Darwin Initiative Main Project Annual Report

Important note: *To be completed with reference to the Reporting Guidance Notes for Project Leaders: it is expected that this report will be no more than 10 pages in length, excluding annexes*

Submission Deadline: 30th April 2017

Darwin Project Information

Project reference	23-025
Project title	Reducing environmental degradation through sustainable fuel interventions in Afghanistan
Host country	Afghanistan
Contract holder institution	Royal Botanic Garden Edinburgh (RBGE)
Partner institution(s)	Conservation Organisation for Afghan Mountain Areas (COAM) UN Environment
Darwin grant value	£304,386
Start/end dates of project	01.07.2016 – 31.03.2019
Reporting period and number (e.g., Annual Report 1, 2, 3)	01.07.2017 – 31.03.2017 AR1
Project Leader name	Tony Miller
Project website/blog/Twitter	
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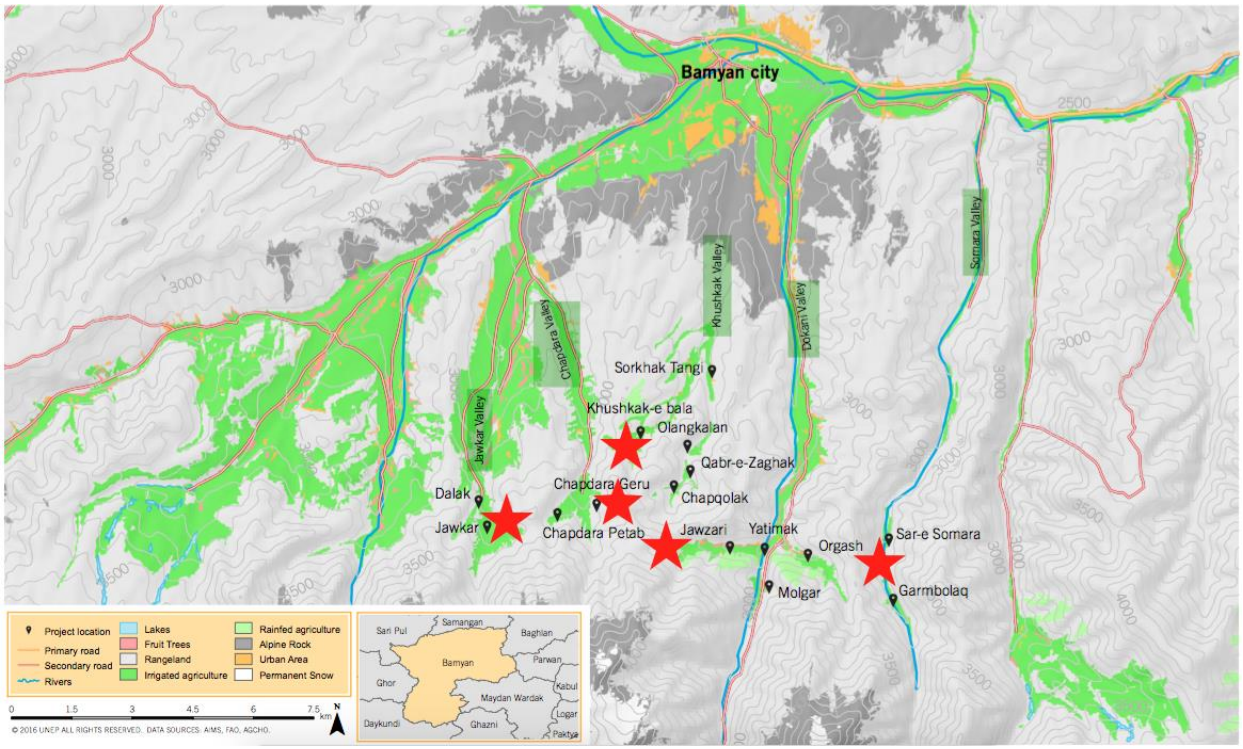
1. Project rationale

A major threat to biodiversity identified in Afghanistan's Fifth National Report to the CBD (2014) is unsustainable collection of woody plants for fuel. These are uprooted, preventing regeneration, and affecting the structure of the plant community and the biodiversity that depends upon it. Afghanistan is rich in biological diversity, with a flora comprising ~5000 native taxa of which ~24% are endemic. A severe lack of capacity means the scale of extractions, exactly which species are removed, and the effects on ecosystem services are poorly known.

Additionally, current heating and cooking facilities do not use fuel wood efficiently, and cause indoor air pollution that has been estimated by WHO to kill ~54,000 women and children annually in Afghanistan, plus the concomitant negative effects on household labour and finance. There is thus a clear link between environmental degradation, health and livelihoods in rural communities that can be addressed through simple interventions and monitoring.

These issues have been highlighted by the Government of Afghanistan, and its international environmental partners UN Environment. Through supporting local organisations, the provision of alternative and more efficient fuel sources has been developed: this project, based in five mountain communities in Bamyan Province (see map below) seeks to expand the provision of more efficient fuel sources and monitor the positive effects on biodiversity, livelihoods and health as well as raising awareness of the importance of sustainable use practices.



2. Project partnerships

Prior to the start of this project, RBGE has been working with both UN Environment and COAM for several years. As a result, a strong partnership and collaborative approach between all parties was already in place. The approach of UN Environment in Afghanistan has followed an “Afghan first” approach where international organisations and institutes have adopted a supporting rather than controlling or implementing role. As a result, this project was designed to outline the requirements of a successful Darwin Initiative project to our Afghan partners, and to support them to achieve project outcomes and outputs as necessary. In the first year of this project (9 months duration) this approach has been largely successful due to excellent working relationships between all partners and the local expertise held by COAM in the target areas.

It should be noted that Project Change documents detail that the Bremen Overseas Research and Development Association (BORDA) were removed as a partner from the project, as by the time the project started it had been demonstrated that the biogas installations planned would be unsuitable, inefficient and costly in the target mountain areas in Bamyan. This decision was proposed in country, and suggested alternate methodologies were based upon local requirements in Bamyan as detailed by in country partners and the communities they work with.

