



Darwin Plus: Overseas Territories Environment and Climate Fund

Final Report

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

Darwin Project Information

Project reference	DPLUS074
Project title	Improving biosecurity in the SAUKOTs through Pest Risk Assessments
Territory(ies)	St Helena, Falkland Islands, UK
Lead organisation	CABI
Partner institutions	Environment and Natural Resources Directorate (ENRD) of St Helena; Department of Agriculture, Falkland Islands Government
Grant value	£144,644.00
Start/end date of project	Project Start date: 1/4/2018 Project End date: 31/3/2020
Project leader name	Norbert Maczey
Project website/Twitter/blog etc.	
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1 Project Summary

This project focuses on the British Overseas Territories (OTs) in the South Atlantic, with St Helena and the Falkland Islands being chosen as directly participating case studies. However, it was anticipated that any outputs would also provide benefits to other OTs.

Biological invasions continue to increase globally, resulting in huge negative impacts on native biodiversity and agriculture, and sometimes threats to public health. This is mainly driven through increased human traffic and trade, but also through climate change. Once an invasive species becomes established, eradication is often not possible and continuous control efforts are costly. Therefore, solid prevention procedures are essential to minimise the risk of invasions and at the core of such procedures are pest risk assessments (PRA) and horizon scanning (HS).

The JNCC-led South Atlantic Overseas Territories Regional Biosecurity Workshop held in Ascension Island in August 2015, identified the lack of capacity to carry out PRAs on new imports, such as ornamental plant species, as a problem for all South Atlantic UK Overseas Territories (SAUKOT). In addition, a recent gap analysis assessing biosecurity and control of invasive species on the UKOTs, conducted by the Non-native Species Secretariat for Great Britain (GB

NNSS) (Key 2017; <http://tinyurl.com/yamf6eyb>), highlighted significant gaps in biosecurity capacity, particularly with regards to prevention across the majority of the UKOTs.

During a meeting of some of the SAUKOTS biosecurity officers at the 'Island Invasives' conference in Dundee (10-14 July 2017), an urgent need to address this lack of capacity to undertake PRAs was agreed upon. Furthermore, it was suggested that this could be addressed by a Darwin funded project, initially focusing on St Helena and the Falkland Islands as case studies. Subsequently and with backing from the GBNNSS, the proposal for this project was developed.

This project primarily aimed to improve biosecurity in the SAUKOTs, by developing Pest Risk Assessment (PRA) procedures tailored to the needs of individual territories and by building capacity to use these. At the same time, CABI developed a new horizon scanning tool and an online PRA tool as part of the open access invasive species compendium (ISC). Throughout the project, our newly developed PRA procedures tried to make use of these CABI tools as much as possible.

To address the problem outlined above, the project was split into four work packages:

WP 1: Identifying the specific needs of individual OTs

Building on the existing gap analysis, a review of the participating territories' specific requirements was undertaken, through initial skype meetings and a first workshop on St Helena. This included consultation of a wide range of stakeholders, with representatives from other SAUKOTS.

WP 2: Test and implement a horizon scanning tool for invasive species

This project used St Helena and the Falkland Islands as case studies to test and improve a new horizon scanning tool based on pathway analysis, initially developed for the CABI invasive species compendium.

WP 3: Develop tailored PRA procedures for individual territories

This WP focused on mechanisms to improve capacity to confidently conduct PRAs in each territory. A PRA form, recently developed for the Falkland Islands (with input provided by St Helena and South Georgia during DPLUS033), together with existing guidelines in the territories, provided the background to develop bespoke PRA procedures. Central to the overarching procedures, the PRAs templates developed during our project, cover these scenarios:

- Accidental introduction of new invasive species (horizon scanning, pathway analysis and rapid response procedures), primarily into the terrestrial but also marine environment;
- Planned introduction of non-native species as ornamentals, pets or for commercial purposes (e.g. aquaculture), including PRA of anything associated with these species such as soil substrate or packaging;
- Introduction of non-native species for biological control of invasives or as pest control agents in agriculture and horticulture;
- PRA for already established invasive species to enable decision making on best control strategies

WP 4: Create a biosecurity network for all SAUKOTs to share knowledge about species of concern, alerts, etc.

We looked into ways to capitalise on a network of individual skills available in the territories as well as how to draw on expertise from other organisations, such as FERA or CABI, in a financially constrained environment. This WP addressed issues such as the periodic loss of skills and experience associated with staff fluctuations and poor access to information, for instance when internet access or other forms of communication are limited. We also assessed how such a network could include an information and tools repository (or at least have access to) and to what degree communication among islands officers is required to allow consistent updates of information and improvement of skills.

Many aspects of the four WPs were covered by desk-based activities, but the need to hold two workshops over the course of the project was also identified. The workshops were both held on St Helena (March and December 2019). At these workshops, biosecurity staff were trained to conduct PRA testing, whilst using and improving the templates developed in the first year of the project.

2 Project Stakeholders/Partners

Project partners are:

CABI

CABI has led the design and development of this project and provided overall co-ordination. CABI has also been responsible for providing the necessary horizon scanning tools, drafting the framework for updated PRAs and conducting all training activities.

Environment and Natural Resources Directorate (ENRD) of St Helena

The Environment and Natural Resources Directorate brings together roles concerned with the management, conservation and regulation of the natural and man-made environment, allowing for a properly co-ordinated and joined-up approach. This includes lands, buildings, transport infrastructure, agriculture and the environment. During the course of this project, ENRD received training to increase capacity for biosecurity. ENRD itself was responsible for the community awareness programme to promote any planned changes on biosecurity procedures. The directorate was well placed to carry out this activity, building on a range of other ongoing awareness raising activities.

Department of Agriculture, Falkland Islands Government

The Department of Agriculture's Biosecurity section leads on biosecurity for Falkland Islands Government, working on the international borders, as well as within the archipelago. The department is supported by biosecurity, agricultural and veterinary staff and as such is well placed to partner in this project. During this project, the DoA received training to increase capacity for biosecurity and was ultimately responsible for the promotion and implementation of any planned changes on biosecurity procedures.

Stakeholders:

Other key stakeholders are organisations involved with the biosecurity in the SAUKOTs. As such, the development of the proposal leading to this Darwin project, not only included the biosecurity officers from St Helena and the Falkland Islands, but also from South Georgia, Tristan da Cunha and Ascension Island, as well as the GBNSS. Only St Helena and the Falkland Islands are official partners on this project, but the biosecurity teams from the other territories were still included in any project discussion and took regularly part in project meetings (via skype). In addition, further organisations and institutions tasked with the control of invasive species, such as the St Helena National Trust and CEH, collaborated with the project team, as is reflected in the list of attendees of the skype meetings and the workshops held on St Helena (annex 6.1). The project was always very open to widely sharing the outcomes throughout the project as widely as possible and also encouraged all stakeholders to take active part in project planning and decision making.

