

JNCC Report 795

25 Year Environment Plan Outcome Indicator K3: Status of endemic and globally threatened species in the UK Overseas Territories (2025 update)

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Executive Summary

The UK Overseas Territories (UKOTs) are considered globally significant biodiversity hotspots, supporting complex ecosystems which are home to many species that are found nowhere else in the world. Species status assessments, such as the International Union for the Conservation of Nature Red List assessments, are effective tools in understanding the level of threat facing these species. Using species status assessments, JNCC is quantifying the proportion of endemic species in the UKOTs that are considered globally threatened to produce an indicator. These are species listed as Vulnerable, Endangered and Critically Endangered on the International Union for the Conservation of Nature Red List.

JNCC has developed this indicator using data provided directly from the UKOT Governments and Administrations as well species records from the <u>International Union for</u> <u>the Conservation of Nature Red List</u> (version 2025-1) and <u>The UK's Wildlife Overseas: a</u> <u>stocktake of nature in our Overseas Territories</u> (Churchyard *et al.* 2014), published by the RSPB. Additional unassessed species records are undergoing review by JNCC and the UKOT Governments and Administrations.

Results are presented as a combined indicator across all UKOTs and include true endemic species only.

Based on the current K3 indicator endemic species dataset, JNCC has calculated the proportion of endemic species in each IUCN Red List category. The dataset currently contains 662 records of endemic species, of which 78.5% (520 species) have been assessed through the IUCN Red List assessment process. As of March 2025, 48.5% are considered threatened. The remaining 142 species records (21.5%) are currently unassessed.

The statistics produced for the K3 indicator will be used to inform national and international UK policy commitments, particularly reporting to the 25 Year Environment Plan, Convention of Biological Diversity and the UN Sustainable Development Goals, as well as other UK Government policy areas. JNCC aims to develop and improve the statistics in ways that will support the work of UKOT Governments and inform non-governmental stakeholders and the wider public. Indicator K3 is published as an Official Statistic in Development to facilitate users' and stakeholders' involvement in assessing its suitability and quality. JNCC welcomes feedback and suggestions on any aspect of the interim K3 indicator via Communications@jncc.gov.uk.

This report is an update to, and replaces, <u>JNCC Report 739</u>, <u>Indicator K3</u>: <u>Status of endemic</u> <u>and globally threatened species in the UK Overseas Territories</u>, published in 2023.

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1. Introduction to Indicator K3

1.1. Indicator K3 – Status of endemic and globally threatened species in the UKOTs

JNCC is developing an indicator to quantify the proportion of endemic species in the UKOTs that are considered globally threatened. This indicator has been developed using data from the <u>International Union for the Conservation of Nature Red List</u> (IUCN Red List) and <u>The UK's Wildlife Overseas: a stocktake of nature in our Overseas Territories</u> (Churchyard *et al.* 2014), published by the RSPB (also referred to as the 'RSPB Stocktake'). JNCC has also been working closely with the UKOT Governments and Administrations who have provided additional species records and reviewed the endemic status of species on the RSPB Stocktake. JNCC is continuing to identify endemic species records through literature reviews, verifying these records with the UKOT Governments and Administrations.

1.2. Purpose of the K3 Indicator

The K3 indicator will establish a baseline that can track changes in the threatened status of endemic species in the UKOTs over time. The indicator will be used to inform UK Government policy commitments including the Convention on Biological Diversity (CBD), specifically target 4 of the Global Biodiversity Framework, which calls for a 'halt on human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species' (CBD 2022).

The results from the K3 indicator will also support work in the UKOT Governments, providing an evidence base of threatened endemic species which can support the prioritisation of resources for targeted conservation action. Quantifying and tracking threat levels over time will assist in communicating progress of conservation action in the UKOTs, as well as identifying species and regions that require further status assessments.

2. Status of endemic and globally threatened species in the UKOTs: Results

2.1. Status of globally threatened and endemic species in the UKOTs: Combined

Figure 1 and Table 1 provide a summary of the status of globally threatened and endemic species in the UK Overseas Territories.



Figure 1. Percentage of endemic species, in total (across 13 UK Overseas Territories, see Section 3.1 for details) within each IUCN Red List category. Note that the 'Threatened categories' value combines the Vulnerable, Endangered and Critically Endangered IUCN Red List categories.

Table 1. Number and percentage of endemic species, across 13 UKOTs, within each IUCN Red List category. The 'Threatened Categories' values (presented in the first row of the table) combine the Vulnerable, Endangered and Critically Endangered IUCN Red List categories.