As RBGE staff are currently unable to visit Afghanistan, the appointment of a liaison officer between COAM and UN Environment has been particularly successful in ensuring project requirements have been met, that actions on the ground have been accomplished in a timely and efficient manner, and that M&E has been conducted with the full involvement of Government of Afghanistan ministries and authorities. Fulfilling reporting requirements set by UN Environment as well as by the Darwin Initiative have strengthened relationships between all partners, and have been beneficial to COAM in terms of administering and undertaking a large project grant, and for RBGE in ensuring expertise can be delivered to Afghanistan entirely through in country partners on the ground. Training workshops in Tajikistan have been important in this regard.

3. Project progress

3.1 Progress in carrying out project Activities

Detailed reports on each activity are given in Appendix 1.

Output 1. Biodiversity

Data collefcted on baseline of amount of fuel wood collected, using photographs of fuel stocks on house roofs and interviews/observational walsk with community members. Data yet to be formally analysed. Identity of local names of plants used for fuel underway. Collections at monitoring plots and during observational walks ongoing and formal identification and quantification planned for year two. Monitoring plots identified, survey training given in Tajikistan and locally by Afghan partners after that training.

Output 2. Awareness and Capacity Development

Inception and training workshops in Tajikistan: planning, design and training in sustainable use concepts for delivery to communities, planning M&E, field survey and plant collection and identification Training undertaken in Tajikistan in August 2016. Community project inception and awareness raising undertaken in March 2017 at time of alternative fuel delivery. Delivery of training in cookstove installation, use and monitoring to communities completed in March 2017.

Output 3. Livelihoods and Health

300 households in five communities provided with cookstoves, with addition of solar water heaters and bio-briquettes in place of biogas installations. Data collection on household fuel extraction time and distance complete but yet to be analysed. Post-installation data collection planned for Years 2 and 3. Community surveys to establish health and economic benefits trialled. Self-rated health assessments to be added in Year 2. Subset of households with CO and particle monitors installed. Community interviews conducted and to be repeated in Years 2 and 3.

Output 4. Gender Equality and Equity

Community interviews targeting data collection on health benefits for women and children trialled, based upon the assumption that women spend far more time in the home and kitchen leading to associated health improvements.

3.2 Progress towards project Outputs

Output 1. Biodiversity

As project start was delayed until 1 July 2016, much of the first year has been spent on project start up, organisation, and the manufacture, installation and training in use of alternative fuel sources. It was decided to capture standing fuel stocks through photography of storage facilities (often house roofs) and calculate by area, alongside interviews during fuel-stock collection trips. These data are available in summary, but have not yet been quantified (see appended COAM report). Interviews and observational walks have been conducted to assess the time and distance taken to collect fuel wood, and by whom (see appended COAM report). Further, permanent monitoring plots in different locations (current fuel collection sites, as well as previous and more distant untouched areas) have been located and monitoring of species and vegetation condition is underway (see appended COAM report). Progress in the field to achieve biodiversity monitoring to show benefits – a reduction in wild species extraction and more sustainable practices – has been good. Ensuring the data collected is mapped, collated and available for reporting and analyses has been less satisfactory and will receive more attention in year 2. The criteria for assessment remain valid.

Output 2. Awareness and Capacity Development.

Year 1 has concentrated on capacity development. Project inception meetings and discussions with Community Development Councils we successful (see appended reports).

Training in Tajikistan encompassed a range of field techniques to capture species and vegetation information, and sample collection for subsequent identification. This role has been taken on by Bamyan University, whose students have no field experience in the programme of study: Prof Abdullah Nawrozi attended the training in Tajikistan and has conducted field training in Bamyan with students and stakeholders alike. They are actively collecting and monitoring biodiversity in established monitoring sites.

At the time of installation of alternative fuel sources, a significant number of community members were trained in uses, and also attended workshops on sustainable use. These awareness raising workshops and events will be expanded in years 2 and 3 when more results from the project itself are communicable.

Training in M&E has involved staff from MRRD, MAIL and NEPA actively participating in evaluation of the project. COAM provides weekly and monthly reports to RBGE and other partners (see appended examples).

All components of capacity development are following the “learning by doing” approach, as implemented routinely by UN Environment in Afghanistan.

Output 3. Livelihoods and Health

300 households in five communities have been supplied with efficient clean cookstoves. The initial result of this is that those households who did not receive cookstoves – those in smaller villages or more isolated areas in the five valleys – are requesting them as they see the positive results especially from the reduction in indoor smoke and the efficiency of cooking and heating water by alternative means. There are also requests for cookstove demonstrations from neighbouring Daikundi Province.

While there is an expectation that a significant amount of time will be saved in reduced wood fuel collection, what this time can be used for remains conjectural. Following installation, time saved, benefits, and use of time will be monitored in years 2 and 3.

Direct health benefits – including finance – will be made in year 2. Informal surveys suggest that minor injuries and lack of hot water have previously been the source of discomfort, and while reductions in these may not have a financial benefit they are likely to have other benefits. These will be assessed through self-rated health which is under planning.

Installation of a small number of indoor air quality monitors has resulted in a lot of data collection which has yet to be formally analysed. However, it appears that peaks of CO can exceed 1000 ppm prior to efficient cookstove installation (see appended data file), and these peaks reduce almost tenfold post-installation. Data analysis and household interviews will add further data to this outcome.

Output 4. Gender Equality and Equity.

Gender segregated interviews on the roles in fuel wood collection, and especially daily schedules and self-rated health, have been trialled and will be expanded. It is clear that benefits from reduced indoor pollution will benefit women and children far more than men, as they spend more time in the household and are responsible for cooking and heating water. Women also spend more time collecting fuel wood – typically up to 4 hours each day - so will benefit more from that reduction. These will be monitored in years 2 and 3 post installation.

In summary, installation and preliminary data collection of many types has been achieved, and with further collection and analysis it is expected to achieve all outputs in the original application.

3.3 Progress towards the project Outcome

Project Outcome: Environmental degradation reduced via sustainable fuel interventions in four communities (300 households, 3000 individuals) leading to a reduction in woody plant extraction and improved livelihoods, health and gender equality.

