





Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

To be completed with reference to the "Project Reporting Information Note" (https://dplus.darwininitiative.org.uk/resources/information-notes/).

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

Submission Deadline: 30th April 2022

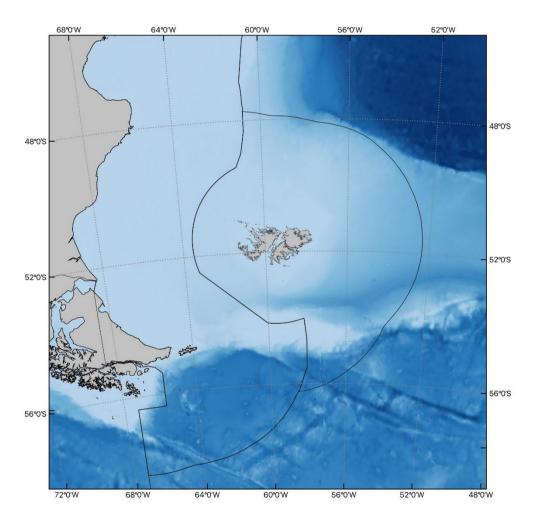
Darwin Plus Project Information

Project reference	DPLUS 148
Project title	Climate change resilience in Falkland Islands fisheries and marine ecosystems
Territory(ies)	Falkland Islands
Lead partner	South Atlantic Environmental Research Institute (SAERI)
Project partner(s)	Falkland Islands Government, Directorate of Natural Resources, Fisheries Department (FIFD)
	Falkland Islands Government, Directorate of Policy and Economic Department (DEPD)
	Falkland Islands Fishing Companies Association (FIFCA)
	Oregon State University (OSU)
	British Antarctic Survey (BAS)
	Shallow Marine Surveys Group (SMSG)
Darwin Plus grant value	£316,882.00
Start/end dates of project	1 July 2021 – 30 March 2024
Reporting period (e.g. Apr 2021-Mar 2022) and number (e.g. Annual Report 1, 2)	Apr 2021-Mar 2022
	Annual report 1
Project Leader name	Dr Paul Brickle
Project website/blog/social media	Organisation: https://www.south-atlantic-research.org/ SAERI Twitter: @SAERI_FI SAERI Facebook: https://www.facebook.com/S4ERI/ SAERI blogs: https://www.south-atlantic-research.org/news/
Report author(s) and date	Dr Paul Brickle, Dr Al Baylis

1. Project summary

FI economy is heavily reliant on its marine environment particularly fisheries, including tourism, shipping, and hydrocarbons. Indeed, FI's coastal landscapes and marine seascapes are central to its economic success. The introduction of a fisheries conservation zone and management regime in 1986 transformed the economy from what was previously a solely agro-economy. FIG revenue increased by 500%, securing self-sufficiency in all areas except military defence and external affairs. The fishery today is not large in global terms; total catches are about a third of those taken in the UK, for example. However, the fishery is unusual in that two species of squid account for 75% of catches. This makes the FI economy particularly susceptible to CC.

An aim of FIG is long-term sustainability of the fishery and marine environment to benefit of future generations. This includes sustainable catches of commercial target species, reducing harmful impacts on bycatch species while maintaining ecosystem function. FI has not undertaken an assessment of the impacts that CC will have on its fisheries and marine ecosystems and is therefore unable to mainstream CCA into Fisheries and Oceans Governance. Nor is there currently an EAF. Recognising the need to sustain FI economy, and for holistic marine management across all sectors, there is a pressing need to understand CC impacts to fisheries and marine ecosystems to inform CCA. The project will address these issues through 1) the generation of baseline data, by conducting literature reviews and surveys, to better understand key inshore species that support fisheries and ecosystems, 2) by conducting physiological tolerance and acclimation experiments of key species to understand the winners and losers. 3) Through workshops that explore CCA interventions which could inform decisions on whether to mainstream CCA and EAF into sustainable fisheries, conservation of marine ecosystems, governance and policy.



