

Appendices to the UK General Implementation Report

Annex A of the 2019 UK Article 17 EU Habitats Directive Report

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Appendix 1. Main achievements under the Habitats Directive (Annex A Section 1)

1. Main achievements under the Habitats Directive

Information is provided separately below for the Atlantic and Mediterranean biogeographic regions and marine regions. This report complements the Conservation Status assessments of individual species and habitats listed on Annexes II, IV and V of the Directive. Those assessments are more than just assessments of the Natura 2000 sites; they take account of the totality of each species and habitat, both within Natura 2000 sites and also in the wider countryside and marine environment.

Atlantic biogeographic region

The UK has undertaken a large amount of work to implement the Habitats Directive over the past six years. Examples of such implementation are provided under the following topics:

- Improved coherence of marine SACs within the Natura 2000 Network
- Improved management of SACs within the Natura 2000 Network
- Assessing benefits and services provided by SACs and the Natura 2000 Network
- Initiatives that combine SACs and the Natura 2000 Network with the local economy
- Positive changes in public acceptance towards biodiversity protection
- Improved co-operation between authorities, nature conservation and other groups
- Research and survey
- Increased availability of information

The examples provided are not exhaustive but illustrate the work being undertaken to implement the Habitats Directive across the UK - in the four countries of the UK and in its offshore waters, and in Gibraltar.

Improved coherence of marine SACs within the Natura 2000 Network

Significant progress has been made in recent years across the UK in the development of its marine Natura 2000 SAC network, which is now nearing its completion through the formal designation process. All five Statutory Nature Conservation Bodies (SNCBs) have established conservation objectives for SACs under their responsibility and developed (or in the processes of developing) new approaches to conservation advice to better support management.

At the end of the current implementation/reporting period (i.e. up to 31st December 2018), there are 115 marine sites, with 106 fully designated Special Areas of Conservation (SACs), eight Sites of Community Importance (SCIs) and one candidate SAC (cSAC) in UK inshore and offshore waters. Before the current implementation/reporting period, there were 77 fully designated marine SACs in inshore and offshore waters. During the current reporting period, a further 29 sites have become fully designated SACs and there are 7 new SCIs.

Seven of the sites have been established to protect harbour porpoise *Phocoena phocoena* (an Annex II species), two of which are fully designated SACs and 5 are SCIs, as at the end of the current implementation/reporting period*.

For other complementary measures directed towards improved coherence of the marine network, see examples provided below under the sections which set out the UK's wider achievements.

*By the end of February 2019 (i.e. just after the implementation/reporting period covered by this report), the remaining 5 SCIs established to protect harbour porpoise became fully designated SACs; and a further site protecting reefs (an Annex II habitat) also became fully designated. Therefore, at the time of submission of this UK report to the European Commission (April 2019), there are now 112 fully designated SACs, two SCIs and 1 cSAC in the UK marine Natura 2000 network.

Improved management of SACs within the Natura 2000 Network

A major area of activity has been the management of habitats and species listed under the Habitats Directive in order to improve their conservation status, both within the UK SAC Network and the wider countryside:

England

- **IPENS Programme** (<https://www.gov.uk/government/publications/improvement-programme-for-englands-natura-2000-sites-ipens/improvement-programme-for-englands-natura-2000-sites-ipens>)
 - The improvement programme for England's Natura 2000 sites (IPENS), led by Natural England and the Environment Agency, worked with partners, and other stakeholders to develop a strategic approach to achieving favourable condition on Natura 2000 sites by reviewing the risks and issues that are impacting on and/or threatening the condition of the site, which actions and measures could be used to address them and how much it will cost and where the money could come from. The programme provided Natural England and partners with an improved understanding of all the issues affecting the sites and how to address them, a clear plan of action for improving their condition and how much it may cost, and recommendations to improve gaps in funding

and evidence. The results of the IPENS programme were used directly to update England's contribution to the UK's Prioritised Action Framework (PAF). A PAF outlines the funding needs for a country and the priorities for Natura 2000 sites. It also led to the production of "Theme Plans" the implementation of which will help habitats wider than just Natura 2000 sites.

