



Biodiversity in UK Overseas Territories



The UK Overseas Territories (UKOTs) support a diverse variety of habitats ranging from ice fields and rocky islands to coral reef atolls and tropical forests. This POSTnote summarises the challenges to conservation management and halting biodiversity loss in UKOTs, as required under international agreements.

Background

UK Overseas Territories are under UK jurisdiction, but are constitutionally not part of the UK. This POSTnote is primarily concerned with the 11 inhabited UKOTs, where UKOT governments are responsible for the protection and conservation of their natural environments (Box 1). The British Antarctic Territory, British Indian Ocean Territory and South Georgia & the South Sandwich Islands have no permanent population.¹

The recent White Paper on the Overseas Territories recognises the importance of stewardship for the UKOT's environment: "the territories are internationally recognised for their exceptionally rich and varied natural environments. They contain an estimated 90% of the biodiversity found within the UK and Territories combined".² There is at least 517 globally threatened species found in UKOTs, compared to 194 in the UK,³ along with undisturbed habitats of international conservation significance. The 12 island UKOTs support a large number of endemic species (found

Box 1. Inhabited UK Overseas Territories

Most of the inhabited UKOTs fall into two regional groups, the Caribbean and NW Atlantic (Anguilla, Bermuda, Cayman Islands, Montserrat, Turks and Caicos Islands and British Virgin Islands) and the South Atlantic (St Helena, Ascension and Tristan da Cunha, and the Falkland Islands). However, there are also two UKOTs in Europe (Gibraltar and the Sovereign Base Areas of Akrotiri and Dhekelia) as well as the Pitcairn Islands in the South Pacific (Box 2).

Overview

- Invasive species and habitat loss are drivers of biodiversity reduction in all UKOTs. The relative significance of different drivers of biodiversity loss varies across UKOTs.
- The evidence base available to different UKOTs for conservation management varies widely. The capacity to make better use of available evidence is an issue for most OTs.
- Despite their globally unique biodiversity, UKOTs are not eligible for the standard mechanisms that fund conservation in the UK, or the Global Environmental Fund.
- There may be opportunities to share research data and best practice within South Atlantic and Caribbean UKOTs regions with similar pressures on biodiversity.

only in a specific geographic location). Endemic species are most likely to arise on biologically isolated islands. For example, on St Helena, 45 plant species, over 400 invertebrate species and 12 coastal fish species are endemic, with more likely to be identified. There were 8 endemic bird species before humans arrived, but now only 1 survives, the St Helena Plover.⁴

Drivers of Biodiversity Loss in UKOTs

The risk factors likely to place the most pressure on biodiversity differ between UKOTs according to geographic location, local environmental factors and population size. The biggest risk in the more remote and less densely-populated South Atlantic is that posed by invasive species, particularly rodents, feral cats and plants. The greatest threat to biodiversity in the more densely populated Caribbean UKOTs is development along with sea level rise and other climate change impacts.

Invasive Species and Biosecurity

Removing invasive alien species introduced accidentally or for agricultural purposes is critical for meeting international biodiversity agreement targets.⁵ The RSPB has been awarded funding to lead a number of eradication exercises, particularly rat eradication (Box 2) and invasive plant removal. It is currently undertaking a research project for Defra to prioritise vertebrate invasive species eradications. However, even if invasive species can be eradicated, UKOTs also need to develop biosecurity controls to police their possible routes of entry to avoid future problems.

Box 2. Pitcairn Islands**Rat Eradication**

The Pitcairn Islands in the southern Pacific Ocean are made up of four islands: Pitcairn, Henderson, Oeno, and Ducie situated 4,500 kilometres (2,800 miles) from New Zealand. They have international recognition as important bird habitats, including seabirds and a flightless species of land bird (Henderson's crane), which are threatened by rats. Although rats have been successfully eradicated from Ducie and Oeno islands, a recent -£1.5 million project to eradicate them from Henderson Island through an aerial drop of poisoned bait was unsuccessful. Henderson Island is a designated UNESCO world heritage site for its near-pristine ecosystem. Only Pitcairn island itself is inhabited, with a population of around 55, one of whom is now a biosecurity officer, but this is only on a part time basis with no professional support.