The Falkland Islands and Conservations Zones in relation to southern South America

2. Project stakeholders/partners

FIG, FIFCA, BAS, OSU and SMSG are the key stakeholders and the main partners and have been directly involved in the project's formulation from its conception. In addition, representatives from the local tourism industry and the FI community have direct interest as the marine environment is key to the FI economy, their businesses and social well-being.

Main project partners and major stakeholders were informed of the project via a concept note highlighting the issues and the solutions the project will provide. The project will continue to engage them through the PMG which will meet every quarter and through regular meetings.

PMG will be kept informed via the PM, a project website and online Project Management System which will contain milestones, targets and will hold current project documents. Project Partners will work closely with the PM in the development subsequent analyses of data and project progress.

The other stakeholders will be engaged throughout by the PM and through a Project stakeholder Group (PSG) that will meet every 6 months. They will provide support with the project by engaging with their respective groups. The PSG will be invited to attend the workshops.

The project has been delayed in its start due delayed receipt of funds for the project which were received in November 2021. This in turn was compounded by the delay in recruitment. It can sometimes be difficult to recruit in FI. The recruitment element of the project fell behind schedule as we were unable to find a suitable candidate in the first round of recruitment. In order to mitigate this we employed an interim Project Manager in late Y1Q3 to get the project underway particularly with ordering essential equipment, starting the baseline literature review and drafting collaboration agreements, ToRs for the PMG and drafting the M&E documents. We have now successfully recruited a PM and she will start on 1st April 2022 and therefore, the first PMG meeting will be held in Y2Q1 –outside of this reporting period. However, we have met regularly with project partners, who also participated in the interview panel for the PM. Profs Michael Harte and Will White, project partners from OSU formed part of the interview panel for the recruitment of the PM.

3. Project progress

3.1 Progress in carrying out project Activities

The main focus of the project activity has been around recruitment of a PM. Dr Paul Brickle has meet with stakeholders in the Falkland Islands and external partners over this period. The project employed an interim PM who was responsible for drafting the partner collaboration agreements, PMG ToRs and the M&E document. In addition, the interim PM initiated the baseline literature review and ordered the wide variety of equipment needed for the project (see detail below).

Relevant to the current reporting period, the activities for which progress has been made:

Output 1: Project Management structure, monitoring and evaluation and communication tools established.

1.1 MoU signed and agreed by partners.

The PL met with Partners to discuss the formulation of the Collaboration Agreements / MoUs and the recruitment process. These documents were prepared by the interim PM and will be signed in Y2Q1, led by the newly recruited PM.

1.2 PM Recruited.

The Project Manager (Quantitative Marine Ecologist) role was successfully recruited and will start 1 April 2022. In addition, we had employed an interim PM in late Y1Q3.

1.3 PMG meeting held every Q.

PMG ToRs have been drafted as have the partner collaboration agreements. PMG meetings will commence in Y2Q1

1.4 Webpage create on SAERI and partners' websites.

Webpages will be live and public facing on the SAERI website in Y2Q1

1.5 M&E Plan created

M&E plan has been drafted and will be available on the project's web page in Y2Q1

1.6 Regular DPLUS reports (half yearly/yearly).

Half yearly report completed and delivered in October 2021.

Output 2: New environmental baselines understood and created by the synthesis of local and scientific knowledge surveys conducted (WPK1)

- 2.1 Desk top review establish current knowledge and informs further data collection (Y2Q1) The interim PM has undertaken a review of current knowledge to inform data collection. This has been handed to the full-time PM, and is on-track to being delivered Y2Q1.
- 2.2 Review report and metadata catalogue delivered to Project partners (Y2Q1) The interim PM has made progress in collating data. These have been handed to the full-time PM, and is on-track to being delivered Y2Q1.

There were no other outputs or activities scheduled to be delivered this year. We again clarify that while the recruitment element of the project fell behind schedule, we employed an interim Project Manager in Y1Q3 to get the project underway particularly with starting the baseline literature review, setting-up the project and ordering essential complex diversity of capital equipment. The latter was important as for some of the components there were long lead in times and all to be procured before the end of the financial year. The project is now on-track.

3.2 Progress towards project Outputs

Output 1: Project Management structure, monitoring and evaluation and communication tools established.