- **Improving the information provided to Competent Authorities and Decision Makers** (<https://www.gov.uk/guidance/conservation-objectives-for-land-based-protected-sites-in-england-how-to-use-the-site-advice>)
 - Natural England has improved its advice on conservation objectives for European sites in England, under the Habitats Regulations 2017 as set out by its strategic standard. By March 2019 all terrestrial SACs have supplementary advice published to better explain the site's Conservation Objectives, how to apply them and how to achieve them.
 - Natural England has developed marine conservation advice for 29 SAC's and these are published via the Designated Sites System (DSS). This advice is aimed at competent authorities, decision makers and anyone who has an interest in a marine site. Marine conservation advice in England includes detailed 'advice on operations' that is based on the best-available evidence on the sensitivity of species and habitats to the pressures caused by marine activities. Natural England provides quantified conservation objectives for marine sites that include site-specific targets, to allow management decisions to be made against those conservation objectives more objectively and efficiently. For more information and to access the packages: <https://www.gov.uk/government/collections/conservation-advice-packages-for-marine-protected-areas>.

Scotland

- **Natura Plans Project**
 - Scottish Natural Heritage has been running a project to develop a Natura Plan for each of its SACs. These documents set out new-style conservation objectives, conservation priorities and conservation measures.

Wales

- **The Anglesey and Llyn Fens LIFE project,**
 - The project was initiated in 2009 and is restoring appropriate management to the entire alkaline fen and calcareous fen resource of this SAC in North Wales, by (i) undertaking large-scale capital restoration works (ii) working with the local farming community to enable low intensity summer grazing (iii) restoring key hydrological pathways and appropriate water level regimes, and (iv) undertaking a wide range of measures to reduce soil fertility and concentration of key plant nutrients in inflowing streams (<https://naturalresources.wales/about-us/our-projects/nature-projects/anglesey-and-llyn-fens-life-project/?lang=en>).
- **Sands of LIFE (SoLIFE) project**
 - The project seeks to ensure the favourable conservation status of 5 Annex I habitats and 3 Annex II species on 10 sites including 4 SAC sites, (Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dunes SAC, Morfa Harlech a Morfa Dyffryn SAC, Carmarthen Bay Dunes / Twyni Bae Caerfyrddin SAC and Kenfig / Cynffig SAC), equating to around 62% of the total resource of Welsh sand dune habitat. It will create mobility in the dune landscape through

restoration of geomorphological processes, by traditional land management and the removal of constraints including invasive alien species. The project will run until December 2022 and its main objectives are to:

- Restore mobile and early successional stages within the key sites to benefit Annex I habitat features,
- Remove constraints to favourable condition of SAC features arising from native and invasive alien species,
- Restore appropriate traditional grazing practices,
- Monitor the outcomes and feedback learning into management and recommendations for best practice increasing the transference of expertise and experience, and
- Raise understanding of the functions and values of sand dunes in Wales promoting best practice guidance to disseminate across Europe for replicating on projects with similar conservation issues.

- **Welsh Raised Bogs LIFE project**

- A £4M project being supported by a 75% EU LIFE contribution due to the priority status of its main target habitat, H7110 Active Raised Bog. The project aims to secure favourable management for 690 ha of this habitat and its degraded successor degraded raised bog (H7120) across the seven SAC sites in Wales where these habitats occur as qualifying features. The project will use a combination of traditional hydrological restoration and other land management techniques to achieve this, combined with innovative approaches to restoring water levels on very large scales along bog margins. The project includes a significant education and community engagement element to help develop local bog guardian partnerships. For more details please see Natural Resources Wales' (NRW's) website section: <https://naturalresources.wales/about-us/our-projects/nature-projects/new-life-for-welsh-raised-bogs/?lang=en>.

- **Development of a LIFE Natura 2000 Programme for Wales**

- The work ran from September 2012 to September 2015 and developed a programme for the management and restoration of all Welsh Natura 2000 sites, including actions both inside and outside the site boundaries, together with the production of a Prioritised Improvement Plan for all sites. <https://naturalresources.wales/about-us/our-projects/nature-projects/life-n2k-wales/life-n2k-wales/?lang=en>.

- **Wales Invasive Non-Native Priority Species for Action list**

- The list was compiled in 2017 to help improve management and includes prevention priority species that are not in Wales, priority species for management that are present in small numbers and widely spread long-term management species. <https://www.biodiversitywales.org.uk/Invasive-Non-Native-Species-Group>

- **Wales Invasive Non-Native Species (INNS) Programme**

- The programme was undertaken between October 2016 and December 2017 to support the delivery of new legislation and government policy objectives in relation to tackling INNS within Wales and build capacity to coordinate data and action in Wales. Actions undertaken by the Programme to tackle INNS

issues in Wales were designed to meet multiple statutory requirements and policy commitments including the Natura 2000 Thematic Action Plan Invasive Species and Pathogens.