There have not been any particular challenges with stakeholders involved, but some technical difficulties in linking up to our meetings via skype hindered our ability to make the project even more inclusive.

3 Project Achievements

3.1 Outputs

Output 1: Existing PRA procedures reviewed and specific need for improvement in individual participating OTs identified

This was the starting point of the project and was covered in the first skype meeting discussions, which included a team of biosecurity officers from Ascension Island (not a full project partner) and during the first project workshop (March 2019). Details regarding the needs of individual territories are provided within the attached minutes of all skype meetings and the workshop (annex 6.1). This included an assessment of recent horizon scanning activities and an analysis of interception data from the Falkland Islands and other OTs (annex 6.1, minutes meeting 7th August 2018, annex 1). Whilst comparably high-level biosecurity procedures are already in place on both St Helena and the Falkland Islands, specific templates to conduct PRAs had either been unavailable or were not sufficiently tailored to cover the individual needs of the OTs. On the Falklands, the template from the previous Darwin project DPLUS033 was in use. However, this template was specifically designed to cover the planned import of biological control agents. As such, scope to extend the use of this template for a wider application was identified as a significant improvement. Equally, the existing procedures on St Helena were in need of updating to better deal with new emerging threats and new pathways. The identification of existing gaps and needs on both OTs have been central to the development of a newly designed PRA template, embedded in overarching procedures and supported by guidance notes.

Output 2: Template for PRA developed and implemented into PRA procedures

As a joint approach, using the discussion and feedback from the skype meetings held in 2018 and early 2019, a first draft PRA template was developed, ready to be tested during the first workshop in March 2019. A selection of high priority species were chosen by the project partners for the testing. This provided an opportunity and platform for suggestions for improvements, which were in turn used to tailor the PRA template for the specific needs of the SAUKOTs. It became clear that the development of a single template, covering a range of purposes, would be too complex and so with the support of all other stakeholders attending the workshop, the project team decided to develop four separate templates instead. These needed to be incorporated into existing procedures. Therefore, a new guidance booklet was developed taking into account the existing procedures in place on St Helena and the Falkland Islands. Initially, the team thought separate versions were required for each territory, but it quickly became apparent that a single booklet could serve both territories. This was also shared with the biosecurity teams on Ascension, Tristan and South Georgia. A comprehensive booklet was produced including a screening form, a pre-application form and a flow chart, demonstrating the overall procedures and guidance notes for all PRA templates (annex 6.2). The templates were incorporated into this guidance booklet. Training of biosecurity staff in the use of the PRA templates made them available for immediate use within the existing biosecurity protocols. As a result, a number of PRAs have already been undertaken (annexes 6.3.1 to 6.3.7). These first PRAs, carried out by the biosecurity officers with the support of CABI, have already significantly mitigated the risk of introducing potentially dangerous invasive species in a number of ways:

- A PRA on a polyphagous, cold tolerant nematode (*Steinernema kraussei*) (annex 6.3.1), which potentially poses a high threat to the survival of endemic weevils on the Falkland Islands, advises strongly against its introduction as a biological control agent in greenhouses. An application for its introduction has now been rejected based on the PRA conducted during the project.
- PRAs on ornamental plant imports (palms) (annex 6.3.2) and horticultural propagation plants (strawberry runners) (annex 6.3.3) for St Helena detail restrictions, making these planned imports safer and minimising the risks of accidental introductions of associated pests and diseases into St Helena.
- A PRA on the tomato leafminer, *Tuta absoluta* (annex 6.3.4), provides guidance for import regulations and improved inspection procedures for St Helena, having now significantly reduced the risk of accidental introduction for this species. The species poses a hazard

for local production of tomatoes and the survival of one extremely rare endemic plant (*Melissa begoniifolia*), which only persists in the wild at one single site.

- Two PRAs on mussels (*Mytilus* spp.) for St Helena (annex 6.3.5) and the Falkland Islands (annex 6.3.6), raise awareness of the imminent threat of introduction of these species from South Africa and South America. They also provide a strategy to minimise the risk of introduction to these territories as much as possible. In particular, the invasion of *Mytilus galloprovinciales* along the coast of southern Africa, where habitat changes caused by the invading species have led to displacement of native species, highlights the huge threat this species poses for endemic species on St Helena and the Falkland Islands.
- A PRA on *Megastigmus transvaalensis* (annex 6.3.7), a biological control agent for Brazilian pepper tree (*Schinus terebinthifolius*) has now kickstarted discussions for the development of a control programme involving stakeholders from St Helena, but also from the British OT of Bermuda, where *Schinus* poses a similar threat to native and endemic species.

Output 3: Use of CABI horizon scanning tool integrated into PRA procedures

The CABI online tools for HS (www.cabi.org/horizonsscanningtool) and PRA (<https://www.cabi.org/PRA-Tool/login>) have been developed through match funding support for this project. Even prior to the first meeting in May 2018, biosecurity staff from all the SAUKOTs taking part in the project had the opportunity to trial and test the CABI HST. The tool was also very useful in providing background lists for the HS exercise during recent CEH-led expert workshops covering all OTs. By providing training to biosecurity staff from St Helena and the Falkland Islands and feeding back recommendations for further improvements, the tool has become readily available as part of the existing PRA procedures on both OTs. Initial prioritisation of species from HS for PRAs was covered through the CEH-led workshops. Updates currently under development aim to include a more automated process, with relevant information filled in automatically into the online template provided by CABI. In addition, we tested the prioritisation of species from HS for PRAs during the project and a simple prioritization tool was developed during the second half of the project (annex 6.4.1). It should be pointed out that the development of a prioritisation tool was not part of the project as such but, should it prove successful, this will be an additional output of the project. Links to the HST and the more recently developed CABI online PRA tool are also provided in our PRA procedure booklet.

Output 4: Biosecurity staff trained and confident in following PRA procedures

Focused training took place during the two workshops held on St Helena and the training activities are detailed in the presentations given during the workshop (annex 6.5) and the workshop summaries (annex 6.1). Additional support was also provided before and after the workshops, particularly in the elaboration of new PRAs. Not only did biosecurity staff from St Helena and the Falkland Islands personally complete PRAs initiated during the workshops, but they also started and developed new PRAs independently following on from the initial training. These new, post-training PRAs cover a potentially invasive nematode (*Steinernema kraussei*, Falkland Islands), a biological control agent (*Megastigmus transvaalensis*, St Helena), and strawberry runners (St Helena) (annexes 6.3). Additional PRAs, which are currently in the early stages of development, cover the planned introduction of olive trees (SH) and almond trees (SH).