Baseline data on woody fuel collection indicates that women spend 3-4 hours each day collecting fuel wood for that day’s requirements, travelling distances of several kilometres. Several different species have been locally identified, with scientific collections for formal

identification ongoing. The number of different species collected, and their conservation status, will be known in year two after a full collecting and monitoring season. Observational walks with both women and men collecting fuel wood have been undertaken. Concentration of fuel-stocks for the winter are undertaken mainly by men over the period of a month, and initiatial quantification of this process is provided in the COAM report attached.

Training in the use of cookstoves and other alternative fuel sources is detailed in the attached report from COAM. These also included wider awareness raising about sustainable use, involving over 200 people and distributed informally to the entire village community of ca. 2100 people. Once more specific results and numbers are available in year two, more explicit awareness raising will be undertaken through appropriate media.

Community interviews have been trialled and are ongoing in villages. More formal interviews detailing self-rated health, daily routines and household finances are starting and will continue in year two. Communities have been receptive to the project, and have collaborated willingly with COAM staff.

Indoor smoke has been measured through the installation of six air quality monitors and shows significant reductions post-installation. Monitoring is ongoing and will be supplemented by self-rated health assessments.

In summary, we expect that out project outcome will be met without significant alteration to methods. The project is already creating interest in alternative fuel sources in neighbouring villages and provinces.

3.4 Monitoring of assumptions

To date, all assumptions have been met with positive results, and no additional or existing potential risks to the project have been encountered. The exceptions to this are listed below:

The ability to attract and maintain high quality project staff has been challenging. This has resulted in (a) core COAM staff spending the majority of their time on this project, and (b) Bamyan University taking on the role of biodiversity monitoring. The project has not been compromised in any way.

Highlighting “stove stacking” will require careful monitoring of stove use post installation, as will the details of fuel wood collection and sale impacting on sustainable use of resources. Such monitoring will come into effect in years 2 and 3.

It was recognised that positive changes to vegetation structure are unlikely to be observed during the course of the project. The permanent monitoring plots will have a long term plan developed to assess this. A modelling component to propose the future effects of sustainable use will be included.

As yet, no natural disasters have affected the project area, and Bamyan remains a relatively stable province in Afghanistan.

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

In our experience, few projects make a direct link between sustainable use of natural resources, the livelihoods and health of communities, and biodiversity conservation. As this project progresses, these themes will be brought together and delivered as inter-connected programmes. This has been demonstrated in year 1 through cookstove installation and training being coupled with workshops on sustainable use. The strength of this link will increase as more data becomes available, and more knowledge about the species involved and the roles they play in the environment is communicated.

Further, this project moves away from the idea that a simple intervention such as a cookstove is the only benefit. The cookstoves have a direct impact on reduction in degradation and over time the benefits of this will be clear to see and understand. Therefore, immediate benefits (health) and longer term benefits in a range of areas give the project sustainability. The challenge will be to ensure that the sustainability is not let down by any link in the project chain

failing – for example if cookstoves require repair or replacement for which funds are not available meaning the links between degradation, livelihoods and health are broken due to one factor. This will be monitored and potential amelioration projected during this project.

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

This project is actively supporting progress towards achieving several Sustainable Development Goals.

SDG 3. Ensure healthy lives and promote well-being for all at all ages.

Installation of efficient cookstoves and other alternative fuel sources will significantly increase health benefits due to improved air quality.This will directly address SDG 3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. Further, well-being through reduced time and effort spent collecting fuel wood and access to hot water for washing through solar water heaters is now operating in Bamyan.

SDG 5. Achieve gender equality and empower all women and girls.

This project does not directly address sub-goals under SDG5 but see Section 7 for a report on gender equality issues addressed in this project.

SDG7. Ensure access to affordable, reliable, sustainable and modern energy for all.

While the alternate and efficient fuel sources installed as part of this project cannot be deemed “modern” they are sustainable, reliable, and should be more affordable for the mountain communities involved. They also diversify the fuel sources available to communities. These fuel sources have been installed during the first year of this project.

SDG 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Sustainable use of natural resources is at the heart of this project, and awareness raising alongside alternative fuel sources has been conducted in five mountain communities. The following two sub-goals are especially pertinent in this regard, and the installation of efficient fuel sources will go some way to reduce degradation in the mountain communities of Bamyan.

15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

5. Project support to the Conventions, Treaties or Agreements

Year 1 of this project has concentrated on collecting baseline data, and the installation of alternative and efficient fuel sources. As such, direct benefits to biodiversity have not yet been demonstrated. It is expected that all CBD, GSPC and Aichi Targets mentioned in the project application will be addressed, and benefits achieved, by the end of the project.

Integration of sustainable use concepts, and the support of communities in developing remedial action in degraded areas, is starting to be addressed through sustainable use workshops in communities, as pertinent to CBD Article 10.

The National Focal Point for the CBD is the Director General of the National Environment Protection Agency (NEPA). The NEPA Bamyan Office has been directly involved in this project from inception, and is an active member of the M&E process. The NEPA Bamyan Officer attended the project training in Tajikistan in August 2016, and NEPA staff have been involved regularly in project meetings and M&E.

6. Project support to poverty alleviation

The main focus of poverty alleviation in this project is an improvement in health. This will be achieved through a reduction in indoor air pollution (mechanism installed, preliminary monitoring suggests significant benefits), a reduction in effort collecting fuel wood (years 2 and 3) and the provision of more sustainable, reliable and regular hot water sources for cleaning and sanitation (years 2 and 3). Minor injuries and fatigue associated with fuel wood collection will also be monitored in years 2 and 3. Further, reduced costs associated with fuel will be measured.

The beneficiaries include all community members, but particularly women who do all cooking and the majority of fuel wood collection. Children in the home will also benefit. Financial benefits will affect entire households.

Indirect benefits such as how time saved in fuel collection can be utilised will be addressed in years 2 and 3 through community and gender segregated interviews.

7. Project support to gender equality issues

Gender discrimination is not being addressed directly in this project, but it is rather addressing gender inequality due to the roles played by different genders in Afghan communities. As the vast majority of wood collection and cooking is done by women and girls, inequality in negative health aspects will be rectified during the course of the project. Further work needs to be done, during this project, to ascertain the roles of females and whether these could be changed to further benefit and empower them. For example, although women do all cooking, only 25% of attendees at cookstove training and sustainability workshops were women. It is hoped to address this imbalance in Years 2 and 3. Further, from community interviews and walks, it appears that the majority of fuel collection is done by men – however, this in fact is the case only for annual stocking with daily requirements done by women. There is a cultural reluctance to admit that women are undertaking a range of physical roles. This will be addressed by further gender-segregated interviews and daily work plans in years 2 and 3.