The Project Manager (Quantitative Marine Ecologist) role was successfully recruited and will start 1 April 2022. There were no other measurable indicators to report against for this reporting period. These are due in Y2. However, the interim PM has progressed much of the Collaboration Agreements, M&E document and PMG ToRs as drafts and these will be finalised by the PM in Y2Q1

Output 2: New environmental baselines understood and created by the synthesis of local and scientific knowledge surveys conducted (WPK1)

There were no measurable indicators to report against for this reporting period. These are due in Y2 + Y3. However, the interim PM has made progress on the base line literature review (2.2) and handed over a draft to the PM. The interim PM also ordered all of the equipment and chemicals necessary for the successful delivery of the project. This includes equipment necessary for output 2.3: (Inshore zooplankton / ichthyoplankton surveys) the bongo nets (plankton nets) and their flow meters; casts net; benthic dredge; dissecting and compound microscopes; chemicals; sample bottles; and a chest freezer for storing samples.

In addition, the Fishing Industry have funded a PhD programme to work the zooplankton elements of this project in collaboration with the PM. The PhD is being run through SAERI and University of Aberdeen. Applications close on 2nd May. The PhD was advertised via the SAERI website and findaphd.com.



FindaPhD.com advert for a PhD student to support WP2. (https://www.findaphd.com/phds/project/the-role-of-coastal-ichthyoplankton-and-zooplankton-to-ecosystem-function-falkland-islands-marine-environment/?p135459)



SAERI advert for a PhD student to support WP2. (https://www.south-atlantic-research.org/jobs/)

Output 3: Understanding Physiological tolerances and acclimation responses of FI foundation species with current and projected rates of climate change (WPK2).

There were no measurable indicators to report against for this reporting period. These are due in Y2. However, the interim PM has ordered the chemicals and equipment needed to deliver this output. We had to consider ordering early as the COVID-19 pandemic has impacted on some of the supply chains for these specialist equipment. Equipment ordered included Loligo systems flow through respirometry chambers; Digistat thermostatic heaters; and associated chemicals. These will all be in the islands when our partner from BAS will come down to FI to conduct the experiments on key species important to the functioning of our inshore ecosystem.

Output 4: An Ecosystem Model for the FI shelf developed in collaboration with local and international expertise (WP3).

There were no measurable indicators to report against for this reporting period. These are due in Y2 and Y3.

Output 5: EAF adopted by FIG and stakeholders. CCA mainstreamed into fisheries Policy and Governance (WPK4).

There were no measurable indicators to report against for this reporting period. These are due in Y3.

3.3 Progress towards the project Outcome

The Project Outcome is "Proposed CCA and environmental variability and an ecosystems approach to fisheries management mainstreaming for fisheries governance/policy document, submitted to FIG Directorates for consideration."

The project has had a late start for the reasons stated above. Despite this it has made good progress against the outcome. SAERI is a FI based organization and as such has close relationships with FIG, the fishing industry and local stakeholders. Partners and stakeholders have been kept informed of the project's progress. Indeed, with the help of an interim PM all of the equipment, chemicals and hardware have been acquired or already ordered ready for Y2Q1. The interim PM has drafted a number of documents including Partner Collaboration Agreements, PMG ToRs, M&E document and the baseline literature review. We have recently appointed a PM with the experience and qualifications ideally suited to this project. In addition, SAERI has the track record for delivering quality timely projects including those funded by the Darwin Initiative.

The indicators for measuring achievement of the project Outcome are still valid and are considered achievable.

There is no reason to suggest that this project is unlikely to achieve the desired Outcomes set out during the project proposal.

3.4 Monitoring of assumptions

Outcome

Assumptions:

- Relevant FIG Directorates continue to be open to the concept of mainstreaming CCA into fisheries using an EAF approach and remain fully engaged in the project.
- FIFCA members and stakeholders committed to the project and engage in project activities. Increased awareness and understanding results in positive action for fisheries and environmental management and governance.

- That the duration of the project is appropriate to inform policy and the implementation of EAF and CCA actions.
- COVID-19 impacts don't place restrictions on national and international travel.

Comments: The assumptions for the project outcome are still relevant. COVID-19 has had some impacts on supply chains for some equipment and chemicals.