Output 5: Network between biosecurity personnel of participating OTs established in order to pool individual expertise and make conduct of PRAs more reliable

The project team initially started out with the instigation of a joint e-mail exchange list between the biosecurity officers of the SAUKOTs and a much more close-nit, direct cooperation and exchange of knowledge and skills between the biosecurity teams from St Helena and the Falkland Islands. The regular skype meeting, open to all stakeholders on the SAUKOTs, additionally strengthened communication between the territories. Furthermore, the workshops in St Helena, provided an excellent opportunity for the close cooperation between the biosecurity teams of both territories, including visits to the biosecurity facilities and direct involvement in their daily activities (i.e. vehicle inspection, flight and cruise ship inspection). To facilitate a more

permanent network, we decided to establish a communication network, which could preserve previous information exchanges, even with staff turnover. A google group was established to accommodate this. This group currently links up the biosecurity teams of the SAUKOTS, but can ultimately be expanded to other territories. This is supported by the establishment of a complementary Google Drive, on which jointly used documents, such as, our guidance notes, PRA templates and finalised and draft PRAs, are already being deposited. It was agreed that regular, quarterly online meetings between the individual biosecurity groups would be arranged by the person in charge to administrate the group (currently SH). A decision was also made to rotate the group administration task between territories on an annual basis.

3.2 Outcome

Outcome: *Biosecurity on several SAUKOTS improved through the implementation of better PRA procedures; Biosecurity staff confident in independently conducting PRAs. Improved prevention of the introduction of invasive species*

Indicators:

- *Increase of rejections of high-risk species and higher acceptance of the import of low risk species over a five-year period after termination of project compared to level before*
- *Increased interception of some high-risk species due to raised alert after horizon scanning*

As described in the activities and output sections, we feel the project has successfully achieved the planned outcome. The newly developed PRA templates, in combination with updated PRA procedures, have been implemented on both St Helena and the Falkland Islands. In addition, with both CABI online tools (HS and PRA tool) now readily accessible and a marked improvement in confidence to independently develop PRAs stemming from the training provided, we are confident that the protocols now put in place have already significantly improved biosecurity in both territories. Furthermore, the implementation of updated procedures and the capacity building to independently compile PRAs has already mitigated the risk of introducing invasive species. This is indicated by:

- A PRA of *Steinernema krausseii* has prohibited its importation as a biocontrol agent on the Falkland Islands, where it would have posed a high-risk to endemic insects. This species is freely available on the commercial market and its use is permissible throughout mainland UK. The project has led to a fundamental change allowing PRAs to provide the background information to better inform decisions. Before our project, species posing a similar threat to *Steinernema* were freely imported into the territory.
- A thoroughly researched PRA on strawberry runners for St Helena showed that, provided adequate phytosanitary measures are adhered to, their import to St Helena is feasible and has the potential to significantly improve strawberry production on the island. Before the availability of the new PRA templates and the associated training provided, this would have been a very challenging conclusion to reach in such a short space of time for the biosecurity team on St Helena.
- A PRA on the feasibility of introduction of *Megastigmus transvaalensis* (a seed-feeding wasp) for the biological control of Brazilian pepper tree, confirmed that an introduction would be safe not only for St Helena but also with regards to South Africa, the country with the direct traffic link to St Helena. This is one of the most detrimental invasive plants on St Helena has and this has now sparked an initiative to explore funding opportunities to develop a biological control programme using this species. It has also led to linkages with stakeholders working on Brazilian pepper tree on the British OT of Bermuda, where this species poses a similar threat to native vegetation.
- To date, no additional interceptions have been made of the tomato leaf miner (*Tuta absoluta*) and/or the mussels (*Mytilus* sp.), which are high risk species for St Helena and the Falkland Islands and for which detailed PRAs have now been completed. There are two major reason for this: the adjustment to inspection procedures to better reflect the PRA information was only possible upon completion of the PRA, towards the end of the

project; secondly, as for most high priority species identified from horizon scanning and based on a scenario of inadequate biosecurity capabilities, a predicted arrival is only likely within the next five to ten years. Therefore, there will be a lag in the time to first interceptions. We are nonetheless certain that the risk of introduction of these species has already been reduced as a result of improved biosecurity, through relevant detailed PRAs. This is particularly true for the arrival of *Tuta absoluta*, which is currently still spreading through southern Africa to St Helena. The PRA for this species has led to increased awareness and more targeted inspections of tomatoes, peppers and aubergines, minimising the risk of introduction to the territory.

- During the annual review, it was highlighted that only outcomes achieved during the course of the project could count towards its success. We would like for this notion to be re-considered. Firstly, it was clearly pointed out in the proposal that an increase in interceptions would only become apparent years after the completion of the project and this was acknowledged when the project was granted. Secondly, the focus of the project was on capacity building, specifically training of biosecurity staff to generate PRAs independently. We believe that not only has this been successfully achieved but it has formed the foundations on which to further enhance future biosecurity, with each new PRA undertaken.

3.3 Monitoring of assumptions

Compared to projects involving a high degree of field work only relatively few assumptions had to be put in place and these were generally of low risk to change throughout the project. Monitoring to place during the regular M&E procedures conducted during the course of the project. There were two major changes of assumptions which we addressed as soon as they occurred. One was the changeover of staff within the biosecurity team in the Falkland Islands at the end of the first project year. The head of the biosecurity team during 2018, Naomi Baxter, was replaced by Daniela Baigorri. As soon as this changeover was known to take place this was reported to Darwin and addressed through an approved change request. In the end this changeover proved to be beneficial for the project outcome as Naomi Baxter took on a new job within biosecurity for South Georgia. This significantly aided the dissemination of the provided training and capacity building to another South Atlantic overseas territory. Naomi Baxter remained involved in the project as an important stakeholder throughout the project. The second assumption, which needed to be addressed early on in the project, was the access to the CABI tool and compendia contents, particular the CABI crop protection compendium on St Helena. The project proposal's assumption was only relating to access to the CABI horizon scanning tool and the CABI invasive species compendium, which worked well throughout the project. However, access to the CABI PRA tool, which was only developed during the course of the project, and is in parts linked to the crop protection compendium, was at times problematic. However, this was corrected by bringing in the CABI compendia team, which provided the necessary assistance to allow access to the online resources despite the currently still low-quality internet access provided on St Helena.

Project risk management including financial risk management was conducted according to PRINCE2. This project management system is embedded throughout CABI and subject to regular review and update. This allowed in particular to monitor budgets and expenditure of both CABI and the partners carefully throughout the project.