8. Monitoring and evaluation

UN Environment in Afghanistan work under the approach that all government ministries and agencies are involved in project approval, and are included in workshops, meetings and project monitoring and evaluation. As such, MAIL, MRRD and NEPA have all been involved directly in monitoring this project on a routine basis against outputs. This approach has been successful thus far, and is strengthening relationships between local actors in Bamyan province. A draft M&E framework is in place. M&E meetings have taken place, planned every four months, including visits to communities and biodiversity monitoring trainings and sites. NEPA also attended workshops in Tajikistan in August 2016.

An additional component to M&E of this project has been monitoring community saturation to development projects. Some communities in this project have been involved in previous projects funded and implemented through different sources. Consideration from the community perspective has led to the formulation of a M&E framework to deal explicitly with such saturation. It is expected that this plan will be developed and implemented provincially and nationally by the end of the project.

9. Lessons learnt

The difficulty of transferring money to Afghanistan and Tajikistan (the latter for training costs) was not foreseen to be as problematic as it was. This was due to international banking inefficiency and a local banking problem in Tajikistan. More time will be allowed for timely and successful transfers in the future, to avoid any cash flow issues for partners in developing countries.

It was impossible to predict extreme variations in exchange rates brought about by the UK Brexit referendum, and this has led to the belief that potential variation in exchange rates should be included in applications at a much higher rate in the future, perhaps building in a contingency fund to future applications.

Generally, all activities (including reporting) have been as efficient and successful as expected, but due to the vagaries of the weather and communications in remote Afghanistan, a more relaxed approach to timetabling would be beneficial. UK expectations in this regard are rarely met in Afghanistan due to a variety of factors. This has been particularly true of transferring and sharing documents with weak and often absent internet connections. This will be borne in mind when transfers of photographs (large memory requirement) and shipping of duplicate plant specimen collections to the UK for identification purposes.

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

Not applicable.

11. Other comments on progress not covered elsewhere

There have been several changes to the project acted upon through formal change requests, initially due to the difficulty of finding suitable project staff in Bamyan and subsequently due to exchange rate differences requiring a revision of the budget lines and slight alteration to the logframe.

Attracting high quality project staff in fact has led to a positive outcome, whereby Bamyan University has taken on a large part of the role of biodiversity monitoring and is actively undertaken surveys and training for this project. UN Environment is using this opportunity to develop national monitoring strategies, and RBGE is using this opportunity to gather a range of data about plants that can be expanded in the coming years to fulfil a range of biodiversity knowledge and conservation roles.

Given that the Darwin Initiative is designed to provide assistance to developing countries, we considered that despite the change in exchange rates we would transfer the expected amount of dollars as calculated in the original application to our partners in Afghanistan. Without this finance in place in country, the project would have been difficult to achieve. As a result, our budget for the UK components has been significantly reduced and our change requests have reflected this. These adjustments have been very challenging to implement, but it is felt that the outcomes, objectives and outputs from the project will still be achieved.

An expected difficulty was that RBGE would not be able to visit Afghanistan during the life of the project. In fact, we view this as positive because it means that COAM have led this project directly and there has been no possibility for UK partners to interfere or impose themselves in Afghanistan. Training undertaken in Tajikistan was extremely successful during the first year of the project and has established some international links that would otherwise have not been the case.

We are confident that no additional or significant risks are attached to the project, and that the objectives will be achieved successfully.

12. Sustainability and legacy

The project exit strategy is still valid, and it is still expected that the project will reach its end point through the collaborative work of all partners.

Capacity development and awareness – in communities, in partner organisations and in stakeholder groups – will ensure long term sustainability of the approach and the skills learned. COAM is a robust NGO with low staff turnover at its core, and as such we envisage their work continuing in Bamyan for the foreseeable future.

As Bamyan is the location of a range of international interventions, including many by UN Environment, we expect that certain aspects of this project will be integrated into national strategies – for example in the avoidance of research fatigue, and vegetation and biodiversity monitoring. These will be reported on in due course.

As this project has concentrated on planning and fuel interventions in Year 1, the project website and further publicity will be developed in Year 2. Announcements and photographs have been posted on FaceBook and Twitter by all project partners, especially pertaining to field training in Tajikistan and the manufacture of cookstoves. It is expected that such publicity will increase as the project goes forward.

13. Darwin identity

Publicity has been relatively low key in Year 1, and is planned to increase as positive results start to come in.

In Afghanistan, the Darwin Initiative is recognised by all partners and stakeholders as a distinct programme – not linked directly to others but benefitting from existing work and collaboration. However, as this is the first Darwin Initiative main project in Afghanistan, detailed knowledge about the scheme is limited.

While undertaking training in Tajikistan, where Darwin projects are better known, much effort was made to discuss this with partners and with the UK Ambassador who supported our work and visited us at Kulob Botanic Garden where he planted a tree. He has subsequently supported a successful Darwin application for Flora Fauna International in Tajikistan and is keen to further develop links between the UK, Tajikistan and Afghanistan in joint training ventures.

Our Twitter account has linked back to a variety of interested organisations including @DarwinDEFRA.

14. Project expenditure

Table 1 below represents the budget agreed by a change request dated 23 March 2017, and thus incorporates agreed changes compared to the original application.

Table 1: Project expenditure <u>during the reporting period</u> (1 April 2016 – 31 March 2017)

Project spend (indicative) since last annual report	2016/17 Grant (£)	2016/17 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			-10%	Staff at RBGE employed on lower salary scale for 3 months
Consultancy costs			0%	
Overhead Costs			-2%	
Travel and subsistence			14%	Travel costs under-estimated but balanced against lower staff costs
Operating Costs			33%	Partial costs paid to partners twice in Tajikistan due to delayed currency transfer (paid in cash in country), explain % increase and project over-spend. Will be recouped in Year 2.