Marine Reserve

Since early 2011, the Pew Environment Group's Global Ocean Legacy project has been campaigning to establish a large scale marine reserve within Pitcairn's waters. There are internationally important endemic marine habitats, including some of the most pristine coral reefs remaining, as a result of their isolation from the pressures that affect many others, such as reefs in the Caribbean UKOTs. Due to their southerly location, just under the Tropic of Capricorn, they are relatively robust to climate change impacts. However, there are proposals to open commercial fisheries. If biodiversity losses are to be minimised, there should be a marine management plan in place before the fisheries are opened, setting out measures such as technical specifications of gear, fish size, quotas and no take zones/marine protected areas. This would require a legislative framework to establish a fisheries and marine management plan covering the entire Pitcairn Exclusive Economic Zone (out to 200 nautical miles).

The capacity of UKOT administrations to enforce biosecurity varies, but few have appropriate regulations in place.

Habitat Loss and Other Pressures

Development pressures leading to habitat loss are most intense in the Caribbean. Although Caribbean UKOTs have established protected area networks, whether the appropriate habitats are protected and levels of protection afforded remain contentious, as does the lack of legal requirements for Environmental Impact Assessments for developments (Box 3). Individual UKOTs are also affected by specific pressures on biodiversity such as overfishing, pollution, over-abstraction of freshwater and tourism, which may need to be addressed through legislation. Conservation of biodiversity requires not only the preservation or restoration of habitats and the acquisition of land, but also management of these pressures driving biodiversity loss. Without the right legislative frameworks in place, along with capacity to enforce them, biodiversity loss will continue.

Climate Change

Climate change is likely to become a major driver of biodiversity loss,⁶ with known risks including:

- floods, storm surge, beach erosion and other coastal hazards, exacerbated by sea-level rise
- salt water intrusion and a reduction and growing scarcity in freshwater resources
- impacts of ocean acidification and rising sea temperatures on coral
- disappearance of St Helena's cloud forest (montane tropical forest that is frequently immersed in low cloud)
- lack of adaptation options for many endemic species, already impacted by invasive species colonisation.

Box 3. Multilateral Conservation Agreements and UKOTs

Defra and its agencies support the UKOTs in meeting the demands of international biodiversity agreements and instruments.⁷ Not all agreements apply to every UKOT, as some are area specific and others would be too onerous. For example, the UK is bound by Article 4 of the 1992 Convention on Biological Diversity (CBD) to account for UKOTs in respect of treaty obligations. Given CBD monitoring requirements, it has not been extended to the remote Pitcairn Islands (Box 2), although they may opt to extend it in the future. UKOTs are also ineligible for the international funding of CBD measures, the Global Environmental Fund.

Environmental charters were negotiated with UKOT governments to set out which administration was responsible for complying with which obligation (with the exception of Gibraltar). In 2012, in a dispute as to whether the Bermudan Government was obliged to conduct Environmental Impact Assessments prior to approval of developments that are likely to have significant impact on the environment, the Bermudan Ombudsman found that the obligations arising out of their Environmental Charter are not discretionary. However, there are no mechanisms for enforcing the charters, nor are there any annual reporting requirements, although some OT's choose to do so.⁸ The charters were not mentioned in the 2012 White Paper, although it lists compliance with relevant multilateral environmental agreements as one of its four goals for environmental management.

Environmental Governance of UKOTs

The Foreign and Commonwealth Office (FCO) takes the overall lead on managing the UK's relationship with OT governments. However, the Department of Environment, Food and Rural Affairs (Defra) and its agencies are primarily responsible for providing support to UKOTs on biodiversity issues. The Defra agencies involved include:

- Joint Nature Conservation Committee (JNCC), the UK statutory advisory body on biodiversity issues
- Food and Environment Research Agency (FERA)
- Centre for Environment, Fisheries and Aquaculture Science (CEFAS)
- Royal Botanic Gardens, Kew.