- **Celtic Rainforest**

- A combination of funding from EU LIFE, the Welsh Government and project partners will benefit and restore some areas of Welsh woodlands, largely referable to the EU Annex I habitat, Old sessile oakwoods with *Ilex* and *Blechnum* in the British Isles and Tilio-Acerion forests of slopes, screes and ravines. Snowdonia National Park Authority leads a partnership with RSPB Cymru and the Woodland Trust as associated beneficiaries, and a wider partnership consisting of organisations including Dŵr Cymru, National Trust, Plantlife Cymru and NRW. The project will concentrate on four areas and will include the control of Invasive Alien Species, namely *Rhododendron ponticum*, from within the woodlands and in a specified buffer area, improvements to structure through thinning stands of young, even-aged trees, and the promotion of appropriate grazing management. This will bring benefits to many species including the nationally and internationally important mosses and liverworts that characterise the habitat, as well as promoting tree regeneration, and generally improving resilience and the woodland's ecosystem function through and engagement with the local community and landowners.
- The recent draft **Grey Squirrel Management Action Plan 2018** and the **Wild Deer Management Strategy (2017-2022)**, updated in 2017, are key to delivering the objectives of both the Natura 2000 Thematic Action Plan for Invasive Species and Pathogens and the Woodland Management Thematic Action Plan in improving the condition of semi natural woodland SACs (<https://beta.gov.wales/draft-grey-squirrel-management-action-plan-wales> and <http://www.thedeerinitiative.co.uk/uploads/docs/45.pdf>).
- The thematic **Action Plan (TAP) for Air Pollution- Nitrogen Deposition** integrates NRW Permitting decisions with responses to local authorities as planning advisers (<https://cdn.naturalresources.wales/media/676006/life-n2k-thematic-action-plan-air-pollution-nitrogen-deposition.pdf?mode=pad&rnd=13147445858000000>).
- **Afon Eden Sustainable Management Scheme** is a project run by Snowdonia National Park Authority to continue the work of the Prioritised Improvement Plan (PIP) project in addressing in stream and catchment wide issues impacting on freshwater pearl mussels in the Afon Eden http://www.snowdonia.gov.wales/authority/news-and-media/latest-news/2018-press-releases/2018-news-items/a-sparkling-future-for-afon-eden?SQ_DESIGN_NAME=print.
- Indicative **European Marine Site condition assessments** have been produced for features in Wales in 2018 (<https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/indicative-feature-condition-assessments-for-european-marine-sites-ems/?lang=en>). NRW also reported on the management effectiveness of Welsh OSPAR marine sites many of which are also marine SACs.
- To aid management Wales has produced a **list of priority marine invasive species** which categorises species as high, medium or low risk and explains their impact (<https://beta.gov.wales/invasive-aquatic-species-priority-marine-species>).
- **Pearls in Peril (PIP, LIFE11 NAT/UK/000383) LIFE Project**
 - The project ran from 2012-2016 to better understand and address the causes of freshwater pearl mussel (*Margaritifera margaritifera*) decline in the Afon Eden catchment in North West Wales and elsewhere in the UK (https://www.pearlsinperil.scot/Project_Summary). The project was supported through the LIFE+ Nature & Biodiversity component due to its contribution to the Habitats Directive and the Natura 2000 network. This UK wide LIFE project involved 22

partners working together to restore river habitats benefiting freshwater pearl mussel and salmonids (salmon and trout). A total of 48 actions were delivered across 21 rivers designated as Special Areas of Conservation (SACs) for freshwater pearl mussel. Actions in the catchment of the Afon Eden SAC included improvements to riparian habitat, in-stream river restoration, reduction of diffuse pollution, interception of road run-off, monitoring and awareness raising.

- **Dee Invasive Non-Native Species Project**

- A catchment-wide partnership initiative to manage Invasive Non-Native Species on the Dee Catchment in England and Wales, which was established in 2012 and is ongoing (<http://www.dinns.org.uk/en/about/default.aspx>).