Capital items (see below)			-1%	
Monitoring and evaluation			-21%	COAM M&E not removed in latest re-budget (error £960)
TOTAL	**126,126**	**127,461**	**1%**	

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2016-2017

Project summary	Measurable Indicators	Progress and Achievements April 2016 - March 2017	Actions required/planned for next period
Impact **Environmental degradation reduced in upland rangelands, with livelihoods, health and fuel security improved in rural mountain communities.**		Community interviews suggest that significant time and effort is spent, especially by women, in the unsustainable collection of wild plants for fuel wood. Installation of 300 efficient cookstoves, solar water heaters and bio-briquettes has been met with enthusiasm by communities, and awareness of sustainable practices has been delivered hand-in-hand with alternative fuel installations. Monitoring of survey plots and amount and time spent collecting wild plants should demonstrate biodiversity and livelihood benefits in Years 2 and 3 as planned.	[redacted]
Outcome Environmental degradation reduced via sustainable fuel interventions in four communities (300 households, 3000 individuals) leading to a reduction in woody plant extraction and improved livelihoods, health and gender equality.	1 Baseline data gathered on woody plant extraction (species, amount, distance, frequency) by end of Year 1 and reduction in extraction after alternative/efficient fuel intervention (end of Year 2 & end of Year 3). 2 Awareness and capacity increased at community level (reaching at least 1000 individuals in participating communities) and at a more detailed level for at least 25 individuals attending gender-separated training courses and workshops, relating to sustainable use, links to livelihoods, and technical capacity in survey and monitoring by end of project. 3 Livelihoods of 300 participating households improved through: (a) alternative and diversified fuel sources,	1 A large amount of baseline data has been collected, but as the main focus during winter was the construction and dissemination of alternative fuel sources this data has not been transferred to a reportable format. Assessment of species collected and used have started, but identification and quantification at the species level with associated use information will not be complete until year two once a full collecting year has been accomplished. Initial surveys suggest women collect an average of 3-5 kg daily for household consumption, and that men stockpile for the winter in the weeks leading up to snow. Therefore, several hundred kg are collected daily across the five watersheds in this project. This takes women 3-4 hours per day, and men several days of work prior to	Consolidate and expand data collection and undertake preliminary data organisation and analyses. Identify species and proportions used for fuel wood. Plan modelling of reduction in collection effects on vegetation structure. Expand awareness of project and benefits through demonstration of positive results. M&E of project objectives and outputs by partners and stakeholders.

	(b) reduction in labour required in fuel collection, (c) reduction in health costs due to decreased indoor smoke, (d) support of local business involved in manufacture and installation of stoves. 4 Improvement in health and wellbeing for women in participating households as a result of measured decrease in indoor smoke by end of project compared with pre-intervention baseline (end of year 1)	winter. Distances travelled are several kilometres on steep terrain. 2 Awareness raising workshops about sustainable use of natural resources have been delivered to >200 people. Technical survey training will be conducted by 20 students from Bamyan University: training is already underway. 3 300 households in 5 communities have received efficient cookstoves, and a smaller selection of solar water heaters and bio-briquette tools for use at community level Air quality measured through installation of six air quality monitors suggests a significant decrease in CO and particulate matter can be achieved. Improvements in health and air quality will be monitored in year 2 via community interviews and assessments of self-rated health. 4 Baseline data on indoor air quality collected in subset of households. Self-rated health questionnaires will be conducted in year two.	
Output 1. Biodiversity Baseline and measurable reduction in extraction of woody species for fuelwood	1.1. Data collected on species, quantity and location of fuelwood extraction for four communities before (end of Year 1 baseline) and after alternative fuel source intervention (end of Year 2, end of Year 3) with intervention resulting in 50% decrease in average fuelwood extraction in Kg/month by end of project 1.2. IUCN Red List assessments of 20 woody species used by the communities involved for fuelwood produced and submitted to IUCN by end of project	1.1. Quantity and location/distance measures acquired but yet to be processed. Species identification will be completed in Year 2. 1.2. Not applicable in Year 1. Data collection targeted to achieve this by end of project. 1.3. Permanent monitoring plots identified, vegetation survey training completed, preliminary surveys underway. 1.4. Not applicable in Year 1. Data collection targeted to achieve this by end of project.	

	1.3. Replicated vegetation surveys before and after alternative fuel source interventions to determine potential species, vegetation and diversity changes, with plans implemented for long term monitoring 1.4. Model projections for the effects of reduced woody extractions on ecosystem services and vegetation changes.	
Activity 1.1. Data collection on frequency and amount of woody taxa collected for fuelwood (including identification of species and relative quantity of each species collected)		Collections and photographs of taxa used for fuel wood underway. As complete field season has not been available in Year 1, identification and quantification will be completed and repeated in Years 2 and 3.
Activity 1.2. Vegetation survey conducted at sample fuelwood collection locations (and control sites) before and after alternative fuel interventions		Permanent survey plots identified and initial survey training undertaken in Tajikistan and in Bamyan by project partners.
Activity 1.3. IUCN Red List Assessments for endemic species used for fuel extraction		Not applicable in Year 1
Activity 1.4. Identification tool for fuelwood species developed, and used to collect detailed information on species distribution		Not applicable in Year 1
Activity 1.5. Predictive modelling of ecosystem service replacement due to natural regeneration of woody taxa		Not applicable in Year 1
Output 2. Awareness & capacity development Basic awareness of concept of sustainable use of natural resources increased amongst participating communities Capacity of local Afghans increased in surveying and monitoring plant species as a measure of environmental degradation and improvement Capacity developed in implementing cleaner and efficient fuel technologies (efficient stoves and biogas).	2.1. Ten project staff and community leaders trained and successfully delivering sustainable use workshops in local communities by end of project 2.2. At least 1000 individuals more aware of sustainability through sustainable use workshops and other awareness raising activities such as participatory mapping, by end of project 2.3. Fifteen people trained in field identification and vegetation survey at field courses delivered in Tajikistan. These attendees will also be instructed and supported in how to deliver this training course to others. 2.4. Twenty-five people trained locally in-country by those project staff who attended field training course in	2.1. Sustainable use workshop delivered by COAM. Further community delivery planned for Years 2 and 3. 2.2. >200 people more aware of sustainable use of natural resources through workshops. Community delivery planned for Years 2 and 3. 2.3. Seven project staff trained in Tajikistan in August 2016. Further training planned for Years 2 and 3. 2.4. Not applicable for Year 1. Training with Bamyan University planned for Years 2 and 3. 2.5. >200 people trained in installation, maintenance and use of cookstoves (breakdown by use and by gender not yet available). Number of smiths trained not yet available. 2.6. NEPA, MAIL and MRRD involved directly in project through M&E. Capacity development and awareness planned for Years 2 and 3.

