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)

Submission Deadline: 30th April 2020

Darwin Project Information

Project reference	25-017
Project title	Enhancing rural Caucasian community livelihoods through fruit and nut conservation
Country/ies	Georgia and Armenia
Lead organisation	Royal Botanic Gardens, Kew (RBG Kew)
Partner institution(s)	Nature Heritage NGO of Armenia (NH), National Botanic Garden of Georgia (NBGG) and Institute of Botany, Georgia (IoB)
Darwin grant value	£310,171
Start/end dates of project	1st July 2018 – 31st March 2021
Reporting period (e.g. Apr 2019 – Mar 2020) and number (e.g. Annual Report 1, 2, 3)	April 2019 – March 2020 – Annual Report 2
Project Leader name	Aisyah Faruk (PI); Ian Willey (Co-PI) Previously Elinor Breman (PI); Aisyah Faruk (Co-PI) – CRF in progress
Project website/blog/social media	https://www.kew.org/science/our-science/projects/enhancing-rural-caucasian-livelihoods-fruit-and-nut-conservation
Report author(s) and date	Ian Willey (RBG Kew), Elinor Breman (RBG Kew), Aisyah Faruk (RBG Kew), Anush Nersesyan (NH), Astghik Papikyan (NH), Tsira Mikatadze-Pantsulaia (NBGG), Tina Barblishvili (NBGG), David Kikodze (IoB), Nana Shakarishvili (IoB)

1. Project summary

The Caucasus region is recognised as being one of the world's 34 Biodiversity "Hotspots" and 35 "priority places" according to Conservation International and the WWF [1]. It is home to over 6,500 plant species, of which, 25% are found nowhere else in the world, making the Caucasus the region with the highest level of endemism within the Temperate Zone of the Northern Hemisphere[2]. Around 2,000 plants species found within the region have a direct economic value

[1] Caucasus Nature Fund (CNF, 2014) *Supporting people conserving nature in the Caucasus,* Brochure, http://caucasus-naturefund.org/wp-content/uploads/2012/10/brochureCNF2014_reduced.pdf, viewed July 2017

[2] Batsatsashvili, K., Schatz, G. E. and Schulkina, T. (2013) *Caucasus Plant Initiative: A regional plant conservation strategy*, Missouri Botanical Garden, Missouri USA

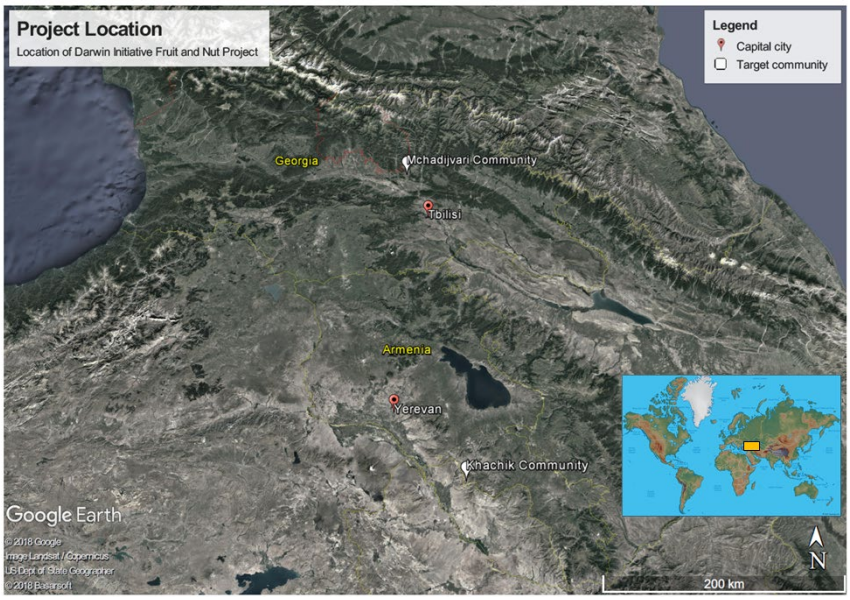
and are used by local communities for various purposes from food and medicines to fuel and dyes[3]. Of these, over 15% are wild-growing fruit and nut species[4].

Communities in Georgia and Armenia are dependent on harvesting wild fruit and nut species to supplement their diet and livelihoods. In 1991, heavy economic recession and high unemployment rates in the South Caucasus (or Transcaucasus) forced rural families into poverty and a heavy dependence on ecosystem services[5]. In Georgia, approximately 1,200 plant species are used medicinally[6] and in Armenia, fruits and nuts make up 52% of frequently collected forest products[7].

Within the last century, more than 40 vascular plant species have disappeared from Armenia and Georgia, and over 250 are in danger of extinction[8]. Moreover, due to widespread illegal logging and mining activities, it is estimated that less than 12% of Caucasus vegetation remains unspoiled[9]. Other major threats to wild fruit and nut populations include overharvesting, overgrazing and pollution. Overharvesting using destructive techniques can speed up collecting, but can heavily damage re-growth, which can be detrimental to sensitive or rare populations of fruit and nut species[10]. Further threats come from locals facing economic pressure, a lack of education on the importance of wild genetic resources, and the expansion of monocultures[11]. These threats are exacerbated by the interaction of climate-change with habitat loss, plant population decline and the disruption of ecological processes.

The current project aims to safeguard the ecologically and economically important fruit and nut species in Georgia and Armenia, which would safeguard rural livelihoods and conserve these valuable genetic resources. In Georgia, we have engaged with the Mchadijvari community and in Armenia the Khachik community (Figure 1).

Figure 1: Project location



[3] Rukhadze, A. (2015) *Georgia's fifth national report to the convention on biological diversity, "*United Nations Convention on Biological Diversity", viewed July 2017
[4] Food and Agriculture Organisation (FAO), 2006, *Better forestry, less poverty - A practitioner's guide; Food and Agriculture Organization of the United Nations*. Rome
[5] Bakkegaard, R. K. (2014) '*Executive Summary – Regional analysis of forest and environmental product use and dependence amongst rural households in South Caucasus, Eastern Europe and Russia*', in *Enpi East FLEG II*, http://www.enpi-fleg.org/site/assets/files/1532/forest_dependency_regional_executive_summary_publication_final.pdf, viewed July 2017
[6] Ministry of Environment and Natural Resources Protection of Georgia (MoE), *Georgia's Fifth National Report to the Convention on Biological Diversity*, 2014, https://www.cbd.int/doc/world/ge/ge-nr-05-en.pdf, viewed August 2017
[7] Mkrtchyan, A., Grigoryan, E. 2014. The World Bank (WB), European Neighborhood and Partnership Instrument East Countries Forest Law Enforcement and Governance II Program, *Forest Dependency in Rural Armenia*
[8] Food and Agriculture Organisation (FAO), 2010, *Gardens of Biodiversity, Conservation of genetic resources and their use in traditional food production systems by small farmers of the Southern Caucasus,* Rome
[9] Caucasus Nature Fund (CNF, 2012) '*Flora Fauna and Threats: Biodiversity under Threat, the Caucasus',* http://caucasus-naturefund.org/the-caucasus/flora-fauna-threats/, viewed August 2017
[10] Bakkegaard, R. K. (2014) *Enpi East FLEG II*, 4
[11] Food and Agriculture Organisation, *Gardens of Biodiversity*, 3

2. Project partnerships

The lead institution is RBG Kew's Millennium Seed Bank (MSB), which manages a partnership network of 96 countries and overseas territories and has over 20 years' experience of project design and delivery. Well-established partnerships exist with Nature Heritage (NH), National Botanic Gardens of Georgia (NBGG) and the Institute of Botany, Georgia (IoB) through previous work in plant conservation. All partners have been closely involved in the development of the project and its delivery.

Planning of activities relating to the communities are largely led by the partners, social scientists and contacts in the local communities following the timetable in the original project application. For visits and events requiring the attendance of Kew or overseas staff the project team work well together to coordinate mutually acceptable timings and actions.

In the second year, the project included stronger links with additional partners, namely from the local universities as the MSc students started working on the research components of the project. The involvement of key Armenian and Georgian researchers alongside the partners has been a success for the project, enabling the project to reach out into the local and international scientific community. For example, Razmik from Armenia, with help from his local university supervisor, was able to present his work and the project at two international conferences in 2019 (see section 3.1 and 3.2).

We have also started reaching out to FairWild and small local businesses with an interest in developing sustainable products to explore ways in which the project can have a sustainable legacy past project end for the local harvesters without compromising the environment. This has been rather challenging, but there are some promising results. In Georgia there is interest from a FairWild certified supplier and in Armenia a local business has started employing the community members for their responsibly harvested range of teas (Figure 2).

Despite the current COVID-19 pandemic all partners remain in place at their resident institutions.

Figure 2: Range of sustainably harvested tea from Khachik Community packaged in bags made locally by Armenian artists.

3. Project progress

Please note that we have moved all photos into Annex 4 to save space. Figures are numbered and linked accordingly.

A separate folder with Means of Verification and additional evidence is attached with this report. Where partner reports are given as evidence, relevant sections are highlighted yellow and page numbers referenced. All documents included as Means of Verification are mentioned in the text as Annex 4.X.X.X.

3.1 Progress in carrying out project Activities

All countries involved in this project have experienced disruption in 2020 as a result of the COVID-19 pandemic. This has affected RBG Kew staff, partners and communities to varying degrees, but all have experienced difficulties since March 2020 in carrying out project activities. The impact this has had on achieving certain outputs is recorded in this report. At the time of writing 65% RBG Kew staff have been furloughed, and most staff have been unable to access the MSB since 17th March. Partner staff have experienced similar restrictions, with some currently unable to access their respective institutions. Partners have also had difficulty visiting target communities due to a number of inhabitants being in isolation and travel restrictions. The effect on individual activities and outputs is addressed below. If disruption is short-term, we currently believe many activities and outputs will only be delayed and will be met before the project's conclusion in 2021.

Output 1. Two rural communities trained in sustainable harvesting practices and empowered to deliver *in-situ* conservation of fruit and nut ecosystem services to enhance rural livelihoods

Activities 1.1, 1.2, 1.3, 1.4, 1.6, 1.8 were completed in Year 1, please see 2018/19 annual report for detail.

1.5 Steering-committees, partners and social scientists meet for training and activity planning, including planning demonstration plots.

Steering committees were established in Year 1 (see 2018/19 annual report) and relevant stakeholders continue to meet in Year 2 of the project. This is documented in quarterly community engagement reports produced by each partner organisation (e.g. community engagement reports, Annex 4.1.4.3; Annex 4.1.3.4).

1.7 Workshops for information sharing are continued with community members

Partners continue to share relevant information with their target communities. Armenian partners have developed and distributed 130 project leaflets to the community (leaflet, Annex 4.1.7.1; leaflet distribution, Figure 3.1.1). They have also led several workshops including in May 2019 a presentation on "Wild F&N [fruit & nut] collected by community members" to 14 community members (Figure 3.1.2 and see community engagement report Annex 4.1.4.3). Georgian partners have held community workshops: welcoming community members to the demonstration plots, discussing project progress and inviting questions from the audience. This includes an event in October 2019 where community members shared a variety of products harvested from the wild and received information on the project (Figure 3.1.3 and see community engagement report Annex 4.1.3.4).

1.9 Baseline/evaluation surveys conducted

Both Armenian and Georgian partners conducted baseline surveys on community engagement in Year 1 (see 2018/2019 annual report). In November 2019, Armenian partners and social

scientist, Emma Hakobyan, were able to revisit the community and conduct evaluation surveys through questionnaires to monitor the success of project dissemination within the community (leaflet distribution Figure 3.1.1; responses Annex 4.1.1.2). Georgian partners were not able to conduct evaluation surveys due to their inability to access the community in light of current restrictions on individuals resulting from COVID-19 pandemic (partner report, page 11, Annex 4.2.2.2).

1.10 Plant material for demonstration plots (three important F&N) collected and provided to each community (six species in total)

This output has been completed with Georgian and Armenian partners having finished developing their community demonstration plots from wild harvested seeds. These plots showcase important fruit & nut species from the area. Georgian partners have planted *Staphylea colchica, Sambucus tigranii* and *Amygdalus georgica* (photographic evidence, Annex 4.1.3.1; community engagement report, page 1, Annex 4.1.3.4) whilst the Armenian plot contains *Rosa hemisphaerica, Crataegus orientalis, Crataegus armena, Pyrus sosnovskyi* and *Berberis vulgaris* (photographic evidence Annex 4.1.3.2; community engagement report, page 1, Annex 4.1.3.3).

1.11 Practical and theoretical training is delivered by partners and social scientists on planting, cultivation and harvesting of fruit and nut species

This output has been completed with Georgian and Armenian partners delivering training on plant conservation and harvesting in Year 1 (2018/19 annual report) with further training events taking place during this reporting year. These events included Georgian partners taking 15 members of the Mchadijvari community on fieldwork to advise on sustainable harvesting techniques and teach fieldwork skills such as taking herbarium specimens and data collection (community engagement report, page 4-5, Annex 4.1.4.2). The partners also invited the steering committee (Figure 3.1.4) and a Mchadijvari school group (Figure 3.1.5) to separate events at NBGG to educate them on seed banking and the importance of floral diversity (community engagement report, pages 1-2, Annex 4.1.4.2). Armenian partners delivered further training on sustainable harvesting to 13 members of the Khachik community (community engagement report, page 3, Annex 4.1.4.3) and provided practical training for the community on how to cultivate and care for their plot (photographic evidence Figure 3.1.6). They also developed and delivered care sheets for community members (Annex 4.1.3.7).