FCO, Defra and DfID have agreed a Strategy for the Conservation and Sustainable Use of Biodiversity in UKOTs,⁹ which provides the policy framework for the UK government, UKOT governments and agencies to work together. However, the strategy only identifies key biodiversity themes, because identifying priority measures for biodiversity conservation is the responsibility of the relevant OT government. The previous 1999 White Paper on UKOTs stipulated negotiated Environmental Charters (Box 3) as the main policy framework, which remain in place. The lack of strategic overview by the UK and a failure to identify priorities for action has been a consistent focus of criticism by NGOs.¹⁰

Funding Conservation Projects

The Environmental Audit Committee (EAC) has previously stated that providing sufficient support to UKOTs would be the most significant contribution the UK Government could make to slowing global biodiversity loss.¹¹ The funding provided by the UK to OTs has also previously been criticised as inadequate by the Foreign Affairs Select Committee.¹² A number of reports have suggested that to meet internationally agreed biodiversity targets funding should be higher (Box 2), with estimates ranging from £16 to £9.6 million per year for 5 years to fund conservation.¹³ Defra spend on biodiversity conservation in UKOTs in 2012

was approximately £2.97 million, whereas £495.4 million was spent on conservation in England for the year 2011/12.¹⁴

The Overseas Territories Environment Programme (OTEP, funded by the FCO and DFID) and the Defra Darwin Initiative (funded by Defra and DFID), have previously provided grants on a competitive basis, with additional funding to address specific governance and capacity issues in UKOTs. These funds have been merged to create the Overseas Territories Environment and Climate Fund (known as 'Darwin Plus') that will operate under the banner of Defra's Darwin Initiative.

European Funding

When the UK joined the European Union in 1973, special arrangements were made for the UK's non-European Overseas Territories in line with those already in place for French and Dutch Territories. As such, UKOTs are currently eligible to apply to the BEST fund¹⁵. The latest round of successful proposals included three projects that include work in UKOTs:

- Conserving Species and Sites of International Importance by the Eradication of Invasive Species in the Caribbean UK Overseas Territories, RSPB
- Terrestrial ecosystems of the Falklands – a climate change risk assessment, Royal Botanic Gardens, Kew
- Identifying important marine areas for Macaroni Penguins in the UK and FR OCTs, British Antarctic Survey.

However, BEST is a pilot programme, and may not continue beyond this round. Negotiations are ongoing as to whether OTs will be eligible to apply for funding from the next iteration of the LIFE programme, the EU's main financial instrument supporting environmental and nature conservation projects.¹⁶

Valuations of Biodiversity

The White Paper highlighted a lack of awareness amongst UKOT government officials about links between biodiversity, the economy and human wellbeing, and the need to integrate environmental considerations into decision-making, policy frameworks and regulations.² The UK Government has funded two stakeholder-led 'environmental mainstreaming' pilot projects in the British Virgin Islands and the Falkland Islands to address this issue. The EAC also recommended that an ecosystem assessment should be conducted in partnership with each UKOT.¹¹ To facilitate exercises based on the UK National Ecosystem Assessment (NEA) approaches, economic valuations of environmental assets are being supported in individual UKOTs. For example, the Darwin Challenge Fund is supporting NEA scoping studies in Anguilla and the Falklands that could act as a template for other Caribbean UKOTs and the South Atlantic UKOTs respectively. Such assessments allow the development of scenarios, which emphasise the need for environmental security and the financial impact of the risks of losing it in areas such as supply chain security of natural resources.

Building Awareness of the Value of UKOT Biodiversity

Awareness of the value of biodiversity assets appears to be generally low in the population of most UKOTs, although some culturally iconic species can help develop awareness,

such as the Bastard Gumwood, a dryland specialist tree species, on St Helena that was reduced to a single individual before a recovery programme was initiated.

Awareness of endemic species could be increased through:

- Developing the economic potential of wildlife tourism for island UKOTs with rare and endemic species. However, for such tourism to be developed there needs to be a high profile for the biodiversity, like the Galapagos Islands.
- Environmental education programmes for school children, with opportunities for children to meet scientists, go on field courses and experience the endemic species.