- **Southern Damselfly**

- Ongoing management by the Pembrokeshire Coast National Park Authority, British Dragonfly Society (BDS) and NRW has used mechanical diggers to open up watercourses on the Preseli Hills, with three additional areas brought under management in winter 2017-18. Attempts are also being made to secure appropriate grazing regimes here. Similar work on a much smaller scale took place on Cefn Bryn in winters 2015-16 and 2017-18, with short sections of ditch lines cleared of dense vegetation and re-profiled to provide suitable conditions. The damselfly has since colonised the ditch cleared in 2015-16 in small numbers. NRW has recently secured a 5-year management agreement with the commoners to deliver a rolling programme of ditch maintenance. Management initiatives on Preseli and Cefn Bryn are highlighted in the British Dragonfly Society's Southern Damselfly Management Handbook (Dalley, 2016).

Northern Ireland

- Improved management of a significant part of the Northern Ireland SAC Network has been secured through:

- The Department of Agriculture, Environment and Rural Affairs (DAERA) administered **Environmental Farming Scheme (EFS)** which seeks to assist farmers and land managers manage the countries sensitive habitats and species through better advice and assistance and is being increasingly targeted at land of high biodiversity value, in particular in designated sites (<https://www.daera-ni.gov.uk/articles/environmental-farming-scheme-efs-higher-level>).
- The Northern Ireland Environment Agency (NIEA) administered **Management of Sensitive Sites programme**, which is designed to remedy land management problems within Areas of Special Scientific Interest.
- The INTERREG VA funded project **Co-operation Across Borders for Biodiversity (CABB)** is preparing Conservation management plans and carrying out conservation actions across a suite of upland and peatland SAC's to restore favourable condition (<https://www.rspb.org.uk/our-work/conservation/projects/co-operation-across-borders-for-biodiversity-cabb/>). CABB partners in the project include DAERA, NIEA, RSPB, Northern Ireland Water, Birdwatch Ireland and Butterfly Conservation, National Parks and Wildlife Service Ireland.
- The INTERREG VA funded project **Collaborative Action for the Natura Network (CANN)** which is preparing conservation management plans and carrying out conservation actions across a suite of Lowland raised bog and freshwater SAC's to restore favourable condition (<https://www.ulsterwildlife.org/news/eu83m-boost-protect-precious-peatlands-and-wetlands-ireland-and-scotland> and

<https://twitter.com/theCANNproject>). Partners include DAERA, NIEA, Newry Mourne and Down District Council, Ulster Wildlife, National Parks and Wildlife Service Ireland, Golden Eagle Trust, IT Sligo, SNH and AFBI. This co-operative approach is bringing together many strands of expertise to co-ordinate delivery of conservation measures for the SAC network.

- The SAC Management Planning Programme, funded through the Rural Development Programme, which will deliver conservation management plans for 23 terrestrial and freshwater SACs and inform future agri-environment outcomes.
- DAERA aims to have conservation management plans in place for all terrestrial and freshwater SACs by Dec 2020.
- In the marine environment, fisheries management measures are currently being developed for Skerries and Causeway SAC, Maidens SAC and Redbay SAC. DAERA aims to have management plans in place for all these SACs and the wider MPA network by 2021. The management plans for all SACs will be developed through the INTERREG VA funded Marine Protected Area Management and Monitoring (MarPAMM) project, led by the Agri-Food and Biosciences Institute.

UK offshore

- Draft fisheries management proposals have been produced for 17 offshore SACs. These have been subject to consultation with relevant Member States and the Advisory Councils. Sufficient information has been agreed for 6 of these sites and Joint Recommendations have now been submitted for formal consultation with Member States. Significant barriers have been encountered in the development of Joint Recommendations to date and it has been challenging to agree measures with other Member States with a direct management interest and with Advisory Councils. It has proven difficult to obtain agreement that sufficient information has been provided, and in many cases there has been opposition to proposals because of concerns about the impacts on the fleets of other Member States. As a result, a number of draft management proposals for offshore SACs have run beyond the six-month period for agreeing a joint recommendation from the provision of sufficient information, as set out in article 11 of the Common Fisheries Policy.
- Fisheries management is currently in place for Hatton Bank SAC and North West Rockall Bank SAC implemented through NEAFC Recommendation 19 2014 (<https://www.neafc.org/rec/2014/19>). These sites fall within the Hatton Rockall area delineated in the recommendation which is closed to all bottom fishing activities. Darwin Mounds SAC has been subject to a permanent ban on bottom trawling and similar bottom-contacting activities since 2004. Further, areas within Darwin Mounds SAC, Wyville Thomson Ridge SAC, Anton Dohrn Seamount SAC, East Rockall Bank SAC and Hatton Bank SAC fall under the deep-sea Regulation (EU) 2016/2336 (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R2336&from=EN>), which bans all bottom trawling below 800m, and restricts fishing operations with bottom gears below 400m over areas of known/likely VME occurrence.
- Workshops have been held to develop guidance for the management of noisy activities in Harbour porpoise SACs.