1.12 Two BCs are engaged and coached in knowledge dissemination by the social scientists

This output has now been completed. In Year 1 an Armenian Biodiversity Champion had been appointed and engaged (see 2018/19 annual report). In July 2019 during a Steering Committee Meeting at NBGG Leila Migdiseli was appointed as the BC for the Mchadijvari community (Annex Contract 4.1.2.1; Report page 4, Annex 4.1.4.2). In June 2019 the Armenian BC, Bela Arakelyam, was engaged through a workshop led by social scientist, Emma Hakobyan, aimed at "establishing a collaborative relationship: buyer seller" (community engagement report, pages 7-10, Annex 4.1.4.3)

Output 2. Seeds of 122 wild fruit and nut species from the Caucasus are protected through *ex-situ* seed banking in-country and at the MSB

Activity 2.1 was completed in Year 1 and good substantial progress has been made towards **Activity 2.2** as in addition to the 60 pre-collection assessments completed in year 1 (see 2018/19 annual report) a further 41 species have had assessments completed across the partnership. Both Georgian and Armenian partners have been collecting data for the remaining species to prepare for the collecting season later this year (Georgian seed collecting reports, pages 3-5, Annex 4.2.2.1; page 10, Annex 4.2.2.2; Armenian seed collecting report page 6-7, Annex 4.2.2.5)

Activity 2.3 is now complete following the delivery of training by Astghik Papikyan (Co-ordinator/Researcher at Institute of Botany). She trained Razmik Papikyan, the MSc student working on the project and two new SBAF staff members. They received training in fieldwork, seed processing and banking (fieldwork training photo, Figure 3.1.7; Armenian seed collecting report page 3, Annex 4.2.3.1). Georgian training was completed in Year 1 and is detailed in 2018/19 annual report.

Both partners are on course to achieve **Activity 2.4**, the overall collection target of 122 fruit and nut species. 101 species have been collected, banked and duplicated to the MSB so far during the project (38 in Armenia and 63 in Georgia) (Collections held at MSB, Annex 4.2.4.1). Both partners have made good progress towards **Activity 2.5** as they have both cleaned, processed, and stored their original collections in-country in line with the MSB International Seed Conservation Standards procedures (Astghik processing seed in Armenia in June 2019, Figure 3.1.8) and started carrying out germination tests on processed species (Georgian seed collecting report, page 8, Annex 4.2.2.2). Good progress towards **Activity 2.6** has been made with 101 collections now duplicated to the MSB, arriving in January 2020 (Figure 3.1.9). **Activity 2.7** has begun at the MSB with 101 collections now accessioned and in-process at the MSB (confirmation email, Annex 4.2.2.4) however seed processing and subsequent upload to the MSBP Data Warehouse has been delayed due to current restriction on access to the MSB. Section 3.2 below provides more clarification on current situation.

Output 3. Global extinction risk assessments are completed and submitted to IUCN SIS for 20 of the target seed conservation species

Activities 3.1 and **3.2** were met in Year 1 after a comprehensive IUCN red-list assessment training course was delivered to 14 participants, please see 2018/19 annual report for evidence. Partners have continued to carry out fieldwork (**Activity 3.3)** and desk-based research (**Activity 3.4)** to collect data necessary for species assessments to be completed (Armenian report page 3, Annex 4.3.2.4; Georgian Report pages 8-9, Annex 4.3.2.5). Armenian partners have conducted fieldwork to collect data for a further 3 species and Georgian partners for a further 8 species. **Activity 3.4** is near complete with desk-based research gathering data for 21 target species. More work is needed however as through this research partners discovered that seven of these species occur outside the two partner countries. They must, therefore, now gather more data which requires partners to seek co-operation with herbaria in the wider region.

Both partners conducted community data-collection surveys towards **Activity 3.5** in Year 1 (see 2018/19 annual report) and Armenian partners have continued to collect data in Year 2 (Figure 1.3.10). They also ran a workshop with 13 members of the community in May 2019 to finalise the list of target species to be assessed thus achieving **Activity 3.6** (community engagement report, page 10, Annex 4.1.4.3). They have since achieved progress towards **Activity 3.7** by submitting 9 red-list assessments to the IUCN Species Information Service (SIS) for review (Annex 4.3.3.1).

Georgian partners had finalised the survey to be used for community data-collection (Annex 4.3.6.1) but the social scientist was not able to visit the community during the final quarter of Year 2 due to COVID-19 imposed restrictions. Their visit has been postponed until current restrictions are lifted. The partners are, however, still confident they have collected enough information to conduct conservation assessments. They have achieved **Activity 3.6** through red-list workshops and meetings held to review species data and finalise the list of species to be assessed (red-list report, pages 2-3, Annex 4.3.3.4). They have progressed towards **Activity 3.7** through submission of 5 red-list assessments species which are currently being reviewed by RBG Kew's Plant Assessment Unit (PAU) (Annex 4.3.3.2).

Output 4. Increased understanding of the genetic diversity and uses of 12 fruit and nut taxa, highlighting valuable traits for climate change resilience

Activity 4.1 was met in Year 1 as two MSc students that were engaged and trained by partner staff during Year 1 (see 2018/19 annual report). **Activity 4.2** is complete, both students have undertaken a two-week residential training course at RBG Kew. Both students were supervised by Laszlo Csiba from RBG Kew's Molecular Systematics Team with Razmik Papikyan completing his training in September 2019 (photographic evidence, Annex 4.4.1.1) and Ana Qvlividze in February 2020 (photographic evidence, Annex 4.4.1.2). Ana's visit was delayed to February due to an issue with her visa application. The usefulness of the RBG Kew training is summarised in a report from Astghik Papikyan (research report, page 1, Annex 4.4.2.1):

"The laboratory studies were very useful for developing practical skills. Since I did not have specific primers that could work on this genus very well, in the Jodrell Laboratory there was an opportunity to study target species using specific primers. The supervisor Mr. Laszlo did his best to teach/show as much as possible."

Activity 4.3 is complete, both MSc students have extracted DNA and performed PCR analysis on designated taxa and are in the analysis phase of their projects (Armenian research report, page 1, Annex 4.4.2.1; analysis, Annex 4.2.2.2). Razmik is set to defend his MSc thesis in May 2020 and along with Anush Nersesyan (President of Nature Heritage & Head of Department of Conservation of Genetic Resources of Armenian Flora at the institute of Botany, Armenia) presented preliminary research results at two international conferences, see section 3.2 below (Annex 4.4.3.1; Annex 4.4.3.2). These achievements make completing **Activity 4.6** and **Activity 4.7**, attendance and presentation of research at Georgia's Annual Biodiversity Conference 2021, more likely. Aisyah Faruk has followed up on previous communication with IPTGRFA's Armenian focal point about imminent publication project progress, achieving **Activity 4.10** (Annex 4.4.3.6)

3.2 Progress towards project Outputs

Output 1. Two rural communities trained in sustainable harvesting practices and empowered to deliver in-situ conservation of fruit and nut ecosystem services to enhance rural livelihoods

In the 2018/19 annual report we documented achieving the first part of **Output 1.1**, raising awareness of the project within the community. Since then progress has been made towards sharing learning from the project with the community. Armenian partners have delivered 130 leaflets (declaration of delivery, Annex 4.1.1.1) and have continued to conduct community surveys to analyse household engagement with the project (survey results, Annex 4.1.1.2).

Output 1.2 was partially met in Year 1 with the establishment of steering committees in both Armenia and Georgia (annual report 2018/19) and these committees have continued to meet throughout the year (community Engagement reports, e.g. Annex 4.1.4.3; Annex 4.1.3.4). Similar to the Armenian community in Year 1, the Georgian community have now appointed their Biodiversity Champion, Leila Migdiseli from the Mchadijvari community, at a steering committee meeting in July 2019 (BC contract, Annex 4.1.2.1).

Output 1.3 was partially met in Year 1 following the selection of sites for demonstration plots. Further progress towards this output has been achieved with both target communities having established demonstration plots planted with eight locally sourced fruit and nut species (target six). Georgian partners have planted *Staphylea colchica, Sambucus tigranii* and *Amygdalus georgica* (photographic evidence Annex 4.1.3.1; community engagement report, page 1, Annex 4.1.3.4) whilst the Armenian plot contains *Rosa hemisphaerica, Crataegus orientalis, Crataegus armena, Pyrus sosnovskyi* and *Berberis vulgaris* (photographic evidence Annex 4.1.3.2;

community engagement report, page 1, Annex 4.1.3.3). The Armenians have chosen species that are of use to the community but rare in the wild having held a steering committee workshop in May 2019 to help select species (workshop register and data gathering, Annex 4.1.3.8). The Georgian team have similarly established a plot under the advice of their steering community, located within the school grounds (community engagement report, page 1, Annex 4.1.3.4). The plot has been endorsed by a teacher at the school (personal communication):

"We [teachers] really like this demonstration plot. The students have always learnt about important species in Georgia in the class room, and now they can come out here and see them" – biology teacher from Mchadijvari school.

Currently, the demonstration sites are being cultivated only by members of the steering committee whilst saplings become established. Therefore, they are not yet accessible to 20% of community members (166 women and 166 men) as targeted by December 2019. However, measures have been undertaken to engage the community and promote the plots' future use. In October 2019, Armenian partners distributed leaflets to the community to increase awareness of the demonstration plots. A follow-up survey was conducted in February 2020 where questions probed the effectiveness of efforts to raise awareness of the project and more specifically, the demonstration plots (survey results, 4.1.1.2). Analysis of these surveys showed that 61% of the 131 respondents would like to cultivate the plot (40% women and 28% men). Fifteen members of the community have also been trained in cultivation and care of the plants by the Armenian partners (photographic evidence, Annex 4.1.3.6) and leaflets have been distributed to households about how to plant and care for trees (Annex 4.1.3.7). Georgian partners also distributed care sheets at a community training event where horticultural specialists reviewed results of a previous training session in which community members propagated target species (page 4, Annex 4.1.4.2). The Georgians were unable to conduct a similar study to monitor learning and engagement within the community due to a large proportion of its residents having to self-isolate due to the COVID-19 outbreak. By selecting the school grounds for the demonstration plots and engagement with the school it can be expected that more people will be involved in cultivation of the plot.

Overall, 159 people (113 women and 46 men) from the two communities have been trained in sustainable harvesting techniques as of 2020. This means **output 1.4** target of 166 people has been missed by 7 people although more training is planned in 2020 which will address the low number of men being trained. Eighty-three people were trained this year in addition to the 76 reported in Year 1 (attendance register for Years 1 and 2, Annex 4.1.4.1). Training events were aimed at different audiences, for example in June 2019 Georgian partners invited a Mchadijvari school group (15 pupils, 3 teachers) to NBGG's Seed Conservation Department (Community Engagement Report & photos, Annex 4.1.4.2) for a workshop on sustainable collecting and seed banking. At a separate event in June, members of the steering committee held a training event with the community to disseminate sustainable practice, including the need to collect no more than 20% available seed from wild populations (report, page 4-5, Annex 4.1.4.2). Following the training the concept of sustainable harvesting was perfectly summed up by Temur Migdiseli, a local collector of fruits and nuts:

"I will not disturb the nature, I use these plants to eat bread [sustenance]".

Armenian partners similarly aimed training at a divergent audience. In June, 2019 13 members of the community were trained by Astghik Papikyan in wild "Collection of wild plants, its impact on biodiversity and ecosystem stability" (community engagement report, Annex 4.1.4.3). Discussion is ongoing as to how to ensure wider community uptake of this with ideas around community licensing being mentioned. There was also a session led by social scientist, Emma

Hakobyan, on establishing a collaborative buyer-seller co-operative around fruit and nut which puts sustainable harvesting at its heart. This has been taken further by Aisyah Faruk who has held meetings with FairWild representatives about accrediting products of the proposed future co-operative (email exchange with FairWild, Annex 4.1.4.4).

The target of 20% of the adult community (332 adults) being involved to collect data towards **output 1.5** has been partially met. In addition to the 219 residents in Year 1 (190 in Georgia & 29 in Armenia; 94 women and 92 men, see 2018/19 annual report) data on target species has been gathered from a further 130 residents (74 women and 56 men) in Armenia (workshop data, Annex 4.1.3.8; survey data, Annex 4.1.1.2). In total 168 women have contributed data towards output 1.5. This threat data is currently being used to carry out red-list assessments (see Output 3) and support genetic research projects (see Output 4).

Progress towards **output 1.6** is being made with both partners consulting their steering groups to draft points to take forward as part of the conservation action plans produced at the end of the project. For example, the Armenian partners have posited ideas around yearly courses on sustainable harvesting and restricting use of cutting tools when collecting from wild species (community engagement report, Annex 4.1.3.3). In Georgia, the steering group came up with the idea of the community orchard to further livelihoods and reduce wild harvesting pressures (community engagement report, page 3, Annex 4.1.3.4). **Output 1.7** has not been met but Georgian partners have begun engagement with neighbouring communities, having distributed 197 leaflets with community questionnaires enclosed. 195 members of the neighbouring communities have agreed to take part in the survey. The Georgian partners plan to pick-up this activity when they can return to their institutions (email, Annex 4.1.7.2). The Armenian steering group are in discussion with the social scientists about dissemination plans to neighbouring communities in relation to sustainable harvesting techniques (email from Armenian partners, Annex 4.1.7.3).

Output 2. Seeds of 122 wild fruit and nut species from the Caucasus are protected through *ex-situ* seed banking in-country and at the MSB

Output 2.1,65% of seed collections being duplicated to two seed banks by December 2020, has been exceeded. Seed collections from 101 species (83%) are now stored in partner seed banks (38 in Armenia and 63 in Georgia) and duplicated at the MSB (arrived January 2020). Unfortunately, due to the lockdown we are unable to retrieve the Notification of Transfer for the collections sent to the MSB as the building is closed due to COVID-19. A surrogate means of verification is provided with this report in the form of email confirmation of receipt by processing teams at MSB (Annex 4.2.1.1, Annex 4.2.1.2) and photographic evidence of seed arriving at the MSB (Figure 3.1.9).

Output 2.2 has been partially met as processing activities (cleaning, counting and viability testing) have not been completed at the MSB due to the closure of the MSB in March 2020 (email from MSB Seed Processing Manager, Annex 4.2.2.4). The data cannot, therefore, be uploaded onto the MSBP Data Warehouse (see section 3.1 for detail). However, the 101 species have been accessioned at the MSB and the donation data has been uploaded onto the MSB Seed Bank Database (SBD) (Annex 4.2.4.1). The data will be easily transferable to the MSBP Data Warehouse when processing is completed. Initial processing has been completed in-country (Armenian seed collecting report, page 6, Annex 4.2.2.5; Georgian seed collecting report, page 8, 4.2.2.2; Armenian photographic evidence, Figure 3.1.8).