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

The project has developed and tested improved PRA procedures using two OT's as case studies. In combination with successful capacity building through training, this has already led to an improvement in biosecurity, notably the prevention of accidental introduction of invasive species and the rejection of planned imports of potentially invasive species. Prevention will be further improved when successively, more PRAs will be elaborated by the local biosecurity teams. This process has already started, with both OTs involved having initiated a number of new PRAs when the project finished (salmon production on the Falkland Islands, import of almond and olive trees on St Helena). Improved prevention will not only reduce direct threats and pressure on the native ecosystems and endemic species but also on local agricultural production. Long term, it can be predicted that the user-friendly templates in combination with the training provided will increase efficiency and help alleviate the substantial strains on staff capacity and local budgets currently faced. The future gains can be significant, especially when comparing the potentially costly mitigation measures required for an invasive species once established, with the relatively modest efforts needed to produce PRAs.

With regards to the daily routine activities of the biosecurity teams involved, no fundamental change was brought about by our approach. The task of completing a rapid PRA as needed in the future and to update existing biosecurity measures accordingly, is considered a time saving and efficiency enhancing measure for the teams involved.

One very important aspect of capacity building to independently develop PRAs emerged during the course of the project. With regards to planned introductions, there is often a conflict of interest between conservation and biosecurity on one side and commercial interests on the other. A well-researched and referenced PRA, even a rapid one, provides solid evidence to which the biosecurity team can refer in any possible dispute. It also functions as a confidence booster to defend any decision made, whether for or against a planned introduction. In our view, it is essential that biosecurity teams of the British OTs should have access to the underlying evidence provided by PRAs.

Better prevention of the introduction of invasive species through increased capacity to conduct PRAs is an important part of the biodiversity conservation and dovetails very well into the overall national biodiversity strategy and individual biodiversity actions plans. Most of this will be through indirect effects. For example, a reduction of future introductions will allow to focus conservation better on the control of already established invasive species. In other cases, it will prevent direct threats to small islands endemics through new invaders in the first place. More directly, the application of PRAs can become an essential part of biodiversity action plans and in the case of St Helena the PRA templates from this project are already considered to be integrated as part of invasive species assessment into the update of the action plan for the 'Peaks National Park, which is currently under development.

The successful implementation of improved PRA procedures has already started to benefit other British OTs. All documents developed during this project and the training programme were used to introduce the same improvements to four Caribbean OTs (Anguilla, Turks and Caicos, Montserrat, Cayman Islands) during a workshop held in January 2020 on Antigua. It is anticipated that our approach will be rolled out to more OTs in the coming months and years.

The project supports the future proofing of the involved OTs against increased risks of introduction, establishment and spread of alien invasive species. In all SAUKOTs, this is particularly relevant in connection with increased traffic and tourism. Especially for OTs with a more temperate or sub-Antarctic climate these risks are expected to become greater with climate change. Climate change is likely to allow the establishment of species in areas currently too cold for their long-term survival. Staff training and the availability of new (online) tools contribute to address these increased risks.

5 OPTIONAL: Gender equality

This project was not specifically addressing any gender issues. But it is worthwhile to point out that the majority of the 11 staff dealing with biosecurity on St Helena and the Falkland Islands and trained during the workshop 8 were female. (see annex 2). Equally, the majority of stakeholder participating in the workshops were female (females/male ratio was 9/5 in both workshops; see annex 6.1).

One very important aspect to mention is that the empowerment of biosecurity staff through the training to independently develop PRAs. This becomes particular relevant when well-researched and referenced PRAs can be used as evidence in any conflict of interests for planned introductions as has been more detailed above. This was pointed out by female participants both at workshops on St Helena but even more so during the subsequent workshop help for the Caribbean OTS in January 2020.

6 Sustainability and Legacy

The project increases biosecurity awareness and succeeds in justifying the importance of prevention, to lower the impact of invasive species on biodiversity and livelihoods in the British OTs. The profile of the project has been significantly raised through the inclusion of biosecurity staff from OTs not directly involved in the project as well as researchers working on similar themed projects. These stakeholders are included in the newly established communication network for the SAUKOTs. We are hopeful that this platform will facilitate increased and thriving communication between stakeholders in the coming years.

One output of the project is a set of completed PRAs for species, which may be introduced deliberately or accidentally (the latter being identified through horizon scanning). These PRAs will be publicly available through the Darwin/Defra project website and can be easily adapted to suit biosecurity teams for other OTs and/or other non-British islands and countries.

Training, in combination with improved access to information resources using a local network of skills, will also ensure that these can be kept current, according to emerging threats and also remain in long-term use. Increased capacity to confidently and independently produce any new PRAs required will lead to improved biosecurity practices and higher levels of prevention. Through their CABI membership, the participating OTs will continue to have free access to the newly developed online PRA tool. The online horizon scanning tool is freely accessible.

The capacity to independently conduct PRAs on potential biocontrol agents, to control priority IASs, will provide sufficient background information to initiate CBC programmes as required and when funding becomes available. These will themselves promote the development of proposals for control programmes by outlining environmental and economic long-term benefits. Well-integrated PRA procedures will improve the overall implementation likelihood of future biological control programmes, which will be completely self-sustaining when successfully implemented. Enhanced understanding of the role of PRAs and their contribution to the control of IAS will itself facilitate and promote the integrated management of invasive species. This is particularly the case for PRAs for biological control agents, which allow the safety and benefits of their introduction to be demonstrated, based on scientific evidence, leading to a better acceptance by the wider public.

7 Lessons learned

Overall, the project team worked extremely well together, despite some technical communication problems caused by the extreme geographical distances between individual project partners.

The intensive collaboration between research teams from other projects working on similar subjects led to very useful synergistic outcomes and improvements of the individual projects (i.e.

CABI compendia team developing USDA funded online tools for HS and PRA, CEH/GBNNS conducting HS expert workshops, collaboration with the teams working in parallel on DI funded projects on St Helena, in particular the implementation of an invasive species strategy on St Helena).

As expected, face to face discussions held during the workshop turned out to be much more productive than skype meetings, which tended to be frequently disrupted by poor connections and/or acoustic quality. These personal interactions and discussions were a vital part of the dedicated week-long workshops. By contrast, skype meetings were comparatively superficial. Poor internet access also limited the potential for collaboration with stakeholders from other SAUKOTs during the workshops themselves and had to be restricted to short skype sessions.

Overall, the emphasis on remote communication, supported by two workshops, worked very well and if faced with a similarly framed project our approach would be near identical.