	Tajikistan. These locally trained people will be trained to carry out vegetation survey and data collection in participating communities. 2.5. 30 people trained in installing and using efficient stoves, solar heaters and bio-briquettes. Five young metal smiths will be trained in the basics of stove construction. 2.6. Capacity in government departments increased (NEPA, MAIL, MRRD) in the role of sustainable technology of promoting community resilience through participation in training workshops in Tajikistan and participation in monitoring and evaluation exercises (6 staff)	
Activity 2.1. Inception and training workshops in Tajikistan: planning, design and training in sustainable use concepts for delivery to communities, planning M&E, field survey and plant collection and identification		Training undertaken in Tajikistan in August 2016.
Activity 2.2. Delivery of awareness raising sustainable use workshops in communities, delivery of training in field survey techniques and data collection		Community project inception and awareness raising undertaken in March 2017 at time of alternative fuel delivery (see report). Field survey training planned for May 2017 through Bamyan University.
Activity 2.3. Delivery of training in cookstove installation, use and monitoring to communities		Completed in March 2017.
Activity 2.4. Project and stakeholder staff trained in M&E.		Staff from MRRD, MAIL and NEPA trained and participating in project M&E with framework developed.
Output 3. . **Livelihoods & Health** Community livelihoods improved through fuel accessibility and diversification and health benefits	3.1. At least 300 households (~3000 individuals) in four communities provided with a combination of efficient stoves, solar heaters and bio-briquettes, with logistical support & training in use provided to users, particularly women. 3.2. At least 30% reduction in average time spent and distance travelled to collect fuel wood by end of project compared to historical and pre-installation 2016 baseline, recorded through fuelwood data collection and participatory community mapping.	3.1. 300 households in five communities supplied with cookstoves, solar water heaters and bio-briquettes. Training provided in installation, use and maintenance. Monitoring of use and customer satisfaction planned for Years 2 and 3. 3.2. Not applicable in Year 1 (baseline and mapping achieved). 3.3. Not applicable in Year 1. 3.4. Not applicable in Year 1, although trials with air quality monitors suggest a significant reduction in CO and particulate matter pre and post installation.

	3.3. 10% reduction in average health expenditure per person by end of project compared to historical and pre-intervention baseline at end of year 1 in participating communities. 3.4. 50% reduction in indoor smoke in community households after installation of efficient stoves compared with pre-installation baseline data.	
Activity 3.1. 300 households in four communities provided with cookstoves		Achieved, with addition of solar water heaters and bio-briquettes in place of biogas installations.
Activity 3.2. Data collection on household fuel extraction time and distance		Data collected but still in raw format. See narrative for details. Post-installation data collection planned for Years 2 and 3.
Activity 3.3. Community interviews and surveys to establish health and economic benefits		Initial interviews conducted but still in raw format. Self-rated health assessments to be added in Year 2.
Activity 3.4. Data collection on indoor air quality		Subset of households with CO and particle monitors installed. Community interviews conducted and to be repeated in Years 2 and 3.
4. Gender Equality & Equity Improved livelihood and health benefits for women, empowerment and engagement through inclusion in training and	4.1. >500 women benefitting from reduced indoor smoke, increased time spent outdoors using solar water heaters, better access to hot water for washing, and reduced time spent collecting firewood. 4.2 Women participating in project training sessions perceive benefit through learning skills and improving knowledge, and increased feelings of empowerment through inclusion, compared to before involvement measured through survey of participants.	4.1. 300 households now have access to cookstoves, solar water heaters and bio-briquettes. Benefits to be monitored by comparing daily routines, air quality measurements and community assessments. 4.2. Women participating in cookstove training and sustainable use workshops. Numbers not yet quantified but still at lower levels than men.
Activity 4.1. Community interviews targeting data collection on health benefits for women and children		Gender segregated interviews started, based upon the assumption that women spend far more time in the home and kitchen leading to associated health improvements.

Annex 2: Project's full current logframe as presented in the application form (changes agreed 2016.10.28).

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: (Max 30 words) **Environmental degradation reduced in upland rangelands, with livelihoods, health and fuel security improved in rural mountain communities.**			
Outcome: (Max 30 words) Environmental degradation reduced via sustainable fuel interventions in four communities (300 households, 3000 individuals) leading to a reduction in woody plant extraction and improved livelihoods, health and gender equality.	1 Baseline data gathered on woody plant extraction (species, amount, distance, frequency) by end of Year 1 and reduction in extraction after alternative/efficient fuel intervention (end of Year 2 & end of Year 3). 2 Awareness and capacity increased at community level (reaching at least 1000 individuals in participating communities) and at a more detailed level for at least 25 individuals attending gender-separated training courses and workshops, relating to sustainable use, links to livelihoods, and technical capacity in survey and monitoring by end of project. 3 Livelihoods of 300 participating households improved through: (a) alternative and diversified fuel sources, (b) reduction in labour required in fuel collection, (c) reduction in health costs due to decreased indoor smoke, (d) support of local business involved in manufacture and installation of stoves and construction of biogas.	0.1 Peer reviewed article, basic yearly summary statistics released on project website, project report 0.2 Training and workshop materials, lists of attendees, radio programming materials, photographs of workshops, summarised awareness survey results, project report 0.3 Community interviews and record keeping presented in project reports: (a) proportion and amount of fuel sources (before/after installation); (b) time/distance spent gathering fuel wood (before/after installation); (c) financial outlay on medical services quantified; (d) number of people trained/employed in construction, installation and training. Baseline currently not quantified, hence year one baseline data gathered, with changes post installation monitored in years two and three.	Working partnership between communities and project staff established and maintained, in which COAM has extensive local experience. Reduction in woody species extraction leads to biodiversity status improvement and associated ecosystem services benefits (good scientific evidence for this, monitoring started with long term plan in place). Potential issue that new cookstoves will encourage increase in stove usage for cooking and heating, leading to increase in fuel wood collection balanced against reduction through increased stove efficiency. Data will be collected on levels of cookstove use alongside fuelwood collection (outputs 1.1 and 3.2) before/after installation in subset of households spanning socio-economic conditions, in order to monitor feedback. Solar heater installation will also ameliorate this issue. Data presented and evaluated in first/second year report to enable adaptive management as necessary in year three. Security and political situation is stable enough for in-country partners to undertake work. This has had less