Output 2.3 is now complete. Three partner staff from Armenia (66% women) were trained in seed collecting, processing and banking in June 2019 (photographic evidence see Figure 3.1.7; seed collecting report page 3, Annex 4.2.3.1). Staff were evaluated by making those trained take the lead on the second day and plan a seed collecting expedition. Georgian staff training was completed in Year 1 and is detailed in the 2018/19 annual report. Increasing the level of training

will help the project achieve **Output 2** and embed skills within respective institutions.

Output 3. Global extinction risk assessments are completed and submitted to IUCN SIS for 20 of the target seed conservation species

Output 3.1 was completed, and **Output 3.2** partially completed in Year 1 of the project when 14 participants from across the partner institutes were given training to allow them to conduct global red-list assessments to IUCN standards. These same staff were able to compile locality data from herbarium specimens for 9 species (See Annual report 2018/19). Trained staff have since gone on to collect assessment data for 21 species (Table 1 below) although research has revealed that 7 of these 21 species are found to exist outside the 2 main partner countries. To complete the global red-list assessments for these 7 species partners will need to acquire additional data by working with other regional institutions. However, as full data has been collected for 14 species, **Output 3.2** has been exceeded for Year 2. Data was collected through study of herbarium specimens (Annex 4.3.2.1) and through fieldwork (Annex 4.3.2.2; Annex 4.3.2.3). As *Crataegus razdanica* has since been deemed a hybrid after consultation with RBG Kew's PAU this species will no longer be assessed.

Output 3.3 has been exceeded for Year 2 with assessments of 9 species having been submitted to IUCN Species Information Service (SIS) for review (SIS screenshot, Annex 4.3.3.1). A further five assessments have been completed using MS Word and submitted to RBG Kew's PAU for review. These five assessments were not submitted to SIS due the author being overseas when restrictions were put in place due to COVID-19. They are ready to be submitted, however, and will be submitted into SIS by the when current restrictions are lifted. Progress towards **Output 3.4** is currently on hold as community workshops cannot be planned whilst strict COVID-19 restrictions are in place. Both partner countries still plan to achieve this output before the project ends.

Table 1: Species for which red list assessment data has been collected

Armenia	**Georgia**
Crataegus susanykleinae	*Rosa galushoki*
Crataegus caucasica	*Sorbus caucasica*
Crataegus stevenii	*Pyrus demetrii*
Crataegus tournefortii	*Pyrus ketzkhovelii*
Crataegus razdanica (hybrid)	*Pyrus saschokiana*
Crataegus ulotricha	*Berberis iberica*
Crataegus orientalis	
Crataegus gabrielianae	
Sorbus luristanica	
Sorbus takhtajanii	
Sorbus tamamschianae	
Sorbus hajastana	
Rosa hemispherica	
Pyrus tamamschianae	
Rosa sosnovskyi	

Output 4 Increased understanding of the genetic diversity and uses of 12 fruit and nut taxa, highlighting valuable traits for climate change resilience

Output 4.1 is complete following training of two MSc students in their respective countries and at RBG Kew's Jodrell Laboratory. Evidence for Razmik, Armenian MSc student, being trained in-country can be found in 2018/19 annual report and Ana, the Georgian MSc student, received training in Georgia early on in Year 2 in preparation for her MSc examinations (research report page 2, Annex 4.3.2.5).

Both students visited the UK for a 2-week residential training course at RBG Kew's Jodrell Laboratory. Razmik and Ana were able to use specific primers to study target species and received thorough training from Laszlo Csiba of RBG Kew's Molecular Systematics Team (photographic evidence Annex 4.4.1.1; Annex 4.4.1.2). Both MSc students were extremely positive about the training they received, demonstrating their confidence in conducting genetic studies. Razmik commented:

"I had the opportunity to communicate with amazing specialists in this field,and learn important laboratory skills. Also during this time I was able to significantly improve my understanding of the language" (Feedback form, Annex 4.4.1.3)

Ana was equally pleased with the training she received:

"I got familiar with commonly used laboratory methods in molecular-genetic study and also got impression on the structure on the molecular study of Prunus spinosa, which is one of the major parts of my master thesis. It was also interesting to meet local scientists and discus some of the molecular technics of laboratory." (Feedback form, Annex 4.4.1.4)

Good progress has been made towards **Output 4.2** with both Razmik and Ana having extracted DNA and performed PCR analysis for all 12 target taxa (research report, page 1, Annex 4.4.2.1; research report, page 1, Annex 4.2.2.2 respectively). Razmik, having performed PCR analysis has now been able to produce a preliminary phylogenetic tree for his target *Rosa* species (Annex 4.4.2.2). Ana was able to successfully extract DNA and perform PCR analysis on samples for her target species during her time at RBG Kew (photographic evidence, Annex 4.4.2.3). In this time, she was able to select the most appropriate gene regions to sequence her target species and when restrictions are lifted in Georgia, she plans to complete analysis in her university laboratory (research report, page 1, Annex 4.2.2.2).

Razmik is already making good progress towards **Output 4.3** through dissemination of early MSc research findings to the scientific community at conferences in Tajikistan in July 2019 (Annex 4.4.3.1 & Annex 4.4.3.2) and the UK in September 2019. Armenian partner research findings were also presented by Anush (President Nature Heritage) at the same UK conference (Annex 4.4.3.3) following which abstracts submitted by Razmik, Anush, colleagues and RBG Kew project staff were published in the abstract book now available online (Annex 4.4.3.4). With lab work finished and writing-up well under way Razmik is set to defend his MSc in May 2020, and with colleagues in Armenia subsequently plans to look at publishing research (research report, page 3, Annex 4.4.3.5). Ana is completing analysis at home but is due to go on maternity leave in May 2020 (research report, page 1, Annex 4.2.2.2). There has also been progress towards building relationship with the ITPGRFA focal point in Armenia with conversation and email exchange between them and the RBG Kew Co-PI (email, Annex 4.4.3.6).

3.3 Progress towards the project Outcome

Further progress has been made towards **Outcome indicator 0.1** via extensive engagement with Khachik and Mchadijvari communities and the training of 159 community members in sustainable harvesting techniques (evidence can be found in section 3.2 above). In October 2019, the Georgian social scientist reported back from a project workshop with the Mchadijvari community that community members viewed sustainable wild harvesting as an avenue for increasing their income and that they were keen on pursuing this (social science report, Annex 4.01.1). She also reported on community members' engagement around protecting ecosystem for and with future generations:

> *"…they regard the necessity of rising environmental awareness as very important. They said that in their opinion this is especially important for the future generation to grow with correct values and caring attitude the nature. That's why they welcome the involvement of school pupils in this project."* (social scientist report, page 2, Annex 4.01.1)

Following a later workshop in the Mchadijvari community, Temur "Jambuli" Mighdiseli, who collects fruits and nuts in the region was interviewed for National TV (photographic evidence, Annex 4.01.2). This exemplifies further, the empowerment of the local community and their ability to take the projects aims of sustainable harvesting and conservation to a wider audience. In Armenia, a questionnaire sent to, and returned by, 130 members of the community points to empowerment in decision making within the Khachik community. Over 60 respondents made positive suggestions towards a Conservation Action Plan (Annex 4.1.1.2).

Progress towards **Outcome indicator 0.2** is visible in sections 3.1 and 3.2 which detail the various training activities held and significant engagement with the demonstration plots. To date 239 out of a target of 332 community members have received theoretical and practical training (Annex 3).

Progress is being made towards **Outcome indicator 0.3**, with the Steering Groups in both communities working well, the communities engaged with the development of action plans and neighbouring communities being approached (See section 3.2). This indicator will be reported on more fully next year.

Progress towards **Outcome indicator 0.4** will ensure that rare fruit and nut species are safeguarded from extinction through ex-situ conservation. To date, seed collections of 101 different fruit and nut species have been collected and stored in-country and duplicated to the MSB. For evidence please see sections 3.1 and 3.2. Progress has also been made towards **Outcome indicator 0.5** with global red-list assessments being submitted to SIS and under review. Avenues are being sought to influence policymakers and the public alike.

Outcome indicator 0.6, genetic research on 12 target taxa and its subsequent dissemination, is progressing well. Both MSc students have completed training, field and lab work, bar final analysis. Razmik, the Armenian student, has nearly completed writing up his MSc theses and has already presented preliminary findings at two international conferences. Ana, the Georgian student, is in the analysis phase of her project and looking to complete her thesis later this year. Evidence for both students is provided in section 3.2. Presentation of research at Georgia's Annual Biodiversity Conference has been postponed until 2021 due to COVID-19 imposed restrictions. A research paper is also in-prep with Armenian partners and Aisyah Faruk.

Currently the project is on track to achieve the Outcome by the end of the project period the indicators seem adequate for measuring the intended **Outcome**. This project is contributing to the higher-level impact on biodiversity through the direct conservation of F&N (*ex-situ* seed conservation), producing IUCN Red List assessments for F&N species, and through undertaking research to improve understanding of the diversity of F&N populations. The project also

contributes to the higher-level impact on human development and wellbeing (poverty alleviation) through the empowerment of local communities to make informed resource management decisions that will improve their livelihoods and to cultivate important fruit and nut species within their communities. In addition, talks are developing to provide a pathway to market for community F&N products, something previously beyond the scope of this project.

3.4 Monitoring of assumptions

All Outcome and Output level assumptions hold true. However, an additional assumption is required at the Outcome level: 'Global pandemic does not occur during the project lifetime'.

The onset of the COVID-19 pandemic was unforeseen when this project was planned and has had an impact on delivery of the project. The specific instances where a COVID-19 impact has occurred have been detailed above. If access to institutions and communities is only temporarily disrupted, and fieldwork is still permitted in country, it is envisaged that project outputs can still be delivered by the end of the project (Evidence from partners, Figure 3.4.1; partner report page 8 Annex 4.2.2.2). However, if COVID-19 related lockdowns and travel restrictions persist the delivery of the project may be compromised. Project staff are in close communication about COVID-19 developments and will routinely review the likely impact of the pandemic on all activities and deliverables.

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

The Caucasus region is considered a global biodiversity hotspot, conserving its diversity will have a high impact on global biodiversity conservation. Output 1 will contribute to biodiversity conservation and poverty alleviation by enhancing the knowledge of local fruit and nut collectors in plant conservation and sustainable harvesting techniques. In addition, by establishing plots for the community to grow rare fruit and nut species, the project has taken steps to alleviate the pressure of wild harvesting as well as establish a potential new income source for the community. By partners teaching students practical skills for cultivating fruit and nut species they are embedding conservation in future generations (community engagement report, Annex 4.1.3.4). Also, this year, a workshop was held with Khachik community members to improve income generation through sustainable wild harvesting which will improve the ability of the community to raise income and improve livelihoods (see section 6 for more detail).

Output 2 has directly contributed to the conservation of Caucasus biodiversity by conserving 101 species of fruit and nut plants *ex-situ* according to internationally recognised standards (http://brahmsonline.kew.org/Content/Projects/msbp/resources/Training/MSBP-Seed-Conservation-Standards.pdf). Project staff have been employed and paid to make seed collections and one-off payments to BC's has provided income to two community members.

Output 3 contributes to biodiversity conservation at the species and ecosystem level by documenting the current knowledge of extinction risk and population locations for fruit and nut species. This information can be used in conservation and land planning. In addition, Output 3 has contributed to poverty alleviation through training of local students/researchers in the latest techniques for extinction risk assessments, enhancing their capacity to conserve their national biodiversity.

Similarly, Output 4 also contributes to poverty alleviation through engaging two MSc students and providing them with comprehensive training both in-country and at RBG Kew to further their knowledge. This will enhance their wellbeing and facilitate career progression, as well as contribute to the wider understanding of fruit and nut species conservation. Ana, the Georgian MSc student, has now been offered a PhD to continue with research related to the project.

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

This project addresses SDGs 1, 2, 12, 13 and 15.

Targets 1.4 and 1.5 focus on equal rights and control of economic resources and building the resilience of the poor. Targets 12.2 and 12.8 focus on sustainable natural resource use and raising awareness of such aims. In this reporting year, the project has

- Raised awareness of the project aims to rural communities through leaflet distribution, demonstration plot training and media engagements (See Section 3.2 Output 1 and Section 3.3 Output indicator 0.1)
- Delivered workshops including theoretical and practical training on plant conservation and sustainable harvesting (see section 3.1 and 3.2 for details)

Target 15.4 specifies the conservation of mountain ecosystems, within which the project is located, for sustainable development.

Target 2.1 aims for improved quality and quantity of food from ecosystems and 2.4, 13.1 and 13.4 highlight the need for strengthened resilience to climate-change. Targets 2.5 and 15.6 specifically intend to maintain plant biodiversity and ensure the benefits of genetic resources are shared equitably. Seed conservation will make genetically-diverse material freely available for restoration, re-introduction and/or research

Partners have already collected, processed and duplicated to the MSB, seed collections of 101 different fruit and nut species (see section 3.2).

Partners have submitted 9 red-list assessments to IUCN SIS for review. These assessments will support species conservation and research (see section 3.2).

Two MSc students have conducted genetic studies on 12 economically important fruit and nuts species. One has already presented research findings and is meeting with supervisors to draft research paper which will disseminate work to scientific community (see section 3.4)

5. Project support to the Conventions, Treaties or Agreements

The project furthers ITPGRFA's objectives for "conservation, documentation, sustainable use, and *ex-situ* collections of food and agriculture resources" through community collaboration for conservation of fruit and nut crop wild relatives (CWR). Articles 5, 6, 9, 12 and 13 are addressed. CBD strategic goals A-E are supported. Aichi Targets (AT) 1 and 4 raise awareness of biodiversity value and conservation with stakeholders. Georgia's National Goals (NG) A1, A2 and E2, and Armenia's national CBD targets 25.1.b and 26.1.a to inform the public about biodiversity and threat mitigation, increasing local involvement in decision-making for sustainable biodiversity use by 2020.