IUCN Red List Category	Number of UKOT Endemic Species	Percentage of UKOT Endemic Species
Threatened categories	321	48.5%
Extinct	44	6.7%
Extinct in the Wild	4	0.6%
Critically Endangered	145	21.9%
Endangered	101	15.3%
Vulnerable	75	11.3%
Near Threatened	21	3.4%
Least Concern	86	12.9%
Data Deficient	44	6.7%
Unassessed	142	21.5%
Total (excluding the Threatened categories subtotal)	662	100%

As of March 2025, 48.5% (321) of the endemic species in the UKOTs are considered threatened (see the combined 'Threatened categories' value) (Figure 1, Table 1). These are endemic species which are included in the Vulnerable, Endangered and Critically Endangered IUCN Red List categories, with 75, 101 and 145 species in each category respectively (Table 1). This percentage is based on the current confirmed K3 indicator endemic species dataset for the UKOTs which contains 662 records in total, of which 21.5% (142 species) are unassessed (Figure 1, Table 1).

A further 6.7% (44) and 0.6% (4) of the endemic species are considered Extinct or Extinct in the Wild respectively (Figure 1). Of the 44 species listed as Extinct, 43 species were classified in this category prior to 2010. One species was listed as Critically Endangered (possibly extinct) in 2019 and reclassified as Extinct in 2020.

Since the publication of the RSPB Stocktake in 2014, there has been an increase in the number of endemic species from the UKOTs with Red List assessments, from 145 in 2014 to 520 in 2025. This includes an increase in globally threatened endemic species from 111 in 2014 compared to 321 in 2025.

The RSPB Stocktake assessment of known endemic threatened species in the UKOTs in 2014 reported that 77% of all endemic species fall within the threatened categories (Churchyard *et al.* 2014). The variation between the results of the K3 indicator (48.5%) and the RSPB Stocktake (77%) is explained by the different methodological approach to assessing threatened status (Section 3.5), which includes exclusion/inclusion of species classified as Unassessed or Data Deficient.

Within the current K3 indicator endemic species dataset, 78.5% of species have been Red List assessed (520 species). The current dataset therefore primarily contains records from the IUCN Red List (see Section 3.2).

As the K3 endemic species dataset expands, the proportion of unassessed endemic species is likely to increase. The cycle of assessment for the IUCN Red List will influence future updates to this indicator. Implications of this are discussed in Section 3.7.

2.2. Status of endemic species in the UKOTs: by region

This K3 indicator is currently an Official Statistic in Development, in order to facilitate feedback from users and stakeholders. The publication of the K3 indicator presents a combined indicator across all UKOTs. In the future results may be disaggregated by geographic region or individual UKOT, as well as by taxonomic group. It is anticipated that these disaggregated results will be presented in the next update to this indicator, subject to agreement with the UKOTs.

There is added value in grouping the territories by region or presenting individual UKOT data:

- Showing areas that have high endemism.
- Presenting areas with high conservation threat.
- Increasing the sensitivity of the indicator detecting change in endemic species at a finer resolution and geographic scale.
- Prioritisation of resources for targeted conservation action.
- Detecting progress, or lack thereof, of conservation action.

2.3. Data Sources

The majority of records (520, 78.5%) used in the development and publication of the interim version of the K3 indicator in 2025 have been obtained from the IUCN Red List, with the remaining records either provided directly by the UKOTs or verified from the RSPB Stocktake through literature reviews.

The International Union for the Conservation of Nature Red List (IUCN Red List) is an inventory of the global conservation status of biological species. It is a reliable source of information both in terms of scientific data and institutional knowledge. Assessments are based on a precise set of criteria that is used to evaluate extinction risk of species and subspecies, with data provided at global and regional level. The IUCN Red List is recognised as the most authoritative source of information on species conservation status, however it is dependent on species being assessed, and for those that have been assessed there is no set period for reassessment. The Red List does not therefore cover all of the species known to exist in the UKOTs.

The <u>RSPB Stocktake (2014)</u> is an inventory of recorded species in the UKOTs. It is based on a wide range of data sources, including published and unpublished literature and direct communication with collaborating organisations and individual experts throughout the UKOTs. Prior to publication of the RSPB Stocktake, species lists for each territory were reviewed by relevant experts and were signed off by each UKOT.

JNCC has reviewed, and is continuing to identify endemic and possible endemic species from the RSPB Stocktake and wider literature. Due to the prominence of official data, and information gathered from government sources, JNCC is confident in the accuracy of the data reported in this indicator.

3. Technical Background

This section describes the methodology and approach to developing this interim version of the K3 indicator.

3.1. Geographic Scope

This indicator presents data from 13 of the 14 UKOTs. Permission has been given to include data from the IUCN Red List for each UK Overseas Territory included. Additional endemic species records verified through the RSPB Stocktake, or provided directly by UKOT Governments and Administrations, are also included in the current version of this indicator.

The UK Government and Mauritius reached a political agreement on 3 October 2024 on the exercise of sovereignty over the Chagos Archipelago / British Indian Ocean Territory. Subject to a formal treaty being agreed, the United Kingdom will agree that Mauritius is sovereign over the Chagos Archipelago, including Diego Garcia. Until the Treaty is signed, ratified and then comes into force, British Indian Ocean Territory will continue to contribute to this indicator.