7.1 Monitoring and evaluation

Regular project monitoring was conducted through meetings and briefings via audio/video links, including the monitoring of progress against project outputs throughout the course of the project. The achievement of milestones was regularly checked against the Implementation Timetable during the skype meetings. Part of the monitoring was the Darwin Plus reporting itself (six-monthly progress reports and this annual project report). These reports, as well as all published outputs, were generated as collaborative activities, with responsibility shared equally between the project teams on the OTs and in the UK. All project data was made available for evaluation at the workshops. During the first workshop a plan for the subsequent phase was developed (see workshop summary in annex 6.1). Progress achieved to date was also reviewed during both workshops. This project was largely desk-based but the activities conducted within individual work packages were expected to have a considerable knock on impact on the subsequent work packages, both with regards to the anticipated time frame and applied methodology. However, as the four project work packages needed to be undertaken sequentially to a certain degree, a cursory evaluation to approve necessary adjustments was always undertaken towards the end of each package. During these project consultations with the stakeholders involved, we evaluated ongoing activities and modified procedures as required. At the end of the workshops, we disseminated feedback forms to participants (see annex 6.6) to assess the degree to which biosecurity personnel had become confident in designing and implementing their own PRAs. Before working on the establishment of a communication network to increase the pool of skills between individual OTs, discussions with workshop participants identified the most widely accepted approach for this within the study area. CABI uses the PRINCE2TM project management methodology to manage and implement all its projects, ensuring that dialogue is maintained between collaborators and with the project's sponsors, through the use of structured reporting and clear communication channels. CABI did retain overarching financial control over the project and all partners accounts, specifically for funds provided to them. The final project report and any publications based on the results of this project will be peer reviewed, both internally by senior scientists in CABI as well as within the DI (if required).

Project progress was supervised at all times externally by Jill Key from the GBNNS, who also attended both workshops through additional match funding. There was also a close collaboration with CEH (Helen Roy, Jodey Peyton), as there were a number of synergies with CEH projects conducted on horizon scanning in the OTs at the same time.

7.2 Actions taken in response to annual report reviews

The feedback from the annual report was:

'The project is working closely with several official and unofficial partners, including the Environment and Natural Resources Directorate (ENRD) of St Helena and the Department of Agriculture, Falkland Islands Government. The inclusive nature of Skype meetings and workshops demonstrates a strong commitment to rigorous development of the various tools, mechanisms and networks the project is designed to develop. Progress towards project outputs is satisfactory but it is unclear why the project has identified four work packages in the rationale but then reports against five, similarly worded outputs. The outcome is not achievable within the project's timeframe and reflects the wider impact the project will have rather than the discreet outcome of the project. While it is clear the project is making progress towards its stated outcome, it is a concern that availability of staff time is recognised as a limiting factor to full endorsement of the PRA procedures. For the project to deliver its outcome, sufficient capacity — including staff availability — must be built. While the greatest weakness is an outcome unachievable within the project timeframe, outcome level indicators are not specific — no baseline or target for rejections of high-risk species, or increased interception of high-risk species, has been established. However, the project is taking a collaborative approach to M&E which is appropriate for the context. For example, all project data was made available at the St Helena workshop for review and was used to establish the workplan priorities for year 2. The project has an appropriate exit strategy.'

As suggested, instead of referring to distinct work packages, the focus of this report is the outputs. There are more outputs than original work packages. This is in part due to the fact that during discussions held with project partners and stakeholders for the specific needs of the OTs involved, we took on additional activities, which were not anticipated in the original proposal. The biggest ones are the development of a prioritisation tool supporting the selection of species from horizon scanning for PRA and the training for and integration of the CABI online PRA tool, which only became available during the course of the project. We regard the flexible addition of these additional activities as a proactive response to stakeholder requests which bring about significant improvement to the project.

It is true that staff capacity is limited in all OTs involved in this project and that this will constrain the number of PRAs produced in the future to a certain degree. However, increasing the number of staff in the biosecurity teams is prohibitively difficult in the territories concerned due to the administrative system, high permanent costs and limited availability of skilled staff. To lobby for the employment of additional staff was always beyond the scope of this project. In contrast, by training biosecurity officers to undertake PRAs, we enabled staff to deal with preventative measures for invasives in a significantly more efficient way within the given capacity. This was our primary aim and we believe this was achieved in full.

With regards to the overall outcome achievement, we would like to refer to the comments made further above. All objectives outlined as part of the project have been successfully delivered. Some of the changes anticipated to materialise only after project completion were in fact achieved within the project timeframe e.g. the rejection of planned imports of potentially invasive species and the positive support for planned imports of strawberry runners to enhance local agriculture, providing adequate phytosanitary measures are adhered to. The only example of increased interceptions for invasives covered through newly conducted PRAs (*Tuta absoluta*) which will become apparent after a lag phase was explicitly highlighted in the original proposal as being a longer term, post project outcome.

Additional comments not covered in the summary were:

'It is not clear if the horizon scanning tool (HST) is actually integrated with PRA procedures or if it is simply available for use. Please fully clarify the integration implementation process and provide evidence'

Both the HST and the additional deliverable of the CABI online PRA tool have been repeatedly referred to in the PRA guidelines developed in this project. Guidance on the usage of both tools are available to biosecurity staff (annex 6.4.2).

Please provide details of the biosecurity staff members who have been trained. The target of least 2 staff from each participating territory trained in implementing PRA procedures cannot be corroborated without evidence of the training provided to the individuals

This target has been met in full see details further below.

The score given in the annual report was 3. This was mostly a consequence of the outcome achievement coming after the project ended. We hope to have fully demonstrated that with the exception of the minor and fully explained case of interception data, which was highlighted as having longer term returns, that we achieved our planned outputs and therefore our overall outcome in full during the course of the project.

8 Darwin Identity

The Darwin logo was represented on slides in every presentation given during the workshops. The workshops themselves were presented to the wider public and altogether six radio interviews were given for both radio stations present on St Helena. During these interviews the aim and purpose of the overall project was also explained and the Darwin Initiative was specifically acknowledged as the main funder.

All project activities were always presented as a distinct project with a single identity.

We contacted Darwin before the first project workshop to request merchandise or other available items displaying the Darwin logo, which we could use to raise the profile of the DI during the team's stay on St Helena, however nothing was available at the time.

The Darwin logo was also featuring in any presentation given outside the project workshops, such as the presentation given at a CEH-led workshop on horizon scanning held on Cyprus in November 2019.

Numerous references to Darwin and this specific project, together with logo use, were made during the follow-on training workshop to roll out our PRA approach in four more Caribbean British OTs, in January 2020. The logo was also included in the guidance booklet developed for this workshop and its final report.

The project was also acknowledged in the publication cited below.



Figure 1: Radio interview given by part of the project team at SAMS during the March 2019 workshop.



Figure 2: A breakout group at work during the March 2019 workshop in Jamestown, St Helena.



Figure 2: A presentation given during the March 2019 workshop, showing the Darwin Initiative logo.