Current progress:

- 101 wild fruit and nut species collected, banked and duplicated to the MSB. Collections made by in-country partners who have continued to train and inform community members throughout Year 2 (See section 3.2).
- Project leaflets and knowledge exchange workshops in Georgia & Armenia (see section 3.2 Output 1)
- Project engagement via national media (see section 3.3 Output indicator 0.1)
- Steering-committee and BC engagement (see section 3.2)
- Twitter engagement (see section 13)
- Social scientist engagement with community to develop sustainable harvesting co-operative (see section 6)

- CO-PI authored article in Darwin December 2019 newsletter https://www.darwininitiative.org.uk/assets/uploads/Darwin-Newsletter-December-2019-Traditional-Culture-Conservation-FINAL.pdf
- An article, written by journalist Carolyn Fry, has been published in the Kew Magazine Spring edition. Carolyn joined Aisyah and the collecting team in October 2019 to follow an expedition and learn more about the project. The Kew magazine is free to members of Kew (119,770 in 2019) and can also be purchased in paperback or online form.

Community engagement activities, including IUCN-accredited assessments of F&N, will help both governments to meet targets for reduced natural habitat loss (AT5) and help prevent extinction / improve the conservation status of known threatened species (AT12). IUCN assessments and genetic research will be informed by mutual sharing of learning from these activities, seed conservation (AT19) and traditional knowledge (TK) (AT18). Georgia's NG C2 (AT19) requires improved species status, notably >75% of red-listed species. IUCN global red-listing will enhance understanding of economically-important species and build on national red-lists.

Current progress:

- IUCN-accredited assessors trained in 2018, have submitted 9 red-list assessments to SIS and submitted a further 5 for review by RBG's Kew's PAU before final submission (see section 3.2)
- Knowledge exchange and community questionnaires to gather information for red listing and provide platform for community members to share ideas on future conservation action plans (section 3.2)

Seed conservation activities address Georgian NG C1 and C5 for the assessment of biodiversity status, maintenance of indigenous plant species, and safeguarding of genetic diversity; and Armenian target 23.1.b for ex-situ conservation of biodiversity. Conserving seeds in-country and duplicating collections provides a resource for research, restoration and reintroduction as well as providing security backup.

Current progress:

- 101 wild fruit and nut species collected, banked and duplicated to the MSB (see section 3.1). Pre-collection assessments for remaining species complete.
- Remaining target species researched for fruiting times and location data (see section 3.1).

Research will improve plant genetic knowledge, directly addressing Georgia's NG E1 for enhanced knowledge on the values and functioning of biodiversity. Training of local MSc students in advanced, transferable genetic research will address Armenia's target 26.1.b for enhanced training of specialists in biodiversity studies

Current progress:

- Two MSc students trained in genetic analysis techniques both by in-country partners and at RBG Kew. Both students have proved capability for conducting independent research: field identification, sample collection, laboratory extraction, sequencing and analysis (see sections 3.1 and 3.2).

All project outputs contribute to GSPC Targets 8, 9, 13, 14. Conservation status will be informed regarding threats, population sizes and uses; seed collections and red-listing will contribute to Targets 8-9. Traditional knowledge is core to the project and will be treated with due respect; communities will be educated in the importance of plant diversity and its conservation (Targets 13-14). Progress is being made through distribution of leaflets, presentations and workshops.

Mutually agreed ABSAs are in place with all project partners to ensure fair and equitable use of project-related resources. Copies are available upon request. Community members engaged for

interviews have been informed about the project and explicitly asked if they would like to participate.

The British Ambassador in Armenia visited the red listing training in 2018 and was invited to visit the community but was not able to attend.

The project has been used to report against GSPC targets in both Georgia and the UK (see report in publications table, Annex 3).

Representatives of the Dusheti Mayor in the Administrative unit of Mchadijvari have attended community workshops (page 1, Annex 4.1.3.4) and has spoken about the needs and perspectives of the population.

6. Project support to poverty alleviation

The Mchadijvari community in Georgia and the Khachik community in Armenia are the intended beneficiaries of this project, which will help them maintain (through sustainable harvesting) and enhance (through community demonstration plots) the F&N resources they utilise. Neighbouring communities will also benefit from this project as the target communities reach out to them to share their experiences (year 3).

The project has contributed to poverty alleviation through employment of local Georgian and Armenian students/researchers/conservationists in various project activities (section 3.1). As well as direct employment, activities have supported income generation indirectly. In the Armenian community, social scientists held a workshop to teach selling techniques to increase sales by women within the community (Annex 4.1.4.3). Sona Galstyan, who sits on the steering committee, is exploring ways to engage the Khachik and nearby community further through her “Wildly Tisane” business (Figure 6.1). The business employs sustainable wild harvesting practice to collect wild species and produce tea products.

Together with Sona, project partners and co-ordinators are exploring opportunities to certify products produced by the community with FairWild (organisation tracking sustainable trade of wild-collected plant products). Certification would provide potential financial benefits to the community whilst ensuring biodiversity is not threatened by harvesting activities (email, Figure 6.2). Contact has also been made with Twining’s to explore commercial possibilities with the aim to improve livelihoods of communities through increased revenue (Figure 6.3).

Through engagement, training and employment (See section 3.1 for examples including steering committee visits to NBGG and demonstration plot training in Armenia) target communities in Armenia and Georgia have benefited from increased understanding of sustainable harvesting, uses of, and threats to wild fruit and nut populations. This will positively impact diet and income, contributing to poverty alleviation in the community. By engaging the next generation in the community through school visits (Annex 4.1.4.2) we are ensuring increased knowledge is intergenerational.

7. Consideration of gender equality issues

The project aims to increase the knowledge, and thereby confidence, of more disadvantaged community members to take decisions about the future of their natural resources. Rural Caucasus populations are dominated by women (52% in Armenia[12] and Georgia[13]). However, traditional gender norms prevail, preventing their equal participation[14]. These communities are almost homogenous in ethnicity and religion[15]. Project partners are committed to equal

12 National Statistical Service of the Republic of Armenia. 2015. Population. The Demographic Handbook of Armenia
13 National Statistics Office of Georgia, 2015. Women and Men in Georgia. Statistical Publication, Tbilisi
14 http://www.fao.org/3/a-i5575e.pdf
15 https://en.wikipedia.org/wiki/Demographics_of_Armenia

opportunities and employ staff without regard to gender; eight of 12 key project roles are held by women.

The project aims for gender equity and a "do-no-harm" policy; social scientists engaged are trained in Yerevan University's Guidance for Social Workers in Armenia[16], and Porta and Keating's Approaches in the Social Sciences[17] in Georgia, to encourage equal participation. Workshops conducted with communities have allocated time to predominantly female activities, including fruit and nut collection and processing. Training and workshop events throughout the project have been majority female (Annex 4.1.4.1) and both BC's in Armenia and Georgia are female as are the majority of steering committee members (see section 3.1). In Armenia the social scientist has held a workshop teaching selling technique to increase sales by women withing the community (community engagement report, page 7, Annex 4.1.4.3). Selling has been traditionally considered a male activity.

8. Monitoring and evaluation

We have in place community questionnaires that we conduct every year of the project to measure the impact the project has on the community. In the first year the questionnaire serves as a baseline, aimed at gathering existing knowledge of residents prior to the project activities. Armenian partners have repeated questionnaires in Year 2 however Georgia had to abandon their planned visit to the community due to several individuals in the community having to self-isolate as a result of the COVID-19 pandemic (report, page 11, Annex 4.2.2.2). The questionnaires will give the project both qualitative and quantitative data that contributes to the overall outcome.

Training/meeting/workshop registers have been taken as evidence of the number of people attending. Meeting minutes given by partners provide an overview of the progress towards the various outputs throughout the project. Currently the partners are required to submit progress reports to Co-PI on a quarterly basis for M&E purposes.

Feedback information from the MSc student training is gathered alongside research reports.

There have been no changes made to the M&E plan over the reporting period.

9. Lessons learnt

The MSc research projects have progressed well and students' residential training at RBG Kew was effective and well received. Razmik utilised the training to produce a preliminary phylogenetic tree and accelerate his research. Georgian partners had issues with extraction kits in-country which slowed down project progress but via the training course, Ana, was able to extract DNA from all her target species.

Participation in questionnaires has been high but a problem encountered in Armenia is that the same people have not necessarily been responding to evaluation surveys. This will affect the ability to evaluate impact of the project following evaluation in Year 3 if not addressed, though some general conclusions may still be drawn about trends in overall community held knowledge.

Partners have made good progress with researching and submitting red-list assessments thanks to a successful training course in 2018. One issue Georgian partners are now finding is that they need to access species data outside of Georgia as the species they are addressing are regional endemics and not solely Georgian endemics. As the project has set out to conduct 20 ***global*** red-list assessments, the Co-PI and RBG Kew's PAU team are advising on the best way to achieve this output.

16 Harutyunyan, L. (2002) Social Work Methods and Research Methods in Social Work, Guidance for Social Workers. Yerevan State University, Yerevan

17 Della Porta, D and Keating, M. (2008) Approaches and Methodologies in the Social Sciences. Cambridge University Press

The PI will use the lessons learnt and refine reporting of M&E for the coming years.

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

No.	Comment	Discuss with Darwin	Next half year report	Next Annual Report	No response needed
1	Section 7 of the report states that "over 50%" of the red listing workshop participants in Armenia were female whereas Section 2 states it was "over 75%" and the Workshop attendance register in Annex 4.3.1.2 indicates 67% (10/15) were female. Please clarify if the reference to "over 75%" requires correction.			x	

1.

We clarify that 67% of participants at red-list training workshops in Armenia were female.

11. Sustainability and legacy

The exit plan is said to be still valid and the completion of partner training activities in Year 1 would suggest this is justified. There is confidence that the legacy of the project will be sustained through ongoing capacity building and future seed conservation activities.

While the awareness raising and training activities relating to fruit and nut species conservation are likely to provide a strong basis for the sustainability of the project interventions, some more detail in the reporting on the poverty alleviation aspects of the project's sustainability would be welcome. For instance, there is limited detail on how the livelihoods of project beneficiaries are being materially improved as a result of the project and to what degree. Is there evidence that a certain number of beneficiaries will be brought out of poverty, have their income levels increase to certain degree, or that the risk of insufficient harvests to maintain a viable level of income and/or food security will be significantly decreased?

2.

More detail has been provided in the current report on the poverty alleviation aspects of the project's sustainability. Certification of community F&N products, for example wild harvested tisanes, will improve market potential for these products. In addition, training in sustainable harvesting techniques will reduce the impact on wild populations, making sustainable harvests available going forward, enabling community members to supplement their diets and potentially their incomes. In addition, training in F&N cultivation and the establishment of community plots for growing important F&N species will further alleviate pressure on wild plants by providing an additional source of produce to communities.

11. Other comments on progress not covered elsewhere

All aspects of project progress have been covered in the above sections. The impact of COVID-19 pandemic, as mentioned in 3.4, remains the largest change to the project to date.

12. Sustainability and legacy

The profile of the project has been promoted by national media engagement in Georgia and presentation of research at two international conferences. Engagement with the British Ambassador has promoted the project in Armenia. The high level of engagement within communities through the steering committees' points to a level of community cohesion around conservation and improving livelihoods continuing beyond the project end-point.

Out exit strategy is still valid, and there is confidence that the legacy of the project will be sustained through ongoing capacity building and future seed conservation activities.

13. Darwin identity

In all targeted and wider communications, The Darwin Initiative (DI) funding was recognised as the main contributor and the distinction of the project was highlighted. Project partners have continued to explain the DI whenever they conducted presentations/workshops/interviews with the target communities and use the DI logo wherever possible, e.g. The DI logo used in project leaflets sent out to target communities (Annex 4.1.7.1) and conference posters (Annex 4.4.3.2).

The Co-PI, Aisyah Faruk, has written an online article (https://www.kew.org/read-and-watch/adventures-in-armenia) which raises the profile of the project and DI's role in supporting it. The article has had 1,186 pageviews to date. The CO-PI has also written an article for the Darwin newsletter (link in section 5).

On social media, project communication is made through the Co-PI's personal account (@AisyahFaruk). Approximately 16 project related tweets during Year 2 of the project (top tweets, Figure 13.1).

14. Safeguarding

RBG Kew has a strict safeguarding code (https://www.kew.org/sites/default/files/2019-02/safeguarding-policy-procedures.pdf) and all RBG staff on the project receive annual safeguarding training Kew has also produced a "code of practice" (Figure 14.1) which we will adapt and send to partners. We also seek consent before any photography or filming event and seek confirmation using photo consent form which is retained securely at RBG Kew.

15. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2019 – 31 March 2020)

Project spend (indicative) since last annual report	2019/20 Grant (£)	2019/20 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	£38,248	£38,487	1%	
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 2019-2020

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
Impact Ecosystem services of the Caucasus are utilised sustainably by national populations thereby contributing to rural poverty reduction, increased food security and protection of plant biodiversity.		Continued knowledge exchange between community and partners contributing to positive impact for biodiversity and poverty alleviation. Demonstration plots for both Armenian and Georgian sites completed and will alleviate the pressure of wild harvesting as well as establish potential new income for the community. Community members given training and care sheets to ensure successful cultivation. Ex situ conservation of seeds (101 species in the bank out of 122 total target). Red list assessments contribute to both biodiversity conservation at a species and ecosystem level by documenting locality and current knowledge of extinction risk of fruit and nut species for use in land planning. In-country partners showing signs of learning and developing their own initiative for conducting assessments. Training local MSc students will further current knowledge gaps of species as well as equip them with the ability to enhance their wellbeing and career progression.	[redacted]
Outcome F&N conservation enhanced in Georgia and Armenia, by community members working together to strengthen economically-important ecosystem-services for rural livelihoods, helping build ecological resilience through	0.1 Best-practice harvesting techniques employed by 60% of adult community, 497 women and 497 men, by March 2021 to empower decision-making around sustainable resource management and protection of ecosystem services 0.2 20% of adult community members, 166 men and 166 women, receive and apply practical training in the cultivation of six priority species across two demonstration plots by March 2021	For 0.1 we have built on the positive response to the project in year 1 through extensive engagement with members of both communities this year around sustainable harvesting and protection of their F&N resources for future generations. This has been well received with participants recognising the link between sustainable practices and income	Community workshop to share project progress Community evaluation survey School quiz surveys Engagement with neighbouring communities

knowledge and protection of plant resources.	0.3 Using learning from project research, two steering-committees agree in their final meeting in 2021 three community-led actions and identify six neighbouring communities for engagement to improve local collection and cultivation beyond project end 0.4 100% of seed collections are duplicated to two seed banks by March 2021, conserving a total of 122 F&N 0.5 20 global risk assessments of economically-important F&N submitted to the IUCN by March 2021, putting in place the pathway for their threat and status information to be shared with policy-makers and the public 0.6 Genetic research results for 12 taxa delivered to the regional scientific community through two MSc theses and the presentation of a partner-led research paper at Georgia's Annual Biodiversity Conference in May 2020. Two research papers, submitted to regional journals by March 2021, will communicate project findings to the wider scientific community as well as policy-makers	generation as well as resource protection (details in section 3.3). Good progress has been made towards 0.2 with theoretical practical training delivered to 239 community members for eight species across two demonstration plots. 0.3 is on track. The steering committees are well established and have BCs in place, both communities have been consulted about conservation action plans, and neighbouring communities are being contacted. 0.4 is almost achieved with 101 F&N seed collections banked in country and at the MSB. Data on the remaining target species has been collected to aid fieldwork (once travel is allowed). 0.5 is in hand with data collected for 21 species, 9 IUCN Red List assessments submitted and 5 ready to submit. Once published threat status information will be shared with policy makers and the public. For 0.6 genetic research has been undertaken on 12 target taxa by the two MSc students. The work in Armenia is near completion, has been shared at two conferences (not the postponed ABC in Georgia) and a paper is in prep. In Georgia the analysis of findings is underway.	MSc theses submitted and research presented at conference Partner research paper submitted Remaining red-list assessments submitted to SIS Remaining collection of target species and subsequent processing in-country and at MSB Seed collection data uploaded to MSBP Data Warehouse Community action plan agreed
Output 1. Two rural communities trained in sustainable harvesting practices and empowered to deliver in-situ conservation of fruit and nut ecosystem services to enhance rural livelihoods	1.1 60% of community members, 497 women, 497 men and 108 children under 18, are made aware by December 2018 of the project, and by March 2021 of the outcomes of shared learning on IUCN threat assessments, genetic research, and sustainable harvesting 1.2 Five members of each community (three of whom are women) take on roles as ambassadors for change in the form of a	1.1 Evidence of completion for the first part of Output 1.1 can be found in the 2018-2019 annual report. We believe that we are steadily progressing towards the second part, which is to deliver shared learning from the project to the same percentage of the target communities. Partners are continuing to gather the relevant data and we plan to use the same mix of methods (school quizzes, leaflets/brochures and interviews) to disseminate our findings. 1.2 In the 2018-2019 annual report, we showed evidence of reaching this target indicator. A Biodiversity Champion was chosen for the steering committee in Armenia in year one. The Georgian community has now confirmed their Biodiversity Champion, Leila Migdiseli before the end of 2019. She is an	

	steering-committee of four people in 2018 and one BC in 2019 1.3 Two demonstration plots are established in 2018 in accessible, local areas with six priority F&N being cultivated by 20% of community members, 166 women and 166 men, by December 2019 1.4 10% of adult community members, 83 women and 83 men, are trained in sustainable harvesting techniques by 2020, and a total of 20% of adult community members, 166 women and 166 men, are trained in sustainable harvesting techniques and the long-term consequences for important F&N by March 2021 1.5 Utilisation and threat data for 20 F&N for IUCN red-list publications and 12 research taxa is collected from 20% of adult community members, 166 women and 166 men, during one workshop in 2018 and one workshop in 2019 and fed into red-list assessments and genetic research 1.6 Steering-committees develop community-led conservation action plans (one in Georgia, one in Armenia) with at least three points to take forward by their last meeting in 2021 1.7 10% of adult community members, 83 women and 83 men, develop plans for continued conservation and dissemination to neighbouring communities of sustainable harvesting techniques by March 2020, and 20% of adult community members, 166 women and 166 men, agree by March 2021 to continued conservation and dissemination to neighbouring communities of sustainable harvesting techniques of local F&N, led by the steering-committee and BC.	active member of the community and has been working closely with the project partners to organize workshops and visits. 1.3 Both target communities have established demonstration plots planted with locally sourced fruit and nut species through close consultation with the steering committee members. These are in easily accessible sites but not yet accessible to the whole community. In October 2019 the Armenian partners distributed leaflets to the community to highlight the demonstration plot and we monitored the effectiveness of this through a survey in February 2020. 48% of the community members have said that they know the plot existed and 68% would like to cultivate the plot (40% women and 28% men). The Armenian partners also conducted training for 15 members of the community to show how to care for the plants. Georgian partners reviewed the cuttings that were given to their community in 2018-2019 and found that 10% of them rooted. They also distributed plant care sheets to the community. Plans were in place to conduct a similar study to the Armenian partners to monitor learning, however, due to the COVID-19, a significant proportion of the community members were under self-isolation and the decision was made to postpone this activity until later in the year. 1.4 In the 2018-2019 annual report, a total of 76 community members were trained in sustainable harvesting techniques (58 women and 18 men). This year the in-country partners trained a total of 83 people from the communities (71 in Armenia and 12 in Georgia) before the January 2020 deadline. This brings the total of people trained to 159 (113 women and 46 men) by 2020, seven people shy of the intended target on 166 people trained by 2020. 1.5 In the 2018-2019 annual report, data was collected from 219 residents across the two countries in 2018. Partners in Armenia have collected relevant data from a further 14 residents in May 2019 (86% women) in a practical workshop and 130 residents in November 2019 (57% women); residents, bringing the total to a total of 363 adult community member, reaching our intended target for Output 1.5 of 332 adult community members but not satisfying the target gender split. 1.6 According to the Community Engagement Reports from Armenia, they are starting to work together with their steering-committee members to draft specific points for their conservation action plans. We plan to develop a printed report and requested for underspend from the Year 2 budget to be brought over to the final year for this purpose. The CRF has been approved. 1.7 Armenia has been proactive in this approach by firstly identifying nearby communities that they would target for project dissemination. Through discussion with the steering committee (~10 adult community members), we learnt that members from the community nearest to Khachik collect fruit and nuts from the same sites and these will be the main target community. In Georgia, the project partners have started disseminating the project leaflets to the nearby community.

Activity 1.1 Two social scientists are engaged, one in Georgia, one in Armenia	Social scientists have been engaged by project partners in both countries. Evidence provided in the 2018-2019 annual report. This activity is complete.	Continued engagement with social scientist for community workshop and surveys in Year 3.
1.2 Partners and social scientists conduct community assessments and engage members	Evidence provided in the 2018-2019 annual report. This activity is complete.	Continued engagement with members of community in Year 3 to disseminate project learning.
1.3 300 project leaflets are prepared and distributed to 200 households, the target school and the church in each community	Evidence provided in the 2018-2019 annual report. This activity is complete. Partners have started printing leaflets outlining project updates to their communities and sharing with nearby communities.	Additional leaflets for Georgian community will be distributed in Year 3.
1.4 Partners and social scientists recruit volunteers for the steering-committees (consisting of 1 partner staff and four community members) and plan future meetings during the first workshop	Evidence of completion for Armenia in 2018-2019 annual report. Georgian committee finalised and BC recruited for this year (see 3.1 and Annex 4.1.2.1; Annex 4.1.4.2)	Continued engagement with BC and Steering Committee for future meetings and workshops in Year 3.
1.5 Steering-committees, partners and social scientists meet for training and activity planning, including planning of demonstration plots	Evidence can be found in section 3.1 (Annex 4.1.4.3; Annex 4.1.3.4). This activity is complete.	Both steering committees meet to finalise plans for Year 3 meetings and workshops.
1.6 Presentations and quizzes are delivered to school-children during the school term in Y1 and Y3	Evidence of completion in 2018-2019 annual report.	Planning Y3 presentation and quiz with partners, teachers and steering committees.
1.7 Workshops for information sharing are conducted with community members	Partners are continuing to share relevant information to their target communities through a series of different avenues (visits, practical workshops and leaflets). Evidence can be found in section 3.1 (Annex 4.1.7.1; Annex 4.1.4.3); Annex 4.1.4.3).	Plans with Biodiversity Champion, steering committee and social scientist to develop workshops for Year 3 to share relevant findings from the project.
1.8 Land secured for two demonstration plots and signs created	Evidence of completion in 2018-2019 annual report.	Georgian partners plan to extend the demonstration plot to the back of the school and develop a larger community orchard and water tank.
1.9 Baseline/evaluation surveys conducted	Evidence of completion in 2018-2019 annual report for the baseline survey. Evaluation survey was done for Armenian	Evaluation survey conducted for communities continue.

		partners in Year 2, Georgian partners had planned to conduct the same, but due to the lockdown could not access the community. See section 3.1 (Annex 4.1.1.2; Annex 4.2.2.2)	
1.10 Plant material for demonstration plots (three important F&N) collected and provided to each community (six species in total)		Evidence of completion for Georgian community in 2018-2019 annual report. Evidence of completion for Armenian community in section 3.1 of this report (Annex 4.1.3.1; Annex 4.1.3.2; Annex 4.1.3.3; Annex; Annex 4.1.3.4). Partners have collected plants based on consultation with steering committee and together with the community members, planted these at their demonstration plot.	The demonstration plots will continue to be maintained and that we are working to involve more of the community in their care.
1.11 Practical and theoretical training is delivered by partners and social scientists on planting, cultivation and harvesting		Evidence of completion for Georgian community in 2018-2019 annual report. Evidence of completion for Armenian community in section 3.1 of this report (Annex 4.1.4.2; Annex 4.1.4.3; Annex 4.1.3.7). Partners have conducted a practical training workshop and handed care sheets in both Armenian and English.	N/A
1.12 Two BCs are engaged and coached in knowledge dissemination by the social scientists		Evidence of completion can be seen in section 3.1 (Annex 4.1.2.1; Annex 4.1.4.2) As per the request of the BC and Steering Committee, Armenian Social Scientist have also started training on sale methods and how to form a cooperative.	N/A
1.13 Steering-committees, BCs and communities meet at partner-led workshop to develop a post-project community conservation action plan		Not done yet	Planned for coming year.
Output 2. Seeds of 122 wild fruit and nut species from the Caucasus are protected through *ex-situ* seed banking in-country and at the MSB	2.1 65% of seed collections are duplicated to two seed banks by December 2020 and a further 35% by March 2021, conserving a total of 122 F&N (61 in Armenia, 90 in Georgia – an overlap of 29 species) 2.2 Data on cleaning, counting and viability testing of 65% of collected species is available by March 2020 and 35% by March 2021, to the Millennium Seed Bank Partnership	2.1 Steady progress is being made by both Armenian and Georgian teams. 101 species (~83%) have been collected and are in long-term storage in partner seed banks (38 in Armenia and 63 in Georgia) and were duplicated to the MSB in January 2020. 2.2 Georgian and Armenian collections have arrived at the MSB and been accessioned onto the MSB Seed Bank Database. However due to COVID-19 imposed restriction (building closure), processing and subsequent upload to the MSBP Data Warehouse was not possible. We expect this to be completed when staff return to the MSB.	

	2.3 Six partner staff, of which 50% women (three in Georgia and three in Armenia) are trained in seed collecting, processing and banking by December 2019	2.3 Georgian partners have trained 10 members of new staff in the first year of the project (see year 1 annual report). Armenian partners have completed training three new staff members, two of whom are women (~67%) in June 2019.	
Activity 2.1 Final target species list is completed, including distribution data		Evidence of completion in 2018-2019 annual report	N/A
2.2 Pre-collection assessments are conducted on the target species		Pre-collection assessments for 60 species have been completed in year 1. An additional 41 species have been assessed through studies of herbarium vouchers and targeted field excursions in the second year. In Q4 of Year 2, both the Armenian and Georgian teams have started collecting data for the upcoming field season for the remaining target species. Evidence can be found in section 3.1 (Annex 4.2.2.1; Annex 4.2.2.2)	Continue to collect pre-collection assessment data on remaining target species.
2.3 Training is delivered by partner staff in seed collecting, processing and banking		Evidence for Georgian team completed in 2018-2019 report. Armenian team completed this in June 2019. See section 3.1 (Annex 4.2.3.1).	N/A
2.4 Seeds, herbarium vouchers and data are collected in the field for 122 F&N		Both teams are on track to achieving this goal, with seeds, herbarium vouchers and data collected for 101 F&N species. See section 3.1 (Annex 4.2.4.1)	Continue to collect target species of F&N to reach the 122 species.
2.5 Seeds are counted, cleaned and viability tested in-country		Both the Georgian and Armenian teams have counted, cleaned and started conducting viability testing in-country. See section 3.1 for evidence (Annex 4.2.4.1; Annex 4.2.2.2; Annex 4.2.2.4).	Continue to count, clean and viability test remaining collections.
2.6 Seeds of 122 F&N are duplicated to the MSB via DHL courier		Seeds and associated materials of 101 F&N species are duplicated to the MSB via DHL courier in January 2020. See section 3.1.	Continue to duplicate remaining collections to the MSB.
2.7 Duplicated seeds are counted, cleaned and viability tested at the MSB		Both collections have been counted, cleaned and viability tested. Germination testing has started at the MSB to develop protocols see section 3.1 (Annex 4.2.2.4), however, some species require a long	Continue to process remaining collections collected in the 2020-2021 field season.