Output 1:

Assumptions:

- Recruitment results in appropriate candidates being appointed and available on island within given timeframe.
- Continued resource from project partners available to engage with the project for its duration.
- Covid-19 impacts do not place restrictions on national and international travel.

Comments: The assumptions for output 1 are still relevant. Recruitment can be 'hit and miss' in the Falkland Islands and is difficult to predict. We were not successful in finding a suitable candidate in the first round. We, in mitigation, employed an interim PM to kick start the project. As mentioned previously the interim PM started procurement, project documents and the baseline literature review. Recruitment for the permanent PM is now complete and we are very pleased as she has the relevant qualifications and experience to deliver the project.

Output 2:

Assumptions:

- Partners have the capacity and resource to contribute data and collaborate in the data synthesis report.
- Inshore survey vessel available at the required time.
- Weather conditions enable data collection within the proposed time periods.
- Covid-19 impacts do not place restrictions local activities.

Comments: The assumptions for output 2 are still relevant.

Output 3:

Assumptions:

- Partner organisation remains able to contribute and train locally retained marine technician.
- Partner organisation accommodates experimental equipment at a FI aquaculture facility.
- Covid-19 impacts do not place restrictions on national and international travel and local activities

Comments: The assumptions for output 3 are still relevant.

Output 4:

Assumptions:

- Partner and Stakeholders engage in the workshop within the given timeframe.
- Partners continue to contribute WPK in a timely manner and collaborate with model development.
- Covid-19 impacts do not place restrictions on national and international travel.

Comments: The assumptions for output 4 are still relevant.

Output 5:

Assumptions:

- Key FIG official and stakeholders available for the workshop.

- FIG continues to engage and contribute to discussion and considerations around how to incorporate EAF and CCA in policy and governance.
- Buy-in secured through continuous engagement and workshops. Active FIG engagement.
- Covid-19 impacts do not place restrictions on national and international travel.

Comments: The assumptions for output 5 are still relevant.

4. Project support to environmental and/or climate outcomes in the UKOTs

The project has been delayed in its start, partly due to a delay in recruitment. We have now successfully recruited a PM. As stated in the stage 2 application it will:

Address the Falkland Islands / UK Environmental Charter 2001.

Guiding principles for the UK Government, the Government of the Falkland Islands and for the people of the Falkland Islands - specifically: 1) To recognise that all people need a healthy environment for their well-being and livelihoods and that all can help to conserve and sustain it; 2) To use our natural resources wisely, being fair to present and future generations; 3) To identify environmental opportunities, costs and risks in all policies and strategies. 4) To seek expert advice and consult openly with interested parties on decisions affecting the environment; 5) To aim for solutions which benefit both the environment and development; 6) To contribute towards the protection and improvement of the global environment; and 8) To encourage activities and technologies that benefit the environment.

Falkland Islands 'Islands Plan 2018-2022'.

The 'Islands Plan' is a Falkland Islands Legislative Assembly document that represents a shared vision and priorities for the Falkland Islands over four years. It articulates ambition for improvements and the actions we will take to deliver positive results, across a range of key areas, for the benefit of every resident. It connects our community's aspirations for protecting the environment, improving transport and communications links, and modernising our infrastructure, with the possibilities that exist to improve our prosperity, health and wealth for current and future generations.

Relevant sections and priorities include:

Fisheries

- Ensure responsible marine management including the implementation of new maritime legislation;
- Lead the development of a long-term plan, working with the fishing sector to ensure the right conditions to encourage development, sustainability and growth
- Make progress on regional fisheries conservation and management to ensure better sustainability and conservation of fish stocks, and improve ecosystem understanding;
- Work in partnership with our Falkland Islands fishing companies to ensure the fishery is responsibly managed and widely promoted, and to improve product visibility and reputation internationally

Environment

- Develop and implement a comprehensive environmental strategy including necessary regulations; Implement the 2030 Biodiversity Framework to preserve our natural environment;
- Encourage research into the Falkland Islands environment to provide greater understanding of ecosystems, biodiversity and wider influences;
- Fulfil our commitments under international treaties and agreements such as climate change accords and strive to mitigate our carbon footprint."