9 Finance and administration

9.1 Project expenditure

Project spend (indicative) since last annual report	2019/20 Grant (£)	2019/20 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others				
TOTAL				

Staff employed (Name and position)	Cost (£)
Norbert Maczey (senior ecologist; project leader)	
Pablo Gonzalez Moreno (pest risk assessment specialist; modeller)	
Suzy Wood (invasive species scientist)	
Alyssa Lowry (data analyst)	
Kate Constantine (socio-economist)	
Djami Djeddour (invasive species scientist)	
Daniela Baigorri (biosecurity officer FIG)	
TOTAL	

Consultancy – description and breakdown of costs	Other items – cost (£)
TOTAL	

Capital items – description	Capital items – cost (£)

TOTAL	

Other items – description	Other items – cost (£)
TOTAL	

9.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
USDA (for the development of the CABI online Horizon scanning tool)	
CABI reduction in overheads	
TOTAL	

Source of funding for additional work after project lifetime	Total (£)
TOTAL	

9.3 Value for Money

Value for money stems from several aspects:

- Only short, on-the-ground training workshops were required to achieve the essential capacity building to independently and confidently conduct PRAs. The investment into the development of the PRA templates and other documents was a one-off investment for the two case studies chosen for this project.
- Stakeholders from the other three SAUKOTS have been involved in a number of skype meetings and have been kept informed about all discussions and developments during the project. In addition, their contributions to any discussions have always been taken into consideration to improve outputs. Stakeholders on Ascension Island, South Georgia and Tristan are also part of the newly established communication network, with full access to guidance notes and templates, other relevant forms and the small but evolving library of completed PRAs.
- A full rollout to other territories has already begun ahead of the project's completion as biosecurity teams from four more British OTs in the Caribbean have been trained. This has culminated in the completion/drafting of five additional PRAs (see GBNNSS website; <http://www.nonnativespecies.org/index.cfm?pageid=658>). The rollout to these territories in particular demonstrates the project's high value for money and sustainability.
- Careful and measured investment into informed, early prevention (as has been at the core of our project) will likely lead to substantial cost savings in the future, by reducing the risk of incursion and the subsequent need for costly control and mitigation measures, once these invasive species have become established and start to impact on biodiversity and livelihoods.

Annex 1 Project's full current logframe as presented in the application form (unless changes have been agreed)

Please insert your project's logframe (if your project has a logframe), including indicators, means of verification and assumptions. N.B. if your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact Darwin-Projects@ltsi.co.uk if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Due to improved biosecurity the rate of invasion by alien species will be reduced. Long term this will reduce staff time and costs required for the control of invasive species.			
Outcome: Biosecurity on several SAUKOTS improved through the implementation of better PRA procedures; Biosecurity staff confident in independently conducting PRAs. Improved prevention of introduction of invasive species			
Outputs: 1. Existing PRA procedures reviewed and specific need for improvement in individual participating OTs identified	1.1 Based on existing GAP analysis by NNSS, specific needs are identified during first meeting of participants. Requirements are listed in order of priority.	1.1 Assessment of current PRA procedures reported and priority needs listed in annual project report	Need for improvement exists on all participating OTs
2. Template for PRA developed and implemented into PRA procedures.	2.1 Template developed by end of first project year	2.1 Template available as word document	
3. Use of CABI horizon scanning tool integrated into PRA procedures	3.1 Instructions for use of horizon scanning tool developed by end of year one 3.2 At least 6 risk assessments for species identified with horizon scanning tool conducted (2 marine species, 4 terrestrial species)	3.1 Instructions available as word document 3.2 Risk assessments available as annex 6.3 to project report	Online access allows full access to tool and compendia information
4. Biosecurity staff trained and confident in following PRA procedures	4.1 At least 2 staff from each participating territory trained in implementing PRA procedures	4.1 Training material and documentation of workshop made available in project reports	No fluctuation of staff during duration of project

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>5. Network between biosecurity personnel of participating OTs established in order to pool individual expertise and make conduct of PRAs more reliable</p>	<p>5.1 Effective communication channels between trained staff established by end of project</p>	<p>Part D of the annex 6.2 of this report</p>	<p>Procedures in place to pass on communication protocol and introduction into PRA procedures in case of changing staff</p>
<p>Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p>1.1 First audio/video conference with all project partners present; project introduction; discussion of work plan and amendments if necessary; establishment of communication channels/procedures; collation of information on existing PRA procedures and preliminary listing of priority needs and gaps</p> <p>1.2 Circulation of agenda prior to second audio/video meeting. Prioritisation of individual requirements for each OT in more detail</p> <p>1.3 Final document with requirements in prioritised order circulated and agreed on</p> <p>2.1 Existing PRA procedures reviewed and draft for improved procedures developed</p> <p>2.2 Draft template for PRA embedded in overall PRA procedures developed (tailored version for each territory) based on template developed during DPLUS033 on the Falkland Islands and circulated to project partners</p> <p>2.3 Discussion and amendment of PRA template and PRA procedures at Workshop on St Helena based on results from output 1</p> <p>3.1 Mechanism developed to integrate horizon scanning tool into PRA procedures of participating OTs</p> <p>3.2 Horizon scanning tool explained and jointly tested during workshop on St Helena</p> <p>4.1 Training to conduct PRAs during workshop on St Helena</p> <p>4.2 Selection of case study PRAs for each territory to be conducted by trained staff and followed up on these after workshop</p> <p>4.3 Review of training capacity during second workshop in Stanley or St Helena</p> <p>5.1 Assessment of requirements for establishing network during first workshop on St Helena</p> <p>5.2 Development of draft procedures/protocols for networking activities and skill sharing</p> <p>5.3 Agreement on final approach during second workshop in Stanley or St Helena</p>			

Annex 2 Report of progress and achievements against final project logframe for the life of the project (if your project has a logframe)