Biodiversity Evidence Base

Policies to raise awareness of the importance of biodiversity within UKOTs are of limited utility without an evidence base for what biodiversity is present, what wider ecological processes it supports and how endangered it is. The OT Governments, the UK Government and NGOs (OT based and UK based) also all have differing conservation priorities that need to be negotiated on the basis of evidence. At present, there is no overview of biodiversity data gaps in UKOTs, although the FCO is funding the RSPB to conduct an 'extinction risk assessment' of UKOT biodiversity.

Biodiversity Baseline Surveys

A baseline biodiversity survey has two main objectives:

- to identify or confirm species, habitats, and ecosystems present along with their related ecological functions and benefits for human users
- to identify priority species, habitats and ecosystems for conservation action, such as statutory designation.

A single baseline survey is a 'snap-shot' and multiple 'snap shots' will be necessary, such as covering different seasons, to get an accurate picture of an area's biodiversity. The evidence base available to different UKOTs varies widely, but most lack basic survey data for some species. Data are usually available at a population level for vertebrate species, such as sea birds, but often only presence or absence surveys are available for plant and invertebrate species. Data on marine biodiversity are usually much sparser than those available for terrestrial biodiversity. Funding of OT biodiversity mapping projects is continuing, including in Anguilla (terrestrial and marine habitat mapping), the Falklands Islands and South Georgia (algae & sponge biodiversity surveys) and St Helena (mapping marine biodiversity to create a Marine Management Plan).

Conservation Planning

Conservation of biological resources requires management to ensure that existing activities, such as fishing, do not lead to biodiversity loss. It should also increase the resilience of the resources to meet future pressures, through measures such as restoring habitats. However, the more detailed data necessary for planning and implementing such measures are often absent in UKOTs. For example, on the British Virgin Islands, RBG Kew is helping develop management plans for protected areas and assess whether the proposed network includes the necessary representative species and habitats. At present, there is no annotated species list or vegetation maps for the areas. Such evidence is also critical for ensuring other decision making processes, such as planning, are appropriately informed.

Making Data Available from Research

Most UKOTs already put the requirement to report data into research permits for external researchers and institutes and that it should be in an accessible format, but they are not able to influence the scope of such research projects to ensure evidence needs are met. Resources to allow accurate identification and record distribution of species are critical for the conservation evidence base. For example, RBG Kew is involved with developing an online herbarium, digitising all the UKOT specimens they hold.¹⁷ However, the users need to have enough bandwidth to download the high resolution files to allow characterisation of microscopic features such as plant hair morphology.

One option would be to develop a central repository for UKOT biodiversity data in the UK, but this would only be developed at the request of UKOT administrations (there is a central repository for UK biodiversity data, the National Biodiversity Network Gateway). Given the logistical challenges of getting to some UKOTs, it may also be cost effective to create a central repository of samples, such as moss and feathers from polar areas, which could be used for genetic or pollutant monitoring by UK based researchers. Another option is to establish regional focal points for research within UKOTs, such as the Falklands based South Atlantic Environmental Research Institute (SAERI, Box 4). However, OT departments need to have the capacity to make use of data under all these options.

Capacity Building

Allocation of current funding has to take into account what can be done effectively with existing OT capacity and over what timescales, and where development of additional capacity is needed. For example, the acquisition of baseline data needs to be accompanied by the development of skills to use tools for manipulating relevant datasets, such as Geographic Information System (GIS) mapping skills. This ensures biodiversity baseline information is integrated with other information sources used by OT governments and there is a proposal for a South Atlantic GIS Centre run by SAERI. However, even in the OTs with large populations, public servants often have limited capacity to take on additional responsibilities.

Improving Capabilities

Improving governance by enhancing the capabilities of staff in administrative structures may require long term systematic support from the UK Government. There is a lack of expertise within OT departments for identifying the key priorities for conservation funding. The technical capacity to address biodiversity issues is often absent, particularly a lack of specialist conservation officers (on groups of species, such as insects). Funding to undertake university courses outside the UKOT may be required to build such capacity, to which end OTEP previously funded 6 MSc students. Without such capacity, OTs may accept degraded ecosystems as normal (the 'shifting baselines' phenomena¹⁸) rather than identifying what habitats could be restored or recreated and what species could be reintroduced.