Falkland Islands Biodiversity Framework

Biodiversity Framework is a threat-based document which outlines the priorities required with regards the wider Falkland Islands environment. The Framework is underpinned by the

implementation of Strategies and Action Plans. Climate change implications run through all elements of the threats identified in the Framework.

Convention on Biological Diversity

UK's ratification to CBD was extended to the Falkland Islands in 2016. The project addresses the following targets: Aichi 4 (Natural Resources); 6 (Sustainable fisheries); 10 (Vulnerable Marine Ecosystems); 10 (Protected Areas); 14 (Essential Ecosystem Services).

United Nations Convention for the Law of the Sea (UNCLOS)

UNCLOS61(2) coastal states take 'into account the best scientific evidence available to it' in determining conservation and management measures.'

5. OPTIONAL: Consideration of gender equality issues

SAERI's policy statement on Equality is:

"SAERI and its Group Companies (SGCs) are committed to ensuring that recruitment, promotion, training, development, assessment, benefits, pay, terms and conditions of employment, redundancy and dismissals are determined on the basis of capability, qualifications, experience, skills and productivity. SGCs are also committed to achieving a working environment, which provides equality of opportunity and freedom from unlawful discrimination on the grounds of race, sex, pregnancy and maternity, marital or civil partnership status, gender reassignment, disability, religion or beliefs, age or sexual orientation. This Policy aims to remove unfair and discriminatory practices within SAERI and to encourage full contribution from its diverse community."

We believe that better decisions are made by diverse groups, and believe that equality thus wide and far-reaching. We actively uphold this approach in all we do and we ensure that all our partners have similar policies.

We acknowledge that attendance at stakeholder workshops or meetings may be limited by parental responsibilities and as such timings will be considered to be most appropriate (within the day) and education year (outside school holidays) both in the FI and internationally.

In the SAERI office, the current staff cohort is 60% female and 40% male. The PM is female.

6. Monitoring and evaluation

The project has been delayed in its start, partly due to a delay in recruitment. We have now successfully recruited a PM.

However, the project will be implemented as a partnership between SAERI, FIG, FIFCA, SMSG, OSU and BAS. The FI partners and OSU will be members of the PMG whose main commitment and task is to monitor and steer the project. The PMG will have equal membership of science- and policy-focused organisations, which will audit the scientific integrity of the work and natural resource/climate change management-oriented organisations, which will ensure that local needs and aims are met.

Additionally, as part of the Project Management Structure, in the first six months of their appointment, the PM will complete the draft detailed Monitoring and Evaluation (M&E) plan initiated by the interim PM in which a set of evaluation questions will used to assess the effectiveness of the project's outcomes. Specific monitoring questions will be used to answer the evaluation questions and will be checked through indicators, data sources/methods to obtain the data, and the responsibilities for data collection (as mentioned in the MoU). The M&E plan will be then submitted to the PMG for sign off. Oversight of the delivery of the M&E plan will be the responsibility of the PM, signing off of the implementation of the M&E plan will be the responsibility of the PMG. The PM will present a quarterly report on progress against deliverables, M&E and a quarterly financial report to the PMG which will check that the project

delivers its outputs on time, within the proposed budget, and that the quality of the outputs is of a high standard.

7. Lessons learnt

It can sometimes be difficult to recruit to the Falkland Islands. The recruitment element of the project fell behind schedule as we were unable to find a suitable candidate in the first round of recruitment. We factored in 3 months for recruitment in the project time-frame, which is typically sufficient. What did work well, as described previously, was that we mitigated this delay by some degree by employing an interim PM to 'kick start' the project. It is difficult to improve on what is an unpredictable process. FI recruitment is highly variable across sectors. We always put a great deal of effort to into our recruitment process and will continue to do so.

COVID-19 has had an impact on supply chains for specialised equipment that is made to order. Given the global situation in future we would start presuming for specialist equipment much earlier and shortly after the successful grant notification is received.

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

N/A

9. Other comments on progress not covered elsewhere

The design of the project has been improved with the inclusion of a PhD student to enhance **Output 2.** This has really added value and will allow us to create a more detailed baseline. The remainder of the methods and exit strategy remain the same.