Assessing benefits and services provided by SACs and the Natura 2000 Network

Several strands of work have contributed to the assessment of the benefits and services provided by the UK SAC Network. For example:

UK

- The **UK National Ecosystem Assessment** (<http://uknea.unep-wcmc.org/>) was the first analysis of the UK's natural environment in terms of the benefits it provides to society and continuing economic prosperity.

England

- The **Natural Capital Indicators report** in England (<http://publications.naturalengland.org.uk/publication/6742480364240896>) identifies key components of the environment, essential for the long term provision of benefits on which society relies. This report fills a gap in the understanding of these vital properties of the environment for well-being. A new and systematic approach is used to develop indicators, by not only focusing on available data sets. The report also highlights which indicators can act as effective, early-warning indicators of change.
- Innovative **natural capital account of National Nature Reserves** managed by Natural England, using an extended balance sheet, which displays the state of our assets, services, benefits and their economic value next to each other (<http://publications.naturalengland.org.uk/publication/4535403835293696>).

Scotland

- A number of case studies have been developed in Scotland looking at the advantages and challenges of applying an ecosystem approach in different settings (<https://www.nature.scot/scotlands-biodiversity/value-ecosystem-approach/ecosystem-approach-case-studies>).

Wales

- In 2014 a report was published that provided a comprehensive review of methods that can be used to assess the socio-economic benefits of marine protected areas in Wales (<https://cdn.naturalresources.wales/media/686182/eng-report-026-assessing-socio-economic-benefits-of-marine-protected-areas.pdf>).

Initiatives that combine SACs and the Natura 2000 Network with the local economy

A wide variety of initiatives aimed at building consensus and connecting the Natura 2000 site series with economic activity have been progressed within the UK. For example:

England

- Natural England's report **Natural Capital Indicators: for defining and measuring change in natural capital** (<http://publications.naturalengland.org.uk/publication/6742480364240896>) identifies key components of the environment, essential for the long term provision of benefits on which society relies. This report fills a gap in the understanding of these vital properties of the environment for well-being. A new and systematic

approach is used to develop indicators, by not only focusing on available data sets. The report also highlights which indicators can act as effective, early-warning indicators of change.

Scotland

- The **Forsinard Flows Visitor Centre** (<http://www.rspb.org.uk/reserves/guide/f/forsinard/>) on Caithness and Sutherland Peatlands SAC is an example of one of the many visitor centres in the United Kingdom which help to provide interpretation of the environment, and engage both locals and visitors with conservation issues.