The British Antarctic Territory was excluded in the development of the K3 indicator. The British Antarctic Treaty deals with matters relating to biodiversity conservation in this region.

3.2. Data Collection

Indicator K3 was developed using data from the <u>IUCN Red List</u> and The RSPB Stocktake (<u>The UK's wildlife overseas</u>: <u>A stocktake update of nature in our land-based Overseas</u> <u>Territories</u> (2014). Both resources were used as a starting point for developing an endemic species inventory for the UKOTs.

3.2.1. IUCN Red List

The IUCN Red List acts as the primary source of information on the Red List status of endemic species. The IUCN Red List assesses species status at a global level which is applicable to the K3 indicator.

3.2.1.1. Data download

A download of all species from the UKOTs was taken from the IUCN Red List in March 2025. This excluded the British Antarctic Territory, which is not included in this indicator, and the Sovereign Base Areas of Akrotiri and Dhekelia (SBA). The SBA requires a specific search on the IUCN Red List using a polygon function. A previous search using this function for SBA did not produce robust data and therefore was not repeated for the final dataset. Data for the SBA was therefore provided directly by the SBA Administration.

The IUCN data download was produced using the advanced function. This feature allows the user to select specific fields, in this case the use of a filter function that includes endemic status. Taxonomic data were downloaded as a separate file from the IUCN dataset. This was merged with the species data to produce a complete dataset that includes taxonomy, endemic status, assessment category and geographic range as applicable to this indicator.

Some species from St Helena, Ascension and Tristan Da Cunha were grouped as endemic across the region in the IUCN download. This was true for 279 records. A manual search in the 'rationale' column of the IUCN species dataset for endemic status confirmed which island each species was endemic to. 11 species were listed as endemic to St Helena and Ascension, and a further 24 were confirmed as endemic to St Helena, Ascension and Tristan Da Cunha. The remaining records were refined as endemic to one of these Islands. These records are included in this dataset as true endemics and not regional endemics.

A total of 514 true endemic species records with corresponding Red List assessments came from the IUCN Red List download and an additional six records with corresponding Red List assessments came directly from the SBA and were verified by JNCC through the IUCN website.

3.2.2. RSPB Stocktake

The RSPB Stocktake (<u>The UK's Wildlife Overseas: a stocktake of nature in our Overseas</u> <u>Territories (2014)</u>) is a comprehensive inventory of all known species in the UKOTs. The purpose of the RSPB Stocktake was to provide a broad view of the biodiversity known to occur in each of the UK Overseas Territories. It includes the number of endemic species occurring in the UK Overseas Territories and the proportion which have had their conservation status assessed on the IUCN Red List. This assessment has highlighted knowledge gaps in different taxonomic groups as well as the need for increased Red List assessments in the UKOTs.

3.2.2.1. Reviewing endemic species from the Stocktake

The RSPB Stocktake has acted as a reference point for endemic species in the UKOTs in the development of the K3 indicator. It includes an extensive list of 1,368 endemic UKOT species, as well as 34 endemic subspecies and 223 possible endemic species.

Of the 1,368 endemic species, 520 are assessed on the IUCN Red List as of March 2025, which form part of this indicator. The remaining 848 records have been confirmed by JNCC through literature reviews and their status is being verified by the UKOT Governments and Administrations with support from taxonomic experts. These will be included in the next update to this indicator.

3.2.2.2. Endemic subspecies and possible endemic species

A review of the 34 endemic subspecies in the RSPB Stocktake has shown that 15 are assessed on the IUCN Red List. These endemic subspecies were added to the K3 indicator endemic species dataset and are included in this update to this indicator.

Of the 223 possible endemic species in the RSPB Stocktake, nine have been assessed on the Red List. A review of these records has shown that three are endemic species, four are regional endemic species and two are not endemic species. The remaining 214 records have been reviewed by JNCC through a literature review and are currently being confirmed with the UKOTs Governments and Administrations. These remaining records will be included in the next update to this indicator.

3.3. Engagement with the UK Overseas Territories

JNCC has pursued direct engagement with UKOT Governments on the development of the K3 indicator. Official government and expert local and taxonomic knowledge has been essential in verifying endemic status, particularly for species that are not listed on the IUCN Red List.

The current K3 indicator dataset contains 142 records that have been provided directly from the UKOTs and are currently unassessed on the IUCN Red List. JNCC has identified the remaining 848 records from the RSPB Stocktake through a literature review and is in the process of confirming the status of these records with the UKOT Governments and Administrations. These will be included in the next update to this indicator.