Box 4. South Atlantic Environmental Research Institute (SAERI)
SAERI, based in the Falkland Islands, is an academic research organisation set up in 2012 to conduct environmental research from the equator to Antarctica. The Falkland Islands Government set up the institute to help diversify its economy. A feasibility study by the British Antarctic Survey suggesting there was a need for an umbrella group to co-ordinate existing activities and increase awareness of environmental research in the Falkland Islands, South Georgia and wider South Atlantic. The study suggested the institute could engage with collaborators and potential research funders around the world. The institute is expected to become a key research centre for natural and physical sciences, building capacity within and between UKOTs in the South Atlantic. Current projects include:

- A marine survey of intertidal and sub-tidal zones down to 30m depth of Ascension Island to produce faunal and floral species inventories, habitat descriptions and maps, a field guide to marine invertebrates, algae and fish, a report on the status of marine endemics, and a report on the potential impacts of climate change.
- A project to establish a marine biodiversity data archive for the Falkland Islands by collating information from recent surveys and historical datasets to establish a baseline dataset that can be used to map species distributions and inform future management of the marine environment.

Capacity for Monitoring and Enforcement

Some OTs, have monitoring programmes, such as the contracting of observers on fishing vessels by the Falkland Islands to meet the requirements of the Agreement on the Conservation of Albatrosses and Petrels. CEFAS and FERA are starting to help build capacity for enforcement and management for fisheries and biosecurity in other UKOTs. Marine enforcement is challenging for most countries, but for UKOTs patrolling, gear inspections and catch monitoring is an even greater burden. Monitoring and enforcing the protection of biodiversity should be incorporated into the start of protected area network programmes to ensure key species and habitats are being sustained or recover. However, in most UKOTs, funds are not available for monitoring or enforcement, and governance issues can affect the effectiveness of enforcement.

Endnotes

- 1 South Georgia has a transient but permanent population of research scientists, government officials and NGO staff, and British Antarctica has a transient but permanent population of research scientists.
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- 3 <http://www.iucnredlist.org/>
- 4 IUCN, 2010, *Climate Change and Biodiversity in the European Union Overseas Entities*, Petit, J, and Prudent, G (eds).
- 5 Varnham, K, 2006, *Non-native species in UK Overseas Territories: a review*, JNCC Report 372
- 6 Brown, N, 2008, *Climate change in the UK Overseas Territories: An Overview of the Science, Policy and You*, JNCC
- 7 Pelembe, T, and Cooper, G.,2011, *UK Overseas Territories and Crown Dependencies: 2011 Biodiversity Snapshot*, JNCC
- 8 Ombudsman for Bermuda, 2012, *Today's Choices, Tomorrow's Costs*
- 9 <http://www.defra.gov.uk/publications/files/pb13335-uk-ot-strat-091201.pdf>
- 10 <http://www.ukotcf.org/pdf/fNews/40.pdf>
- 11 Environmental Audit Committee, Thirteenth Report of Session 2007-08, *Halting Biodiversity Loss*
- 12 Foreign Affairs Select Committee, Seventh Report of Session 2007-08, *Overseas Territories*
- 13 GHK, 2008, *Costing Biodiversity Priorities in the UK Overseas Territories* http://darwin.defra.gov.uk/reports/thematic_review.UKOTs.pdf
- 14 3 Sep 2012, *Official Report*, Column 118W
- 15 Voluntary Scheme for Biodiversity and Ecosystem Services in Territories of the EU Outermost Regions and Overseas Countries and Territories
- 16 <http://ec.europa.eu/environment/life/funding/lifeplus.htm>
- 17 <http://herbaria.plants.ox.ac.uk/bol/UKOT>
- 18 Knowlton, N, and Jackson, J,2008, *PLoS Biol*6(2): e54