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
<p>Impact:</p> <p>Due to improved biosecurity, the rate of invasion by alien species will be reduced. Long term this will reduce staff time and costs required for the control of invasive species.</p>		<p>The PRAs completed during the project have already prevented the introduction of potentially invasive species and reduced the risk of introduction and establishment of others, therefore reducing existing pressure on staff time and reducing costs on future control of these species.</p> <ul style="list-style-type: none"> • A PRA on a nematode, which poses a high threat to the survival of endemic weevils on the Falkland Islands, has resulted in the rejection of an application to introduce this species as a biological control agent in greenhouses. • PRAs on ornamental plant imports (palms) and horticultural propagation plants (strawberry runners) impose restrictions on their imports and minimise the risks of accidentally introducing associated pest species and diseases into St Helena. • A PRA on the tomato leaf miner has led to improved inspection routines, significantly reducing the risk of accidental introduction of this species. • Two PRAs on mussels for St Helena and the Falkland Islands raise awareness for the imminent threat of introduction of these species and provide a strategy to minimise this risk. <p>Procedures are set in place for the biosecurity team to continually add to this list in coming years through the elaboration of additional PRAs.</p>
<p>Outcome: Biosecurity on several SAUKOTS improved through the implementation of better PRA procedures; Biosecurity staff confident in independently conducting PRAs. Improved prevention of the introduction of invasive species</p>	<p>Increased rejections of high-risk species and higher acceptance of import of low risk species over a five-year period after project end compared to level before</p> <p>Increased interception of some high risk species due to raised alert after horizon scanning</p>	<p>All proposed outputs have been achieved. The impact already recorded during the project (see above) indicates that biosecurity measures on St Helena and the Falkland Islands have been improved. The generation of a number of PRAs, with additional ones under development, indicates that training of biosecurity staff has achieved an increase in capacity. This has led to improved prevention of introduction of invasive species and thus meets the project goal in full.</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Output 1. Existing PRA procedures reviewed and specific need for improvement in individual participating OTs identified	1.1 Based on existing GAP analysis by NNSS, specific needs are identified during first meeting of participants. Requirements are listed in order of priority.	Specific needs of the participating OTs were discussed during initial skype calls and during the first workshop in March 2019. There was a focus on adjusting a first draft PRA template to the requirements of the OTS in very fine detail. Whilst both St Helena and the Falkland Islands both currently have high levels of biosecurity, specific templates to conduct PRAs were either unavailable or too generalised to cover the needs of the individual OTs. On the Falklands, the template from DPLUS033 had been in use but there was much room for improvement. Equally, the existing procedures on St Helena were in need of rationalising to better deal with new emerging threats and new pathways. The identification of existing gaps and needs on both OTs have been the foundation for the development of a newly designed PRA template. Evidence is provided in the notes of the meetings (annex 6.1).
Activity 1.1 First audio/video conference with all project partners present; project introduction; discussion of work plan and amendments if necessary; establishment of communication channels/procedures; collation of information on existing PRA procedures and preliminary listing of priority needs and gaps		Completed; first skype call was held May 3 rd 2018; minutes in annex 6.1
Activity 1.2. Circulation of agenda prior to second audio/video meeting. Prioritisation of individual requirements for each OT in more detail		Completed; second skype call was held August 7 th 2018; minutes in annex 6.1
Activity 1.3 Final document with requirements in prioritised order circulated and agreed on		Completed; notes of second skype call circulated; annex 6.1
Output 2. Template for PRA developed and implemented into PRA procedures.	2.1 Template developed by end of first project year	A template for PRAs was developed and circulated before the workshop in March 2019. Through training of biosecurity staff at the workshop, this was made available for immediate use within the existing biosecurity procedures. However, there was still scope for improvement as discussed with all stakeholders during the first workshop. and changes were subsequently made. Final templates are provided in annex 6.2.
Activity 2.1 Existing PRA procedures reviewed and draft for improved procedures developed		Completed; this was covered during the first three skype meetings and the first workshop;

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 2.2. Draft template for PRA embedded in overall PRA procedures developed (tailored version for each territory) based on template developed during DPLUS033 on the Falkland Islands and circulated to project partners		Completed; this was drafted during the workshop and finalised before the second workshop. Procedures for St Helena and the Falklands Islands with the PRA templates embedded are provided in annex 6.2
2.3 Discussion and amendment of PRA template and PRA procedures at Workshop on St Helena based on results from output 1		Completed; see summary of first workshop (annex 6.1)
Output 3. Use of CABI horizon scanning tool integrated into PRA procedures	<p>3.1 Instructions for use of horizon scanning tool developed by end of year one</p> <p>3.2 At least 6 risk assessments for species identified with horizon scanning tool conducted (2 marine species, 4 terrestrial species)</p>	Biosecurity staff from all SAUKOTs had the opportunity to trial and test the CABI HST. The tool has also provided background lists for HS exercised during the CEH-led expert workshops covering all OTs. By providing training to biosecurity staff from St Helena and the Falkland Islands and feeding back recommendations for further improvements, the tool has become readily available as part of the existing PRA procedures on both OTs. Initial prioritisation of species from HS for PRA was covered through the CEH-led workshops. However, we have added a simple tool allowing a more automated prioritization process (annex 6.4). In addition, training was provided in the use of a new online PRA tool developed by CABI during the project, which was also integrated into the improved PRA procedures. It needs to be pointed out that the development of a prioritisation tool and the online PRA tool were not a defined part of the project and are an additional achievement of the project. Instructions on how to use these tools are provided in annex 6.4.2.
Activity 3.1 Mechanism developed to integrate horizon scanning tool into PRA procedures of participating OTs		Completed; the HST along with the new online PRA tool are integrated into the overarching PRA procedures (annex 6.2)
Activity 3.2 Horizon scanning tool explained and jointly tested during workshop on St Helena		Completed; training was provided during both workshops (workshop notes annex 6.1); major training documents were the draft guidance documents and PRA templates themselves (annex 6.2); screenshots of training presentations are provided in annex 6.5.
Output 4. Biosecurity staff trained and confident in following PRA procedures	4.1 At least 2 staff from each participating territory trained in implementing PRA procedures	Completed; altogether 11 staff trained; 3 biosecurity officers trained for St Helen: Julie Balchin, Nicholas Stevens, Rosie Peters; 2 biosecurity officers trained for the Falklands: Naomi Baxter and Daniela Baigorri. Additional staff dealing with biosecurity who have been trained are: Denise Blake (Environmental Officer, Falkland Islands Government), Vanessa Thomas-

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
		Williams (Nursery Officer, ANRD, St Helena Government), Lourens Malan (St Helena Nature Conservation Group), Ludi Kern (Invasive Plants Specialist), Sasha Bargo (Conservation Officer, ANRD, St Helena Government), Ted Whitton (Agronomist, ANRD, St Helena Government).
Activity 4.1 Training to conduct PRAs during workshop on St Helena		Completed; training was provided during both workshops (annex 6.1) and further supervision in conducting PRA was provided after the workshops.
Activity 4.2 Selection of case study PRAs for each territory to be conducted by trained staff and followed up on these after workshop		Completed; see PRAs in annex 6.3.
Activity 4.3 Review of training capacity during second workshop in Stanley or St Helena		Completed; this was a discussion point at second workshop and is supported by feedback forms disseminated after the workshop
Output 5. Network between biosecurity personnel of participating OTs established in order to pool individual expertise and make conduct of PRAs more reliable	5.1 Effective communication channels between trained staff established by end of project	A new communication network between the SAUKOTs was established during the second workshop (part D in annex 6.2). Initially this was setup between the Falkland Islands and St Helena with biosecurity officers from the other territories invited to participate after the workshop. Stakeholders present at the second workshop chose Google Group and Google Drive as the best platforms to record communications between the biosecurity teams and deposit and exchange files, in particular PRAs.
Activity 5.1 Assessment of requirements for establishing network during first workshop on St Helena		Completed; this was discussed in a dedicated session during the first workshop (annex 6.1)
Activity 5.2 Development of draft procedures/protocols for networking activities and skill sharing		Completed; these were developed before the second workshop
Activity 5.3 Agreement on final approach during second workshop in Stanley or St Helena		Completed; this was discussed and agreed on during the second workshop (see summary in annex 6.1)