3.4. Indicator K3 development – regional endemic species and subspecies

There are 52 regional endemic species listed on the IUCN Red List, however these are not currently included in the K3 indicator. It is anticipated that these will be included in some capacity in the next publication of this indicator, however further consideration is needed around the geographic scope for regional endemic species within each territory. Discussions are ongoing on the best approach for including these data.

3.5. Calculating endemic species status

The status of threatened endemic species in the UKOTs, as well as the percentage of species in each IUCN Red List category, has been calculated as a percentage of the number of species in each category against the total number of species using the following equation:

% of Species of Threatened Status = (Vulnerable + Endangered + Critically Endangered) / Total Species (Including Data Deficient and Unassessed)

The total number of species includes those listed as Data Deficient and Unassessed. Data Deficient and Unassessed species have been recorded as separate categories. A taxon is classed as Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution or population status. Unassessed species have not had an assessment of data availability and therefore cannot be categorised as Data Deficient.

The Data Deficient and Unassessed records are included in the calculation of the percentage of species of threatened status to give a more representative indicator that includes all species currently in the dataset.

3.5.1. RSPB Stocktake: Threatened Species Status

The RSPB Stocktake (Churchyard *et al.* 2014) calculated the percentage of endemic species in the UKOTs in using the following equation:

% of Species of Threatened Status = (Vulnerable + Endangered + Critically

Endangered) / (Total species (Excluding Data Deficient, Extinct and Unassessed)

Data Deficient, Unassessed and Extinct species were removed from the number of total species used to assess threatened status in the RSPB Stocktake calculations.

Assessing threatened status of the current K3 indicator endemic species dataset using the RSPB Stocktake calculation above gives a value of 74.3% of species in the threatened categories, which is comparable to the figure quoted by RSPB in 2014 (77%). The number of endemic UKOT species that have been Red List assessed has increased since the publication of the RSPB Stocktake in 2014 (see Section 2.1) which may partially explain the small differences in these figures.

JNCC is confident that the data used in the development of the K3 indicator is representative of the status of threatened endemic species in the UKOTs despite using a different methodological approach to the RSPB Stocktake. The methodological approach may be revised, in line with the approach within the RSPB Stocktake, once the remaining endemic species records status of assessments have been confirmed.

3.6. Sources of uncertainty

The species in the current K3 indicator endemic species dataset are known endemic species. JNCC is confident that the current dataset is accurate having verified records through official sources. JNCC is in the process of verifying the remaining endemic and regional endemic species for inclusion in next year's publication.

3.7. Constraints

The development of the K3 indicator is limited by the data sources available and the capacity of government departments and experts to engage. The K3 indicator can only provide an indication of the status of endemic and threatened species in the UKOTs based on the data that are available.

3.7.1. Red List Assessments

Threatened status is based on the IUCN Red List global assessments. At the time of publication, 520 endemic species in the UKOTs have been assessed on the Red List, an increase of 375 assessments since the publication of the RSPB Stocktake in 2014. Considering there are an estimated 1,500 endemic species in the UKOTs, a large proportion of the endemic species in the K3 indicator dataset will not have had a Red List assessment.

Red List assessments are based on a variety of information, including species distribution, habitat and ecology, threats to species, and current conservation methods. Due to the unique and often elusive nature of the endemic species included in this indicator, and the limited amount of capacity and funding for research in the UKOTs, the likelihood of comprehensive data being available for all species in the near future is limited. Over the lifetime of this indicator further endemic species will undergo Red List assessments; however, it is acknowledged that there are limitations to developing a complete dataset.

3.7.2. Knowledge Gaps and Bias

Every UKOT has endemic species, although some have a higher proportion than others. This is partly due to differences in biodiversity across the different geographic regions as well as differences in the knowledge of species presence between UK Overseas Territories. As with most species data, there are knowledge gaps amongst certain taxonomic groups. Terrestrial species are better represented than marine species and lower (non-vascular) plants are less well documented than higher (vascular) plants. An analysis of threatened status of endemic species within different taxonomic groups is being considered for future updates of the K3 indicator. At this stage this is dependent on capturing sufficient data that represent the taxonomic groups present in each UK Overseas Territory.

3.8. Quality control and quality assurance

The work on indicator K3 is compliant with JNCC's Evidence Quality Assurance Policy. JNCC's risk assessment recognises that indicator K3 could have a moderate impact if used to inform UKOT policy decisions and funding bids.

3.9. Update frequency

JNCC will continue to develop the K3 indicator over the next financial year, with an aim to disaggregate the data by region or individual UK Overseas Territory, and explore options for disaggregating by taxonomic group. The ongoing frequency of updates will be decided once a fuller species inventory is complete as part of the ongoing evaluation of this indicator. Future updates are dependent on IUCN Red List assessment cycles, as well the capacity of the UKOTs to provide information about new discoveries of species, which in many cases depends on funding for survey work and the availability of external taxonomic expertise.

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