	4 Improvement in health and wellbeing for women in participating households as a result of measured decrease in indoor smoke (plus improved sanitation and access to covered passive solar area in households with biogas installations) by end of project compared with pre-intervention baseline (end of year 1)	0.4 Data gathered through community interviews and average medical cost survey results presented in project report.	effect in Bamyan than in any other province to date, where project workers have worked safely and successfully for several years. Communication methods are appropriate & take account of gender – workshops are gender-separated and appropriately led to allow women to participate fully, interview questions are sensitively worded and asked by appropriate team members. COAM and UNEP have extensive experience of this. Workshops and training materials can be accurately translated in a timely fashion; UNEP have access to high-quality translators with specialities in environmental and sustainability material. Stoves & solar heater installations are safe, sturdy, easy to maintain and appropriate to household; local experts will install the interventions & contact points will be established. Suppliers of stoves continue to stay in business and capable of fulfilling the orders; the stoves are made from easily sourced metal and will be supplied by a local enterprise to a design developed and tested by Bamyan artisans through several iterations, solar heaters and bio-briquettes are simple technologies and easy to repair. 'Stove stacking' (using the efficient stove in addition to traditional methods instead of as a replacement) will not occur – this could lead to no reduction in fuelwood usage or an increase; the

			local design & testing of stoves should prevent the need for this.
Outputs: **1. Biodiversity** Baseline and measurable reduction in extraction of woody species for fuelwood	1.1 Data collected on species, quantity and location of fuelwood extraction for four communities before (end of Year 1 baseline) and after alternative fuel source intervention (end of Year 2, end of Year 3) with intervention resulting in 50% decrease in average fuelwood extraction in Kg/month by end of project 1.2 IUCN Red List assessments of 20 woody species used by the communities involved for fuelwood produced and submitted to IUCN by end of project 1.3 Replicated vegetation surveys before and after alternative fuel source interventions to determine potential species, vegetation and diversity changes, with plans implemented for long term monitoring 1.4 Model projections for the effects of reduced woody extractions on ecosystem services and vegetation changes.	1.1 Peer reviewed article, identification tools available, project report 1.2 IUCN Red List Assessments submitted 1.3 Project report, community interviews 1.4 Peer reviewed article, project report	Identification and survey tools must be accessible and usable for local staff and communities; these will be tested by project staff & necessary translations done Fieldwork in Bamyan possible due to political and environmental stability. Current situation is stable & NGOs are able to carry out work with local communities with no problems. UNEP partnering will give access to high quality security information and logistical assistance as necessary. Changes in vegetation can be detected within project time-frame – this would be recorded in a follow-up survey outside project lifetime to assess lasting change and long-term project impact. Community engagement with project should ensure data gathered is representative & accurate; COAM local community expertise & UNEP assistance in developing data collection methods will assist this. Communities and local landscapes will not be affected by ecological disasters such as flooding, landslides or fires.
2. Awareness & capacity development Basic awareness of concept of sustainable use of natural resources increased amongst participating communities	2.1 Ten project staff and community leaders trained and successfully delivering sustainable use workshops in local communities by end of project	2.1 Project report, list of attendees at community workshops, workshop photographs.	Fieldwork in Tajikistan possible due to political and environmental stability. For UK partners, CMEP will follow institutional guidelines drawing on FCO advice and information from colleagues

Capacity of local Afghans increased in surveying and monitoring plant species as a measure of environmental degradation and improvement Capacity developed in implementing cleaner and efficient fuel technologies (efficient stoves and biogas).	2.2 At least 1000 individuals more aware of sustainability through sustainable use workshops and other awareness raising activities such as participatory mapping, by end of project 2.3 Fifteen people trained in field identification and vegetation survey at field courses delivered in Tajikistan. These attendees will also be instructed and supported in how to deliver this training course to others. 2.4 Twenty-five people trained locally in-country by those project staff who attended field training course in Tajikistan. These locally trained people will be trained to carry out vegetation survey and data collection in participating communities. 2.5 30 people trained in installing and using efficient stoves, solar heaters and bio-briquettes. 5 young metal smiths will be trained in the basics of stove construction. 2.6 Capacity in government departments increased (NEPA, MAIL, MRRD) in the role of sustainable technology of promoting community resilience through participation in training workshops in Tajikistan and participation in monitoring and evaluation exercises (6 staff)	2.2 Project report, list of attendees of field training and community workshops, workshop photographs, participatory mapping exercise attendee list, household questionnaire responses 2.3 List of Tajikistan field course attendees, field course training outcomes, field survey course materials, project report. 2.4 List of in-country field course attendees, field course training outcomes, project report 2.5 List of attendees from installation training workshops project report 2.6 Workshop attendees list, workshop outline, project report.	in Tajikistan. For in-country partners, advice will be sought from governmental sources and UN sources. Afghan staff are able to obtain visas to visit Tajikistan Possible to have field equipment and materials sent to Tajikistan for workshop. Communities and staff are engaged with project and will attend workshops; COAM will work with community leaders and members of the CDCs (Community Development Councils) to inform them of the project as soon as it is confirmed, developing a partnership with each community, identifying enthusiastic and influential members who can build networks as well as assisting project staff in workshop design and logistics to allow greatest participation such as selecting times where many community members are not required to graze livestock or harvest crops, or encouraging vulnerable members to contribute. Presumes women will be culturally comfortable attending field training workshops. If this does not prove to be the case, women could be trained in theoretical survey methods and data collection, with training on how to collate, curate and analyse survey data instead of collecting it. Project staff and associates will feel engaged, supported and confident enough to deliver high-quality training locally in-country; project partners will provide additional support as necessary, with time spent at Tajikistan course covering how to