Annex 3 Standard Measures

Code	Description	Totals (plus additional detail as required)
Training Measures		
1	Number of (i) students from the UKOTs; and (ii) other students to receive training (including PhD, masters and other training and receiving a qualification or certificate)	0 (it was not the of the project, that trainees would get a specific degree or qualification)
2	Number of (i) people in UKOTs; and (ii) other people receiving other forms of long-term (>1yr) training not leading to formal qualification	0
3a	Number of (i) people in UKOTs; and (ii) other people receiving other forms of short-term education/training (i.e. not categories 1-5 above)	(i) 16 (see list of workshop participants in annex 6.1)
3b	Number of training weeks (i) in UKOTs; (ii) outside UKOTs not leading to formal qualification	(i) 2; (ii) frequent remote supervision of biosecurity staff drafting PRA in between workshops
4	Number of types of training materials produced. Were these materials made available for use by UKOTs?	<p>Altogether 9 PowerPoint presentations were given to cover the individual topics of the workshop programmes;</p> <p>Word and PDF versions were provided both as printed handouts and in digital form for the PRA procedures, PRA templates, guidance notes and example PRAs. In addition, training material for the use of the CABI online tool were provided. All documents were made available to biosecurity officers not only on the Falkland Islands and St Helena but also for biosecurity teams on Ascension, Tristan and South Georgia. A similar set of training materials was made available for biosecurity teams on Anguilla, Cayman Islands, Montserrat and Turks and Caicos</p>
5	Number of UKOT citizens who have increased capacity to manage natural resources as a result of the project	20; 11 citizens of the Falkland Islands and St Helena have increased capacity achieved through training to conduct PRAs (list of names and positions is given in annex 2 above under output 4); 9 citizens of Cayman Islands, Anguilla, Montserrat and TCI have increased capacity achieved through training to conduct PRAs (list of participants available through GBNNSS)
Research Measures		
9	Number of species/habitat management plans/ strategies (or action plans) produced for/by Governments, public	0

Code	Description	Totals (plus additional detail as required)
	authorities or other implementing agencies in the UKOTs	
10	Number of formal documents produced to assist work in UKOTs related to species identification, classification and recording.	None as such, but all conducted PRA cover taxonomic aspects and the identification of the target species
11a	Number of papers published or accepted for publication in peer reviewed journals written by (i) UKOT authors; and (ii) other authors	(i) none so far; (ii) one
11b	Number of papers published or accepted for publication elsewhere written by (i) UKOT authors; and (ii) other authors	none
12b	Number of computer-based databases enhanced (containing species/genetic information). Were these databases made available for use by UKOTs?	none
13a	Number of species reference collections established. Were these collections handed over to UKOTs?	none
13b	Number of species reference collections enhanced. Were these collections handed over to UKOTs?	none
Dissemination Measures		
14a	Number of conferences/seminars/workshops/stakeholder meetings organised to present/disseminate findings from UKOT's Darwin project work	none
14b	Number of conferences/seminars/workshops/stakeholder meetings attended at which findings from the Darwin Plus project work will be presented/ disseminated	4 (CEH South Atlantic horizon scanning workshop Nov. 2018 (https://www.ceh.ac.uk/news-and-media/blogs/predicting-threat-invasive-non-native-species-british-overseas-territories); CEH horizon scanning workshop Gibraltar in Jan. 2019 (https://www.yourgibraltartv.com/politics/18393-jan-23-uk-funded-horizon-scanning-workshop-targets-future-invasive-species-in-gibraltar); Addressing drivers of ecological change in Lake Akrotiri: Assessing and mitigating impacts of invasive non-native species, Workshop Cyprus, Nov. 2019; Improving biosecurity in the Caribbean British Overseas Territories through Pest Risk Assessments, workshop, Antigua, January 2020.
Physical Measures		

Cod e	Description	Totals (plus additional detail as required)
20	Estimated value (£s) of physical assets handed over to UKOT(s)	
21	Number of permanent educational/training/research facilities or organisation established in UKOTs	
22	Number of permanent field plots established in UKOTs	
23	Value of resources raised from other sources (e.g., in addition to Darwin funding) for project work	

Annex 4 Publications

Provide full details of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details. Mark (*) all publications and other material that you have included with this report

Type *	Detail	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers	Available from
(e.g. journals, manual, CDs)	(title, author, year)				(name, city)	(e.g. weblink, contact address, annex etc)
Journal paper	González-Moreno P. et al. (2019) Consistency of impact assessment protocols for non-native species. NeoBiota 44: 1–25.	Spanish	British	male		Gonzalez et al. 2019
Manual	Maczey et al. (2020) PRA guidance for St Helena and the Falkland Islands	German	British	male		Annex 6.2

Annex 5 Darwin Contacts

To assist us with future evaluation work and feedback on your report, please provide details for the main project contacts below. Please add new sections to the table if you are able to provide contact information for more people than there are sections below.

Please see our Privacy Notice on how contact details will be used and stored:

<https://www.gov.uk/government/groups/the-darwin-initiative#privacy-notice>.

Ref No	DPLUS074
Project Title	Improving biosecurity in the SAUKOTs through Pest Risk Assessments
Project Leader Details	
Name	Norbert Maczey
Role within Darwin Project	Project coordinator; PRA trainer
Address	
Phone	
Skype	
Email	
Partner 1	
Name	Julie Balchin
Organisation	ENRD; head of biosecurity
Role within Darwin Project	Project coordinator for the project team on St Helena
Address	
Skype	
Email	
Partner 2 etc.	
Name	Daniela Baigorri
Organisation	FIG, DoA
Role within Darwin Project	Coordinator project team in the Falkland Islands
Address	
Skype	
Email	

Annex 6 Supplementary material (optional but encouraged as evidence of project achievement)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	√
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.	
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.	√
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
Have you involved your partners in preparation of the report and named the main contributors	√
Have you completed the Project Expenditure table fully?	√
Do not include claim forms or other communications with this report.	