		period of incubation before successfully germinating.	
2.8 Data is shared by partners and the MSB on cleaning/counting/viability testing of seed collections		Both Armenian and Georgian teams have started sharing their processing data for the collection sent.	Share data as and when available to the MSB.
2.9 Data is uploaded to the DW		Not complete	Upload data to DW for Armenian and Georgian collections and remaining collections for the project.
Output 3. Global extinction risk assessments are completed and submitted to IUCN SIS for 20 of the target seed conservation species	3.1 14 partner-affiliated individuals (of which 50% women) can conduct global red-list assessments to the standard of the IUCN by September 2018 3.2 Full assessment data are available for seven species by December 2019 and a further 13 species by December 2020 3.3 IUCN global-scale assessments are made and submitted to the IUCN SIS, detailing the threats to, and status of, each of the 20 F&N; seven assessments made and submitted by March 2020 and a further 13 made and submitted by February 2021 3.4 Relevant learning from global IUCN assessments integrated into community workshops in 2020 and incorporated in community conservation plans by March 2021	3.1 Completed. Evidence given in the 2018-2019 annual report. 3.2 Data gathering for 14 species are now complete. Seven species are found to occur outside of Georgia, which requires additional data from neighbouring countries. Partners have sent out official requests to colleagues for this information and Kew's Plant Assessment Unit team are at hand to support the partners in developing assessments for problematic species. 3.3 Currently assessments of nine species have been submitted into IUCN SIS for review. A further five assessments are being completed using word document due to issues accessing the platform while in the current lock down situation and these will be uploaded into SIS when staff return to their respective institutions. 3.4 Assuming the current national level lock down due to COVID-19 is lifted before the end of 2020, the partners will plan to update the target communities on relevant leaning from the assessments. Both country partners are in close communication with the steering committees.	
Activity 3.1 IUCN-accredited Kew staff travel to Armenia to deliver training to all project partners in IUCN assessments		Evidence of completion in 2018-2019 annual report.	N/A
3.2 Training is delivered to 14 participants		Evidence of completion in 2018-2019 annual report.	N/A
3.3 Fieldwork is conducted for data collection		Through internal workshops, partners have identified specific gaps for assessments. In the 2018-2019 report, the Armenian partners completed field assessments for two species. In the current report a further three species required further investigations in the field before assessments can formally begin. The Georgian team conducted field	N/A

		visits for 8 species that required data collection. All field based work is now complete and assessments are being written in the final year of the project. See section 3.1.	
3.4 Desk-based research on 20 target-species is delivered		Desk-based research of 21 species is completed for those found in target countries. ~7 species are known to occur outside of Georgia and Armenia. Partners have started contacting colleagues from nearby countries to send locality data to ensure a global assessment can be done. See section 3.1.	Georgian team to continue collecting data from colleagues to feed into their current findings to ensure a global assessment can be done.
3.5 Community data-collection surveys are delivered		The first surveys were conducted in the 2018-2019 reporting period. Further surveys have been done for the Armenian community to collect additional data. This was in the form of short written surveys and in a workshop with the steering committee. See section 3.1.	N/A
3.6 Red-listing workshops are conducted to analyse and summarise the gathered data		Both country teams have conducted workshops to analyse and summarise current data. Evidence can be found in section 3.1 (Annex 4.1.4.3) of this report.	Further workshops in year 3 to finalise assessments and follow-up on comments made by reviewing panel.
3.7 Red-list assessments are submitted to the IUCN SIS for publication after project end		Partners have submitted into IUCN SIS 9 assessments for review. A further 5 assessments are in a Microsoft Word template that can be readily uploaded into SIS when completed. See section 3.1 (4.2.2.4).	Continue to review and refine assessments based on the IUCN guidelines to ensure successful publication after project end.
3.8 Results from the red-listing assessments of 20 species are shared with communities at workshops and through steering-committee meetings through 2019 – 2021		Not done yet.	Planning of workshop for Year 3 continue with partners and committee members.
Output 4. Increased understanding of the genetic diversity and uses of 12 fruit and nut taxa, highlighting valuable traits for climate change resilience	4.1 Two MSc students (Georgia and Armenia) in post by March 2019, and capable of conducting genetic analysis for 12 fruit and nut taxa (8 in Armenia, 4 in Georgia) by March 2020 4.2 DNA extraction completed on 12 taxa (8 in Armenia, 4 in Georgia) by February 2020 and	4.1 Both the Armenian and Georgian teams have successfully engaged two MSc students into the project before the March 2019 deadline. Through in-country training with their respective supervisors and further training at RBG Kew, both MSc students have shown that they have the capability to conduct genetic analysis for 12 fruit and nut taxa. Kew Project Coordinator has received feedback forms and preliminary results from the students as evidence of their newly acquired skills at the end of February 2020.	

	laboratory analyses completed on 12 taxa by December 2020 4.3 MSc and partner research findings disseminated to the scientific community and available to policy makers by March 2021 4.4 Two communities include relevant learning from research on traits related to climate change resilience for 12 F&N in their conservation plans by March 2021	4.2 DNA extraction for all 12 taxa is now complete and was done by the end of February 2020. In addition, PCR analysis is also complete for the 12 taxa ahead of the December 2020 deadline. 4.3 The Armenian MSc student has presented his initial findings to the scientific community during a conference in Tajikistan in July 2019 and again in the UK in September 2019. He is currently planning to submit his thesis in May 2020 and work on drafting his first research paper for publication closely afterwards. Georgian MSc student is still working on analysing her data before preparing to write her thesis and present her work. 4.4 Plans are currently in place to deliver a knowledge exchange workshop to the steering committee of the target communities to ensure that current findings are incorporated into conservation action plans before the end of the project.	
Activity 4.1 MSc students engaged and trained by partner staff in genetic analysis techniques		Evidence of completion in 2018-2019 annual report.	Partner staff will continue to supervise the students throughout their MSc study.
4.2 MSc students two-week residential training at RBG Kew, delivered by Conservation Science Department		MSc students from both the Armenian and Georgian teams attended training at RBG Kew under the mentorship of Laszlo Csiba. See section 3.1 (Annex 4.4.1.1; Annex 4.4.1.2)	N/A
4.3 DNA extraction and PCR techniques are used to conduct research on 8 taxa in Armenia and on 4 taxa in Georgia.		DNA extraction and PCR techniques done for 8 taxa of Rosa in Armenia and 4 of Prunus in Georgia (see section 3.1, Annex 4.4.2.1; Annex 4..2.2.2). Armenian MSc student has begun to analyse his results, leading to building of a phylogenetic tree. Georgian MSc student is working with her supervisor and other researchers to analyse her results gathered in February 2020.	Georgian MSc student continue to analyse her results with her supervisor.
4.4 CBD focal point contact invited to Georgia's Annual Biodiversity Conference 2021		Not done yet	Contact CBD focal point about the Georgian Biodiversity Conference 2021
4.5 MSc students complete theses and submit		Armenian MSc student is scheduled to complete and defend his thesis in May 2020. Georgian MSc student is still analysing her data and will be starting the writing phase of her course.	MSc students continue to work on their thesis in the final year of the project.

4.6 Attendance by partners at Georgia's Annual Biodiversity Conference 2021	The Armenian team has attended an international conference in the UK (see section 3.1, Annex 4.4.3.1; Annex 4.4.3.2) and plan to attend the Georgian conference in 2021.	Partners organise conference for 2021 and attend.
4.7 Presentation of latest research findings, including red-listing and community engagement learning, at Georgia's Annual Biodiversity Conference 2021	The Armenian team presented the latest findings from the project at the international conference in the UK (see section 3.1, Annex 4.4.3.1; Annex 4.4.3.2). Both partners plan to attend the Georgian conference in 2021.	Partners develop presentations of latest findings for the 2021 conference.
4.8 Research results of 12 taxa are shared with communities at workshops and through steering-committee meetings in 2021	Not done yet	MSc students to collate relevant data for partners to share with communities during a workshop in 2021
4.9 Research paper finalised and submitted to regional journals;	Armenian team is working with MSc student to begin drafting a paper from his findings to be submitted to regional journals.	Continue to work with partners and students to identify relevant journals and draft research papers for publication.
4.10 IPTGRFA focal point contacted and made aware of the imminent publication	ITPGRFA focal point in Armenia contacted about the project. See section 3.1 (Annex 4.4.3.6)	Contact both focal points about project and any relevant publications made.

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Ecosystem services of the Caucasus are utilised sustainably by national populations thereby contributing to rural poverty reduction, increased food security and protection of plant biodiversity. (Max 30 words)			
Outcome: (Max 30 words) **F&N conservation enhanced in Georgia and Armenia, by community members working together to strengthen economically-important ecosystem-services for rural livelihoods, helping build ecological resilience through knowledge and protection of plant resources.**	0.1 Best-practice harvesting techniques employed by 60% of adult community, 497 women and 497 men, by March 2021 to empower decision-making around sustainable resource management and protection of ecosystem services. 0.2 20% of adult community members, 166 men and 166 women, receive and apply practical training in the cultivation of six priority species across two demonstration plots by March 2021 0.3 Using learning from project research, two steering-committees agree in their final meeting in 2021 three community-led actions and identify six neighbouring communities for engagement to improve local collection and cultivation beyond project end 0.4 100% of seed collections are duplicated to two seed banks by March 2021, conserving a total of 122 F&N	0.1 Workshop attendance registers; community baseline and evaluation surveys 0.2 Training attendance registers; community baseline and evaluation survey sections on cultivation (demonstration plots); photographic evidence 0.3 Community action plan; steering-committee meeting minutes 0.4 Notification of Transfer documentation; DW data search	Political climate continues to enable partners to access rural areas Political climate continues to enable the shipping of plant material to the UK Exchange rate variation (e.g. as Brexit progresses) remains within bounds that enable project work to be fulfilled Natural disasters which would prevent project delivery do not occur in the project region Target F&N produce sufficient mature seeds for project needs

	0.5 20 global risk assessments of economically-important F&N submitted to the IUCN by March 2021, putting in place the pathway for their threat and status information to be shared with policy-makers and the public 0.6 Genetic research results for 12 taxa delivered to the regional scientific community through two MSc theses and the presentation of a partner-led research paper at Georgia's Annual Biodiversity Conference in May 2020. Two research papers, submitted to regional journals by March 2021, will communicate project findings to the wider scientific community as well as policy-makers.	0.5 Field survey forms; IUCN red-list assessment submission receipt 0.6 Two partner research papers and 2 MSc theses in pdf format; receipts of submission to regional journals for former; receipt of submission of abstract to conference.	
Outputs: **1. Two rural communities trained in sustainable harvesting practices and empowered to deliver in-situ conservation of fruit and nut ecosystem services to enhance rural livelihoods**	1.1 60% of community members, 497 women, 497 men and 108 children under 18, are made aware by December 2018 of the project, and by March 2021 of the outcomes of shared learning on IUCN threat assessments, genetic research, and sustainable harvesting 1.2 Five members of each community (three of whom are women) take on roles as ambassadors for change in the form of a steering-committee of four	1.1 Community survey section on household engagement at baseline then annual evaluations; leaflet distribution confirmed by signed declaration of delivery for each community by partner staff in 2018 and 2021; school quiz results baseline and end of project 1.2 Community engagement reports; community surveys; steering-committee minutes; letter accepting post as BC	All engaged community members remain in the region for the entire project period Access to communities remains politically and physically possible Environmental conditions enable sapling establishment successful within the project timeframe

	people in 2018 and one BC in 2019 1.3 Two demonstration plots are established in 2018 in accessible, local areas with six priority F&N being cultivated by 20% of community members, 166 women and 166 men, by December 2019 1.4 10% of adult community members, 83 women and 83 men, are trained in sustainable harvesting techniques by 2020, and a total of 20% of adult community members, 166 women and 166 men, are trained in sustainable harvesting techniques and the long-term consequences for important F&N by March 2021 1.5 Utilisation and threat data for 20 F&N for IUCN red-list publications and 12 research taxa is collected from 20% of adult community members, 166 women and 166 men, during one workshop in 2018 and one workshop in 2019 and fed into red-list assessments and genetic research 1.6 Steering-committees develop draft ideas for community-led conservation action plans (one in Georgia, one in Armenia) by March 2019, with at least three points to take forward by their last meeting in	1.3 Community engagement reports; community surveys; photographic evidence 1.4 Training attendance registers; community baseline and evaluation surveys; photographic evidence 1.5 Workshop attendance registers; workshop data forms; community surveys; IUCN red-list assessments; research report 1. 6 Two community conservation action plans	

	2021 1.7 10% of adult community members, 83 women and 83 men, develop plans for continued conservation and dissemination to neighbouring communities of sustainable harvesting techniques by March 2020, and 20% of adult community members, 166 women and 166 men, agree by March 2021 to continued conservation and dissemination to neighbouring communities of sustainable harvesting techniques of local F&N, led by the steering-committee and BC.	1.7 Two community conservation action plans; steering-committees meeting minutes; community engagement reports; end-of-project workshop attendance register	
2. Seeds of 122 wild fruit and nut species from the Caucasus are protected through *ex-situ* seed banking in-country and at the MSB	2.1 65% of seed collections are duplicated to two seed banks by December 2020 and a further 35% by March 2021, conserving a total of 122 F&N (61 in Armenia, 90 in Georgia – an overlap of 29 species) 2.2 Data on cleaning, counting and viability testing of 65% of collected species is available by March 2020 and 35% by March 2021, to the Millennium Seed Bank Partnership 2.3 Six partner staff, of which 50% women (three in Georgia and three in Armenia) are trained in seed collecting, processing and banking by December 2019	2.1 Field data sheets; cleaning/counting/testing data sheets; notification of transfer paperwork; photographic evidence 2.2 DW data search 2.3 Copies of training assessments and certificates; photographic evidence	Mature seeds are available for collection within the project timeframe. Partners and Kew able to continue to work under the current terms of their ABSAs for exchange of seeds Seed collection size is large enough to be divided and banked in 2 locations (i.e. contains >1,000 seeds, which can be a problem for rare/endangered plants)