The project has been delayed in its start for the reasons explained above, and partly due to a delay in recruitment. We have now successfully recruited a PM.

The FI have enjoyed being largely COVID-19 free during the pandemic which has meant that we have been able to operate without restriction. The situation is changing with FI opening up its boarders and doing away with quarantine. Risks here include staff health and safety particularly with regards to working in isolated areas in the field. SAERI have created new COVID-19 guidance specifically for the FI in the period of this uncertainty. We have confident that these risks can be managed sensibly and efficiently. We will report on this in future submissions to Darwin Plus.

10. Sustainability and legacy

There is a good deal of interest in the project from the government and indeed form the fishing industry. This is evidenced by the financial contribution to the PhD studentship.

Our Exit Strategy is still valid:

"This project directly contributes to FI's long-term vision for biodiversity, conservation and management targets. It will enable FIG to plan, manage the sustainable development of the marine environment.

The Impact is 'EAF management in FI is developed, CCI to fishery and ecosystems are better understood with CCA Policy for fisheries and ocean governance/policy submitted to FIG for consideration.' This will be delivered completely by in territory project staff and partners in support of international partners OSU and BAS, experts in the field who will work in the islands and provide later support remotely. It will fill key baseline understanding the marine environment and will fill important gaps left by previous work and will inform future research and work streams to improve understanding.

For the first time it will provide an understanding of the ecosystem function through modelling and will enable insight into how CC will impact this system providing FIG, industry, science community and community tools to investigate options for CCA.

For sustainability and legacy there will be a suite of tools available and maintained/improved in territory that can be adsorbed into fisheries and ecosystem/environmental management. It will provide options for mainstreaming of CCA and EAF into Fisheries/Oceans governance."

SAERI is a local FI organization and has close working relationships with FIG and local stakeholders all with the motivation to ensure that this project provides sustained legacy going forward. The Environment and Sustainable Management of our marine ecosystems has never been so important and this is evidenced by FIG's new Environmental Strategy and the emphasis of the environment and sustainable management place in FIG's Islands Plan.

11. Darwin identity

The Project Manager (Quantitative Marine Ecologist) role was advertised with Darwin Initiative logo as was the advert. Darwin Plus were also mentioned in our advertisements for our PhD student and associated tweets (see below).





12. Impact of COVID-19 on project delivery

The only COVID-19 issues that we have experienced have been linked to procurement explained above.

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13. Safeguarding

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

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

SAERI has a comprehensive safeguarding policy that formally outlines policy principles and responsibilities within the organisation and includes a designated safeguarding officer (DSO). SAERI incorporates safeguarding as part of its organisational induction procedures for all new employees and, as a result, the PM is conversant with all our policies including this one.

In preparing the project, SAERI has sent a copy of its safeguarding policy to all project partners and adherence to these policies forms part of the PMG ToR. Once the ToR have been agreed upon by all partner organisations, safeguarding will be a core PMG quarterly meeting agenda item.

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2021 – 31 March 2022)

Project spend (indicative) in this financial year	2021/22 D+ Grant (£)	2021/22 Total actual D+	Variance %	Comments (please explain significant variances)
Chaff anala	(2)	Costs (£)		Interine DM Income and
Staff costs			-	Interim PM leave pay out and associated costs, covered by underspend in capital items
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				Used to cover overspend in staff costs
Others (Please specify) Data Storage; repatriation interim PM; Per CR2, project M&E costs; Bank Charges; preparation of nets for fieldwork				
TOTAL				

Highlight any agreed changes to the budget and **fully** explain any variation in expenditure where this is +/- 10% of the budget. Have these changes been discussed with and approved by Darwin?

15. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the correct template (checking fund, type of report (i.e. Annual or Final), and year) and deleted the blue guidance text before submission?	√
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	√
Is your report more than 10MB? If so, please discuss with Darwin-Drojects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	Х
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	√
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	Х
Have you involved your partners in preparation of the report and named the main contributors	√
Have you completed the Project Expenditure table fully?	✓
Do not include claim forms or other communications with this report.	ı