male and female forum members feel they are more able to influence forest management compared with project start.</p> <p>3.4 60 local forest users taking actions to protect trees in their lease plots (20 by end of Year 2; 40 by end Year 3; 60 by end Year 4).</p> <p>3.5 Over 400,000 native trees grown in nurseries and planted out in priority locations by Year 4.</p>	<p>knowledge and perception survey, PIA report.</p> <p>3.4 Activity records, photos, Year 4 survey of plots (baseline measured when action agreed).</p> <p>3.5 Nursery and planting records, photos, local forest service annual report to Forestry Agency.</p>	<p>knowledge and perception survey, PIA report.</p> <p>3.4 Activity records, photos, Year 4 survey of plots (baseline measured when action agreed).</p> <p>3.5 Nursery and planting records, photos, local forest service annual report to Forestry Agency.</p>
<p>Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p>1.1 Conduct habitat and botanical surveys to update (currently weak) baseline biodiversity data for sites and key species at Childukhtaron and Dashtijum</p> <p>1.2 Conduct interviews to collect local knowledge of agro-biodiversity</p> <p>1.3 Collate data to help establish sustainable harvest levels for key species</p> <p>1.4 Produce and disseminate survey reports (in Russian, Tajik and English)</p> <p>1.5 Compile information on likely climate change impacts on forest ecosystem/ tree species, both from scientific community/ literature and community vulnerability assessments; develop climate change risk assessments for the sites</p> <p>1.6 Workshops with specialists and local stakeholders to develop Species Action Plans for three Red-List trees (two CR <i>Pyrus</i> species); produce and disseminate plan documents</p> <p>1.7 Agree protocol for participatory forest monitoring scheme with forest service and communities</p> <p>1.8 Implement monitoring: patrols collect data as per agreed protocol</p> <p>1.9 Monitoring data collated, analysed and reported to forest service and local stakeholders (including community forest monitors)</p> <p>1.10 Workshop to disseminate research and learning to local and national Forest Agency and interested stakeholders.</p> <p>2.1 Preliminary work to start the Participatory Market System Development process for Dashtijum in consultation with community representatives and project partners: identification of appropriate products, preliminary market mapping and strategic design, identifying and engaging key market actors (preliminary steps of PMSD roadmap – http://www.pmsdroadmap.org/).</p> <p>2.2 Small community workshops to empower marginalised market actors (local NTFP collectors in the villages of Dashtijum and Childukhtaron) and prepare them to engage with other market actors in the next steps - with a particular emphasis on women (separate groups if necessary).</p> <p>2.3 Facilitate participatory market mapping at workshops with representatives of all market actors (collectors, local traders, processors, 'big' traders, input providers), help the community members to develop stronger links with traders and processors; followed by participatory planning – resulting in action plans.</p> <p>2.4 Support the two communities to establish producer cooperatives, ensuring active participation of women.</p>			

- 2.5 Run (minimum) 15 practical training events for local women and men involved in fruit and nut collection, processing and sale - provide follow-up support through producer cooperatives to improve product quality through enhanced local processing techniques.
- 2.6 Provide locally appropriate equipment (identified in PMSD action plans) to producer cooperatives to improve processing at local level – for example, this might be drying racks or packaging machine.
- 2.7 Research and explore potential for overseas markets and innovative products; follow-up as appropriate.
- 2.8 Set up and support at least three local women’s saving groups in villages in Childukhtaron, based on and learning from successful model in Dashtijum (initiated by Save the Children)
- 2.9 Conduct Participatory Impact Assessment (PIA): semi-structured interviews and focal group discussions with women and men to explore the impact the project has really had on participant’s lives (using our experience from Darwin post-project in Kyrgyzstan).
- 3.1 Run 16 awareness raising events: seminars for women and men and school activities for children on various topics: biodiversity, climate change, agro-biodiversity and sustainable harvesting.
- 3.2 Organise four community harvest-time festivals to celebrate the forest, its biodiversity and fruit and nut products
- 3.3 Conduct at least four climate adaptation planning workshops with community groups (replicating and learning from activity in Darwin Initiative post-project in Kyrgyzstan): exploring together the likely impacts of climate change, assessing vulnerabilities, and identifying feasible adaptation measures for local stakeholders.
- 3.4 Following on from activities 1.1 – 1.5, develop strategic, climate-proofed, reforestation plans for both sites jointly with the forest service and other stakeholders, identifying strategic sites for planting (to improve connectivity, reduce risk of erosion/ landslides) and appropriate resilient species and varieties.
- 3.5 Establish stakeholder forum at each site; ensure members are representative of the different groups within the forest user community (including those with more marginal use rights and women); facilitate regular meetings to enable discussions on forest management, conservation and sustainable use issues; provide mediation if necessary; and promote collaborative planning and implementation of actions.
- 3.6 Work with local forest leaseholders to protect trees in their forest plots, through fencing and other means.
- 3.7 Support local forest service and community groups to grow native fruit and nut trees in nurseries for planting in forest and gardens, promoting diversity of species and local varieties to maintain agro-biodiversity (seed to be collected locally wherever possible) – minimum of two forest service nurseries and two community nurseries.
- 3.8 Support forest service teams to plant 400,000 native trees (10+ species) in protected and strategic locations in Childukhtaron and Dashtijum to reinforce natural populations, including aftercare and monitoring survival.

Annex 3: Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
5	In Year 1, 1 person from the botanical gardens received field training and 3 people from Zam Zam received PMSD and survey training.	2 male, 2 female	Tajik	4	-	-	-	4
6A	<p>Year 1: 97 people were trained on fruit tree management for a day 45 people trained for a day on saving group management 40 people we trained on fruit processing for 2 days</p> <p>Year 2: 142 people trained in family budgeting; and in use of saving funds (3 days) 40 people (a subset of the 150 trained above) also trained in canning and drying fruit and forest conservation (5 days)</p>	<p>Year 1: 28 female, 69 male 33 woman, 12 male, 9 male, 31 female</p> <p>Year 2: 96 female; 46 male</p>	Tajik	182	142 (is a subset of 182 from Year 1, so doesn't increase total)	100	100	182
6B	Training weeks using the figures described above:	See above	Tajik	43	125	15	15	125

	Year 1 – 43 weeks (202 person days) Year 2 – 125 weeks (626 person days)							
7	A manual was produced In Year 1 for the training on dried fruit processing, further manuals are planned but subjects will be defined by needs	-	-	1	-	1	1	1
9	Species and restoration plans will be completed in year 3	-	-	-	-	4	-	0
10	A pocket tree identification guide was produced and will be shared with the FMU teams in Year 3	-	-	-	1	-	-	0
12A	Database of threatened tree species and database of forest quality now established but not yet handed over to the Forest Service.	-	-	-	-	1	-	0
14A	Workshop to be organised at end of project	-	-	-	-	-	1	0
14B	Project findings were shared at the 2018 Conservation Asia conference in Bishkek	-	-	-	1	1	1	1
20	In Year 1 two electric dryers Equipment for installation of driers; in Year 2 , a truck was procured and donated to local producer groups.	-	-					
23		-	-					

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
None but will be available in future years, with one journal paper currently under review.						

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

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@itsi.co.uk putting the project number in the Subject line.	X
Is your report more than 10MB? If so, please discuss with Darwin-Projects@itsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you want 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.	
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	