3. Global extinction risk assessments are completed and submitted to IUCN SIS for 20 of the target seed conservation species	3.1 14 partner-affiliated individuals (of which 50% women) are capable of conducting global red-list assessments to the standard of the IUCN by September 2018 3.2 Full assessment data are available for seven species by December 2019 and a further 13 species by December 2020 3.3 IUCN global-scale assessments are made and submitted to the IUCN SIS, detailing the threats to, and status of, each of the 20 F&N; seven assessments made and submitted by March 2020 and a further 13 made and submitted by February 2021 3.4 Relevant learning from global IUCN assessments integrated into community workshops in 2020 and incorporated in community conservation plans by March 2021	3.1 Training register of attendance; scan of competence certificate signed by IUCN-accredited trainer 3.2 Audited species data forms 3.3 IUCN red-list assessment submission receipt; final assessments 3.4 Community action plan; steering-committee meeting minutes; community surveys	Sufficient data can be found on the target species to conduct meaningful assessments Kew trainer is able to travel and deliver training in year one IUCN accepts and publishes data within 12 months of project end
4. Increased understanding of the genetic diversity and uses of 12 fruit and nut taxa, highlighting valuable traits for climate change resilience	4.1 Two MSc students (Georgia and Armenia) in post by March 2019, and capable of conducting genetic analysis for 12 fruit and nut taxa (8 in Armenia, 4 in Georgia) by March 2020 4.2 DNA extraction completed on 12 taxa (8 in Armenia, 4 in Georgia) by	4.1 Signed MSc Student contract, training assessments; photographic evidence 4.2 Annual research reports; data from research	Target species populations are of sufficient size to enable material collection Two suitable local students are found within the project timeframe for completion of the Masters projects

	February 2020 and laboratory analyses completed on 12 taxa by December 2020 4.3 MSc and partner research findings disseminated to the scientific community and available to policy makers by March 2021 4.4 Two communities include relevant learning from research on traits related to climate change resilience for 12 F&N in their conservation plans by March 2021	4.3 Two MSc theses in pdf format; receipt of abstract submission to conference; copy of presentation for conference; two partner research papers in pdf format; receipts of submission to regional journals; email exchanges with ITPGRFA focal point in Armenia 4.4 Community action plan; steering-committee meeting minutes; community surveys	Results are sufficiently conclusive to provide new information to the scientific community Research proceeds according to plan and will be completed in time to feedback learning to communities before project end Kew staff are available to train MSc student on genetic analysis techniques

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)

1. Two rural communities trained in sustainable harvesting practices and empowered to deliver *in-situ* conservation of fruit and nut ecosystem services to enhance rural livelihoods

1.1 Two social scientists are engaged, one in Georgia, one in Armenia

1.2 Partners and social scientists conduct community assessments and engage members

1.3 300 project leaflets are prepared and distributed to 200 households, the target school and the church in each community

1.4 Partners and social scientists recruit volunteers for the steering-committees (consisting of 1 partner staff and four community members) and plan future meetings during the first workshop

1.5 Steering-committees, partners and social scientists meet for training and activity planning, including planning of demonstration plots

1.6 Presentations and quizzes are delivered to school-children during the school term in Y1 and Y3

1.7 Workshops for information sharing are conducted with community members

1.8 Land secured for two demonstration plots and signs created

1.9 Baseline/evaluation surveys conducted

1.10 Plant material for demonstration plots (three important F&N) collected and provided to each community (six species in total)

1.11 Practical and theoretical training is delivered by partners and social scientists on planting, cultivation and harvesting

1.12 Two BCs are engaged and coached in knowledge dissemination by the social scientists

1.13 Steering-committees, BCs and communities meet at partner-led workshop to develop a post-project community conservation action plan

2. Seeds of 122 wild fruit and nut species from the Caucasus are protected through *ex-situ* seed banking in-country and at the MSB

2.1 Final target species list is completed, including distribution data
2.2 Pre-collection assessments are conducted on the target species
2.3 Training is delivered by partner staff in seed collecting, processing and banking
2.4 Seeds, herbarium vouchers and data are collected in the field for 122 F&N
2.5 Seeds are counted, cleaned and viability tested in-country
2.6 Seeds of 122 F&N are duplicated to the MSB via DHL courier
2.7 Duplicated seeds are counted, cleaned and viability tested at the MSB
2.8 Data is shared by partners and the MSB on cleaning/counting/viability testing of seed collections
2.9 Data is uploaded to the DW

3. Global extinction risk assessments are completed and submitted to IUCN SIS for 20 of the target seed conservation species

3.1 IUCN-accredited Kew staff travel to Armenia to deliver training to all project partners in IUCN assessments
3.2 Training is delivered to 14 participants
3.3 Fieldwork is conducted for data collection
3.4 Desk-based research on 20 target-species is delivered
3.5 Community data-collection surveys are delivered
3.6 Red-listing workshops are conducted to analyse and summarise the gathered data
3.7 Red-list assessments are submitted to the IUCN SIS for publication after project end
3.8 Results from the red-listing assessments of 20 species are shared with communities at workshops and through steering-committee meetings through 2019 – 2021

4. Increased understanding of the genetic diversity and uses of 12 fruit and nut taxa, highlighting valuable traits for climate change resilience

4.1 MSc students engaged and trained by partner staff in genetic analysis techniques
4.2 MSc students two-week residential training at RBG Kew, delivered by Conservation Science Department
4.3 DNA extraction and PCR techniques are used to conduct research on 8 taxa in Armenia and on 4 taxa in Georgia.
4.4 CBD focal point contact invited to Georgia's Annual Biodiversity Conference 2021
4.5 MSc students complete theses and submit
4.6 Attendance by Georgian partners at Georgia's Annual Biodiversity Conference 2021
4.7 Presentation of latest research findings, including red-listing and community engagement learning, at Georgia's Annual Biodiversity Conference 2021
4.8 Research results of 12 taxa are shared with communities at workshops and through steering-committee meetings in 2021
4.9 Research paper finalised and submitted to regional journals;
4.10 IPTGRFA focal point contacted and made aware of the imminent publication

Annex 3: Standard Measures

Table 1 Project Standard Output Measures

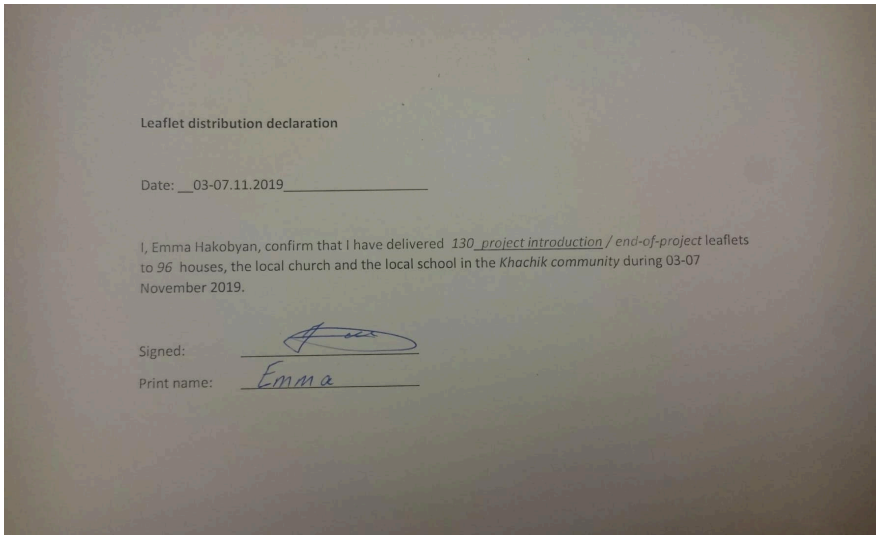
Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
Established codes								
2	Number of people to attain Masters qualification in genetic analysis (mixed)		Georgian and Armenian	0	0		0	2
3	IUCN-accredited training course certification (English)	50% women	Georgian and Armenian	14	0		14	14
6A	Training in seed conservation techniques (Armenian and Georgian)	50% women	Georgian and Armenian	10	3		13	6
6A	Theoretical and practical training on fruit and nut conservation and sustainable harvest	50% women	Georgian and Armenian	109	130		239	332
6A	Biodiversity Champion coached in knowledge sharing techniques		Georgian and Armenian	0	1		1	2
9	Conservation Action Plans of fruit and nut species			0	0		0	2
11B	IUCN assessments submitted for publication			0	9		9	12
11B	Peer reviewed paper based on MSc thesis work			0	0		0	2

13A	Seed and associated herbarium collections			4	101		105	122
14B	Research presented at biodiversity themed conference			0	2		2	1
14A	Workshop organised to share current findings to community			2	2		4	6
20	Capital assets			£5,479	£4,793		£10,272	£11,645
21	Steering-committee		Georgian and Armenian	2	0		2	2
22	Demonstration plots for fruit/nut species			1	1		2	2
23	Matched funding			£15,550	£15,804		£31,354	£47,097

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)
Adventures in Armenia	Blog	Aisyah Faruk, 2019	Female	Malaysian	Kew	https://www.kew.org/read-and-watch/adventures-in-armenia
Kew and the Global Strategy for Plant Conservation	Report	Dhanda, S., Williams, C. and Cowell, C. (eds), 2019	Female	English	Kew	Link

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



Leaflet distribution declaration

Date: __03-07.11.2019_____

I, Emma Hakobyan, confirm that I have delivered *130 project introduction / end-of-project* leaflets to *96* houses, the local church and the local school in the *Khachik community* during 03-07 November 2019.

Signed:

Print name: Emma

3.1.1 Leaflet distribution declaration by Armenian partners

3.1.2 Workshop with Khachik community, May 2019.

3.1.3 community workshop in Georgia

3.1.4 Mchadjjvari steering committee visiting NBGG

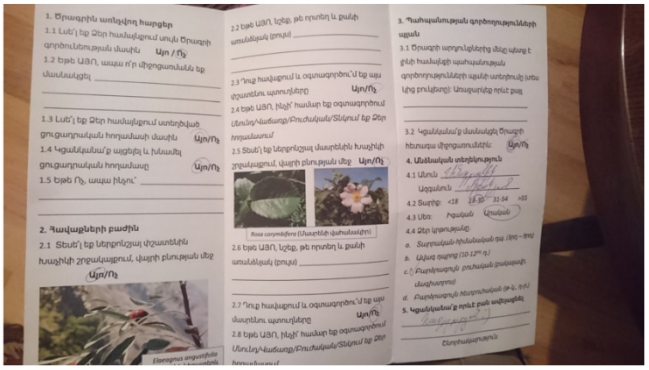
3.1.5 Mchadijvari school group visiting NBGG

3.1.6 Khachik Community demonstration plot training

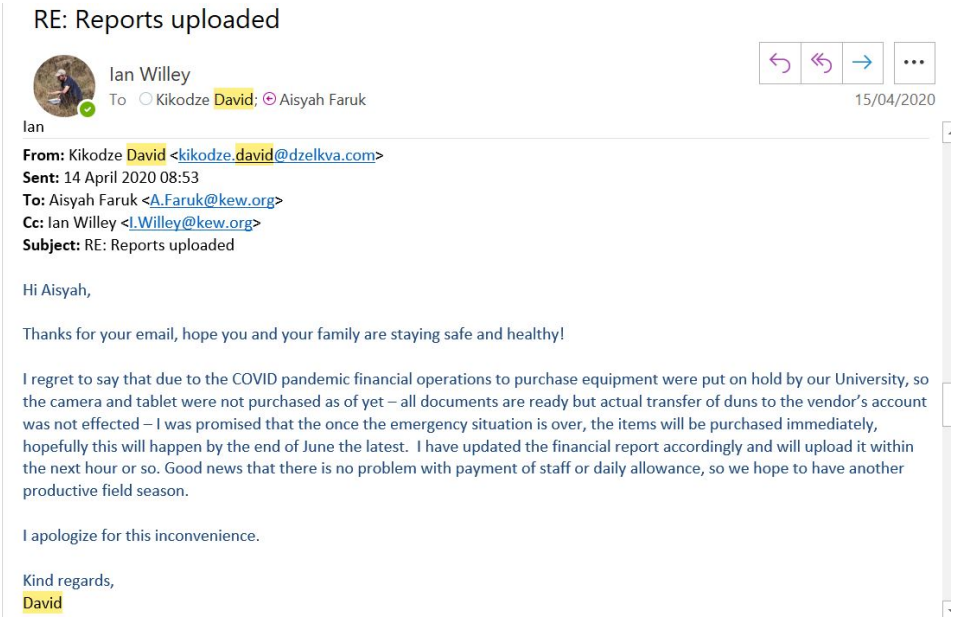
3.1.7 Astghik training new staff

3.1.8 Astghik processing seed collections (counting and setting up tests following cleaning)

3.1.9 Arrival of Armenian seed collection at the MSB



3.1.10 Armenian community questionnaire



RE: Reports uploaded

Ian Willey
To Kikodze David; Aisyah Faruk
15/04/2020

Ian

From: Kikodze David <kikodze.david@dzelkva.com>
Sent: 14 April 2020 08:53
To: Aisyah Faruk <A.Faruk@kew.org>
Cc: Ian Willey <I.Willey@kew.org>
Subject: RE: Reports uploaded

Hi Aisyah,

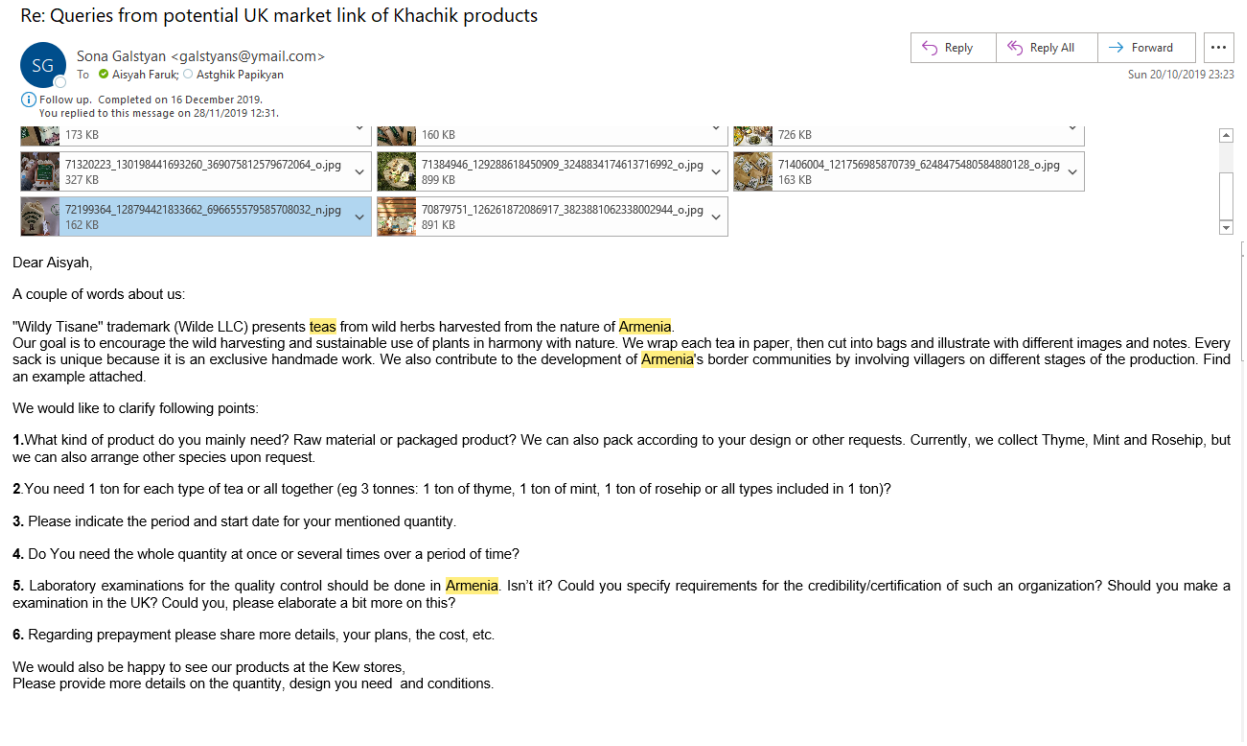
Thanks for your email, hope you and your family are staying safe and healthy!