			deliver training. Remote assistance in difficult vegetation identifications and data quality control will be given by CMEP. Recruiting staff and associates to the project will be possible and not create delays in project operations. Hired and trained staff will remain with project throughout project lifetime; encouragement and support will be given to project staff remotely and via face-to-face project meetings where feasible, encouraging retention of knowledge and skills for project duration.
3. **Livelihoods & Health** Community livelihoods improved through fuel accessibility and diversification and health benefits	3.1 At least 300 households (~3000 individuals) in four communities provided with a combination of efficient stoves, solar heaters and bio-briquettes, with logistical support & training in use provided to users, particularly women 3.2 At least 30% reduction in average time spent and distance travelled to collect fuel wood by end of project compared to historical and pre-installation 2016 baseline, recorded through fuelwood data collection and participatory community mapping 3.3 10% reduction in average health expenditure per person by end of project compared to historical and pre-intervention baseline at end of year 1 in participating communities 3.4 50% reduction in indoor smoke in community households after installation	3.1 Project report 3.2 Project report, community maps, recorded data, community interviews with fuelwood collectors 3.3 Community interviews, survey of health service providers, project report 3.4 Indoor air quality monitoring report, community interviews, project report,	Assumes no barriers to installation and primary use of efficient stoves in each household or community, ameliorated by COAM expertise in community engagement. Assumes wood will not be cut for fuel and sold to other communities instead, data collected to verify this. Stove stacking (use of efficient stoves additional to, not instead of original stoves) may increase fuel use, however it is expected that occurrence of this will be minimal as a result of local design and community testing of various models to ensure their features are appropriate for a wide range of home uses such as cooking, baking, heating water and heating the home. Fuelwood collectors who earn their livelihood through sale of collected

	of efficient stoves compared with pre-installation baseline data	peer reviewed article on indoor air quality improvement	wood may be disadvantaged through reduction of income caused by reduced fuel requirements due to more efficient stoves; assessments should be made of risk of potential loss of livelihood. Assessment & community discussion of how to include fuelwood collectors in workshops & training where possible to diversify their skills and potentially lead to other sources of income should be carried out.
4. Gender Equality & Equity Improved livelihood and health benefits for women, empowerment and engagement through inclusion in training and	4.1 >500 women benefitting from reduced indoor smoke, increased time spent outdoors using solar water heaters, better access to hot water for washing, and reduced time spent collecting firewood. 4.2 Women participating in project training sessions perceive benefit through learning skills and improving knowledge, and increased feelings of empowerment through inclusion, compared to before involvement measured through survey of participants.	4.1 Community interviews, project report 4.2 Case studies, community interviews, workshop/training feedback and evaluation survey	Within Afghanistan, cultural practices (particularly in rural areas) mean that inclusion of women in project design needs to be sensitive and appropriately handled. Female staff at COAM and UNEP will take responsibility for gender equity and for ensuring all data collection methods, training and engagement are sensitively designed to allow full, active and appropriate participation of women with the project.
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) 1.1 Data collection on frequency and amount of woody taxa collected for fuelwood (including identification of species and relative quantity of each species collected) 1.2 Vegetation survey conducted at sample fuelwood collection locations (and control sites) before and after alternative fuel interventions 1.3 IUCN Red List Assessments for endemic species used for fuel extraction 1.4 Identification tool for fuelwood species developed, and used to collect detailed information on species distribution 1.5 Predictive modelling of ecosystem service replacement due to natural regeneration of woody taxa 2.1 Inception and training workshops in Tajikistan: planning, design and training in sustainable use concepts for delivery to communities, planning M&E, field survey and plant collection and identification 2.2 Delivery of awareness raising sustainable use workshops in communities, delivery of training in field survey techniques and data collection 2.3 Delivery of training in cookstove installation, use and monitoring to communities 2.4 Project and stakeholder staff trained in M&E and applied 3.1 300 households in four communities provided with cookstoves 3.2 Data collection on household fuel extraction time and distance 3.3 Community interviews and surveys to establish health and economic benefits			

3.4 Data collection on indoor air quality
4.1 Community interviews targeting data collection on health benefits for women and children

Annex 3: Standard Measures

Please expand and complete Table 1: new projects should complete the Y1 column and also indicate the number planned during the project lifetime. Continuing project should cut and past the information from previous years and add in data for the most recent reporting period. Quantify project standard measures over the last year using the coding and format from the Darwin Initiative Standard Measures (see website for details: http://darwin.defra.gov.uk/resources/) and give a brief description. Please list and report on relevant Code No's. only. The level of detail required is specified in the Standard Measures Guidance notes under 'definitions and reporting requirements' column. Please devise and add any measures that are not captured in the current list. Please note that these measures may not be a substitute for output level objectively verifiable indicators in the project logframe.

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								
4A	Undergraduate students to receive training		Afghan	20	na	na	20	20
4B	Number of weeks of training provided		Afghan	2	0	0	2	
6A	Training provided							
6B	Weeks provided							
7	Training materials provided							
9	Species or habitat action plans			0	0	0	0	
10	Field guides			0	0	0	0	
11B	Papers submitted			0	0	0	0	
13B	Species collections enhanced			0	0	0	0	200
14B	Seminars attended to disseminate			0	0	0	0	
20	Value of assets handed over							
22	Field plots/sites established permanently			4	0	0	4	

In Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Mark (*) all publications and other material that you have included with this report.

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)

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

This may include outputs of the project, but need not necessarily include all project documentation. For example, the abstract of a conference would be adequate, as would be a summary of a thesis rather than the full document. If we feel that reviewing the full document would be useful, we will contact you again to ask for it to be submitted.

It is important, however, that you include enough evidence of project achievement to allow reassurance that the project is continuing to work towards its objectives. Evidence can be provided in many formats (photos, copies of presentations/press releases/press cuttings, publications, minutes of meetings, questionnaires, reports etc.) and you should ensure you include some of these materials to support the annual report text.

Darwin Initiative 23-025 Factsheet COAM

Darwin Initiative 23-025 COAM Report Dec 2016

Darwin Initiative 23-025 Project Launch Meeting

Darwin Initiative 23-025 Community Development Council Meeting Report

Darwin Initiative 23-025 COAM Annual Report

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.	N/A
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.	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.	