I regret to say that due to the COVID pandemic financial operations to purchase equipment were put on hold by our University, so the camera and tablet were not purchased as of yet – all documents are ready but actual transfer of duns to the vendor's account was not effected – I was promised that the once the emergency situation is over, the items will be purchased immediately, hopefully this will happen by the end of June the latest. I have updated the financial report accordingly and will upload it within the next hour or so. Good news that there is no problem with payment of staff or daily allowance, so we hope to have another productive field season.

I apologize for this inconvenience.

Kind regards,
David

3.4.1 Email from Georgian partner detailing impact of COVID-19 on project



Re: Queries from potential UK market link of Khachik products

SG Sona Galstyan <galstyans@ymail.com>
To Aisyah Faruk; Astghik Papikyan
Reply Reply All Forward
Sun 20/10/2019 23:23

Follow up. Completed on 16 December 2019.
You replied to this message on 28/11/2019 12:31.

173 KB | 160 KB | 726 KB
71320223_130198441693260_369075812579672064_o.jpg 327 KB
71384946_129288618450909_324883417461371699 2_o.jpg 899 KB
71406004_121756985870739_6248475480584880128_o.jpg 163 KB
72199364_128794421833662_696655579585708032_n.jpg 162 KB
70879751_126261872086917_3823881062338002944_o.jpg 891 KB

Dear Aisyah,

A couple of words about us:

"Wildy Tisane" trademark (Wilde LLC) presents teas from wild herbs harvested from the nature of Armenia.
Our goal is to encourage the wild harvesting and sustainable use of plants in harmony with nature. We wrap each tea in paper, then cut into bags and illustrate with different images and notes. Every sack is unique because it is an exclusive handmade work. We also contribute to the development of Armenia's border communities by involving villagers on different stages of the production. Find an example attached.

We would like to clarify following points:

1.What kind of product do you mainly need? Raw material or packaged product? We can also pack according to your design or other requests. Currently, we collect Thyme, Mint and Rosehip, but we can also arrange other species upon request.

2.You need 1 ton for each type of tea or all together (eg 3 tonnes: 1 ton of thyme, 1 ton of mint, 1 ton of rosehip or all types included in 1 ton)?

3. Please indicate the period and start date for your mentioned quantity.

4. Do You need the whole quantity at once or several times over a period of time?

5. Laboratory examinations for the quality control should be done in Armenia. Isn't it? Could you specify requirements for the credibility/certification of such an organization? Should you make a examination in the UK? Could you, please elaborate a bit more on this?

6. Regarding prepayment please share more details, your plans, the cost, etc.

We would also be happy to see our products at the Kew stores,
Please provide more details on the quantity, design you need and conditions.

6.1 Email communication with Sona regarding tea products

FW: Armenia project & BioFach meeting invitation

Aisyah Faruk
To Ian Willey

Reply | Reply All | Forward | ...
Wed 08/04/2020 17:03

Cheers,
Aisyah

From: Bryony Morgan <secretariat@fairwild.org>
Sent: 09 September 2019 17:08
To: Aisyah Faruk <A.Faruk@kew.org>; Bone, Ruth <Ruth.Bone@twinings.com>
Cc: Anastasiya Timoshyna <anastasiya.timoshyna@traffic.org>
Subject: RE: Armenia: Fruit and Nut project - "market driven" conservation and sustainable livelihoods

Hi Aisyah,

It was good to speak over skype last week. Below is a short summary of the GIZ project in the South Caucasus – it included some training activities on sustainable collection, as well as auditing SMEs against the FairWild Standard.

They identified 17 companies for training through a selection process – of these, 12 later passed the Y1 FairWild certification scheme audit. Two of these continued with the certification for a couple more years (with financial support from GIZ), but did not manage to successfully establish ongoing trade partnerships.

You can find the FairWild Standard translated into Armenian and Georgian on our website: https://www.fairwild.org/resources (scroll to the bottom)

If it's potentially useful, I'm happy to try to find a contact point for you at GIZ to see if more information can be shared. There should be some value chain analyses and information on how they selected the participating companies, that might still be of use.

Best wishes,

Bryony

6.2 Communication with FairWild regards certification of community products

From: Bone, Ruth <Ruth.Bone@twinings.com>
Sent: 17 October 2019 13:46
To: Aisyah Faruk <A.Faruk@kew.org>; FairWild Secretariat <secretariat@fairwild.org>
Cc: Anastasiya Timoshyna <anastasiya.timoshyna@traffic.org>
Subject: RE: [External] RE: Armenia: Fruit and Nut project - "market driven" conservation and sustainable livelihoods

Hi Aisyah,

From my part: If you/ FairWild can identify a 3rd party processor in-country that can meet our specifications, there may be an opportunity for direct trade with us.

Our criteria would be:

- Items on offer are items we need for the business, and are available in commercial volumes (e.g. > 1 tonne per annum, ideally more like 3-5, depending on the item).
- Food safety compliance (specification attached, for hot brew items, including meeting maximum pesticide residue limits, same for microbiology which requires heat/ steam sterilization, pest infestation controls e.g. CO2 under pressure).
- Quality (taste, meeting our specification on physical attribute of the material, such as g/ 500 mls, dust content, moisture content) so we can accept shipments and the material will be suitable for our herbal blends.
- Price needs to be competitive [in principle direct trade vs. via a herbal supply company such as Martin Bauer should enable this]

These are our current criteria. We may be able to identify our own Europe based 3rd parties to cover the food safety and QC specification compliance if these measures cannot be met by the processors you identify in Armenia.

Further into the future, there may also be more scope for me/ Twinings to become more directly involved in supporting supply chain development. But that's not something I can offer right now – my role is still shaping up so please keep me posted!

Best wishes,
Ruth

6.3 Communication with Twining's regarding commercial opportunities for community products

Jan 2020 · 31 days

TWEET HIGHLIGHTS

Top Tweet earned 2,491 impressions

First shipment of seeds from Armenia just arrived for our **@Darwin_Defra** **#fruitandnutproject**. Over 40 important wild species are now in long term conservation. Now THIS is the way to start back at work 😇 **@KewScience**
pic.twitter.com/hCreX1KgoY

1 2 28

View Tweet activity View all Tweet activity

Top Follower followed by 8,967 people

Robbie Blackhall-Miles
@fossilplants FOLLOWS YOU

Top mention earned 1 engagements

Darwin Initiative
@Darwin_Defra · Jan 3

@AisyahFaruk **@KewScience** What a great start to 2020!

1

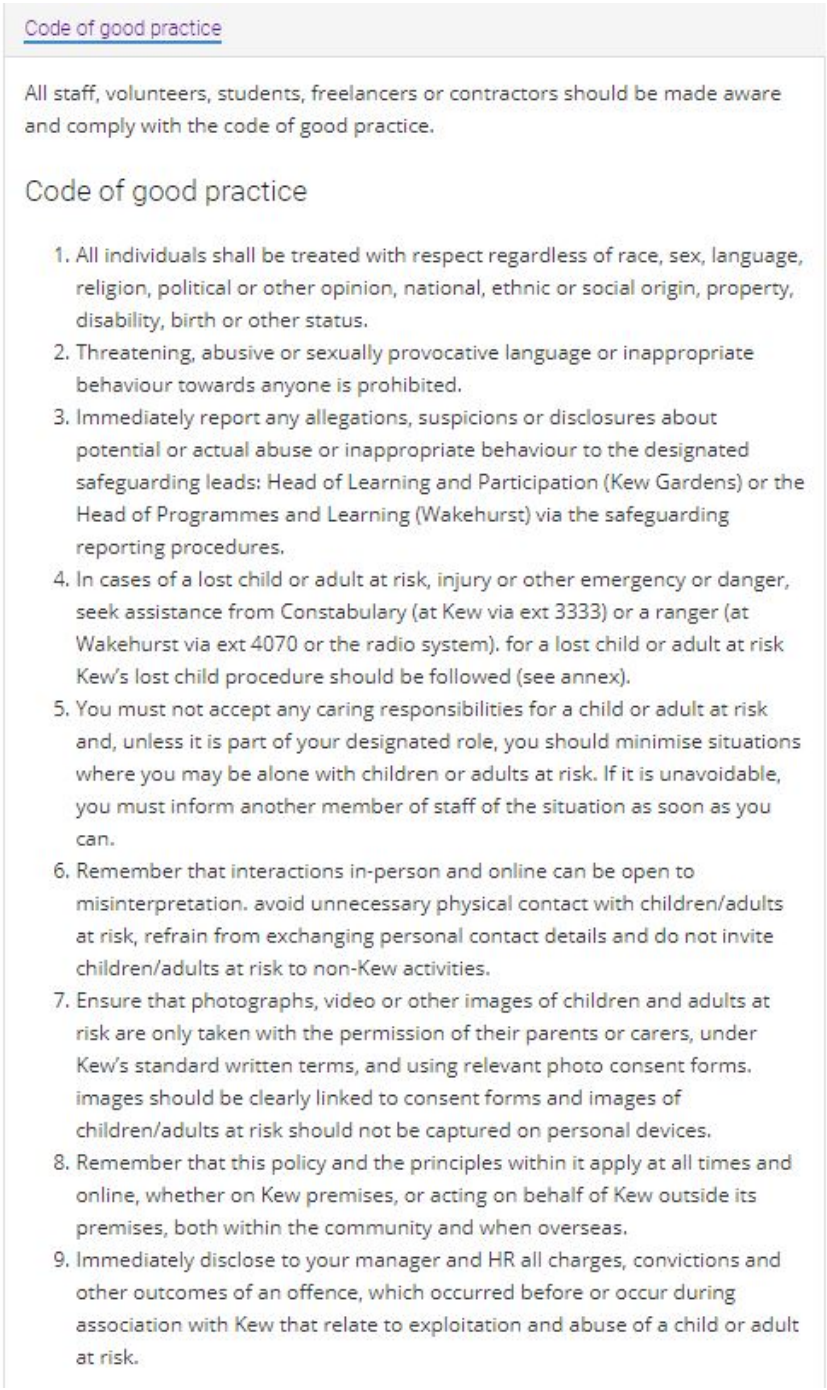
View Tweet

Top media Tweet earned 1,160 impressions

The Georgian seeds are here! In the safe hands of the ever cheery Nicola. Another 63 species of fruit and nut of the **#Caucasus** conserved both in Georgia and a back up collection at the **#MillenniumSeedBank** 😇 **@KewScience** **@Darwin_Defra** **#fruitandnutproject**
pic.twitter.com/WL5m2CYUPc

1 10

13.1 Top tweets in Year 2



Code of good practice

All staff, volunteers, students, freelancers or contractors should be made aware and comply with the code of good practice.

Code of good practice

1. All individuals shall be treated with respect regardless of race, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
2. Threatening, abusive or sexually provocative language or inappropriate behaviour towards anyone is prohibited.
3. Immediately report any allegations, suspicions or disclosures about potential or actual abuse or inappropriate behaviour to the designated safeguarding leads: Head of Learning and Participation (Kew Gardens) or the Head of Programmes and Learning (Wakehurst) via the safeguarding reporting procedures.
4. In cases of a lost child or adult at risk, injury or other emergency or danger, seek assistance from Constabulary (at Kew via ext 3333) or a ranger (at Wakehurst via ext 4070 or the radio system). for a lost child or adult at risk Kew's lost child procedure should be followed (see annex).
5. You must not accept any caring responsibilities for a child or adult at risk and, unless it is part of your designated role, you should minimise situations where you may be alone with children or adults at risk. If it is unavoidable, you must inform another member of staff of the situation as soon as you can.
6. Remember that interactions in-person and online can be open to misinterpretation. avoid unnecessary physical contact with children/adults at risk, refrain from exchanging personal contact details and do not invite children/adults at risk to non-Kew activities.
7. Ensure that photographs, video or other images of children and adults at risk are only taken with the permission of their parents or carers, under Kew's standard written terms, and using relevant photo consent forms. images should be clearly linked to consent forms and images of children/adults at risk should not be captured on personal devices.
8. Remember that this policy and the principles within it apply at all times and online, whether on Kew premises, or acting on behalf of Kew outside its premises, both within the community and when overseas.
9. Immediately disclose to your manager and HR all charges, convictions and other outcomes of an offence, which occurred before or occur during association with Kew that relate to exploitation and abuse of a child or adult at risk.

14.1: RBG Kew Safeguarding Code of Practice

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	Yes
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	No
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
Do you have hard copies of material you 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.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	