Wales

- The **Wales Coast Path**, which opened in May 2012 and covering 870 miles (<http://www.walescoastpath.gov.uk/default.aspx?lang=en>), enables the public, both locals and visitors, to enjoy the coastline of Wales. The path passes through or adjacent to a number of SACs and SPAs, and brings economic benefit to coastal communities. NRW lead on national policy, marketing, monitoring and distribution of grant aid to the coastal local authorities that undertake development and maintenance of the route. Funding principally comes from Welsh Government and the local authorities. A new section of the path near Llandonna, Anglesey was opened in 2018 along the cliff tops, replacing a section of the path which partly followed a minor road. The website continues to be updated, for example a free marketing toolkit is being developed to help businesses attract walkers walking in Anglesey (<https://t.co/UhZGOCuGh9>).
- The management of the **Dee Estuary Cockle Fishery** has provided a sustainable fishery since 2008 on the border between England and Wales in the River Dee Estuary. The fishery exists in a region protected by Site of Special Scientific Interest (SSSI), plus SAC and SPA (Natura 2000) designations. The fishery provides economic income to 53 licenced harvesters and their associated wholesalers and harvesters. As well as maintaining the tradition of this style of fishing in the region and providing income, careful management of the resource has enabled the continuing favourable status of the protected species surveyed within the estuary and repeat certification by the Marine Stewardship Council (MSC). MSC accreditation documents and information: <https://fisheries.msc.org/en/fisheries/dee-estuary-cockle/@assessments> and <https://naturalresources.wales/guidance-and-advice/business-sectors/fisheries/dee-estuary-cockle-fishery/?lang=en>.
- **Wye and Usk Foundation** (WUF) (<https://www.wyeuskfoundation.org/>) carries out numerous in stream and catchment wide interventions to improve river habitat quality, including INNS control. Since 1996, over two hundred “easements” on both rivers have been completed that range from unblocking timber jams and removing old weirs to the construction of complex fish passes. In total, WUF have restored full access to over 800km of the Wye and Usk.
- **PONT (Pori Natur A Threftadaeth) Welsh Government grants** help deliver multiple benefits for communities and include core funding for Third Sector organisations whose goals and priorities are in line with those of Welsh Government and who seek to deliver the same outcomes (<https://www.pontcymru.org/>). Over £25 million has been awarded to Third Sector organisations for core funding from October 2015 to the end of September 2018. This highlights the importance of better management of our natural resources, increasing ecosystem resilience and delivering our commitments on biodiversity and includes PONT.
- The multi-partnered **Living Levels project** (<https://www.livinglevels.org.uk/>) will roll out 24 discrete but inter-related environmental, community and cultural projects across the Gwent Levels area in South Wales between 2018 and 2021. The Gwent Levels is one of the largest blocks (10,500ha) of coastal and floodplain grazing marsh surviving in the UK and covers eight SSSI and the Severn Estuary / Môr Hafren River Usk / Afon Wysg and River Wye / Afon Gwy SACs.

Positive changes in public acceptance towards biodiversity protection

Many steps have been taken to improve public engagement and their perception of biodiversity protection, for example:

England

- The **Monitor of Engagement with the Natural Environment (MENE) survey** continues to provide a baseline and trend data on how people use the natural environment in England (<https://www.gov.uk/government/collections/monitor-of-engagement-with-the-natural-environment-survey-purpose-and-results>). Natural England and its partners use the findings of the MENE survey to inform their work and that of other interested parties, to link it more closely to need, to evaluate the impact and effectiveness of this work, and to measure the impact of policy intervention.
- **England's Coastal Path** is underway to enable access to Environment and Nature (<https://www.gov.uk/government/collections/england-coast-path-improving-public-access-to-the-coast>).

Scotland

- Scottish Natural Heritage has tracked changes in public perception to biodiversity through the **Scottish Nature Omnibus Survey** (<https://www.nature.scot/scottish-nature-omnibus-summaries-engagement-biodiversity-and-natural-environment-august-2017>).

Wales

- The Welsh Government and NRW work closely with the **Wales Biodiversity Partnership (WBP)** (<https://www.biodiversitywales.org.uk/>). The WBP is made up of key individuals and organisations from the public, private and voluntary sectors. WBP provide leadership and expertise on priorities for action on biodiversity in Wales and promote and monitor the delivery those.

Northern Ireland

- The Wildlife and Natural Environment Act (Northern Ireland) 2011 introduced a duty on all public bodies to further the conservation of biodiversity. Local councils in Northern Ireland therefore now have a statutory duty to further biodiversity conservation and have become increasingly engaged in this area (<http://www.legislation.gov.uk/ni/2011/15/section/1>); most District Councils in Northern Ireland now employ Biodiversity Officers to produce and implement **Local Biodiversity Action Plans** for their area, which engage with their local communities in taking action for biodiversity (<http://www.biodiversityni.com>).

Improved co-operation between authorities, nature conservation and other groups

A series of measures have been undertaken to improve co-operation between authorities, nature conservation and other groups, for example:

England

- **Back from the Brink** is one of most ambitious conservation projects ever undertaken in England (<https://naturebftb.co.uk/>). Its aim is to save 20 species from extinction and benefit over 200 more through 19 projects that span England. It's the first time ever that so many conservation organisations have come together with one focus in mind – to bring back from the brink of extinction some of England's most threatened species of animal, plant and fungi.

Scotland

- The update of the **Scottish Biodiversity Strategy** has involved co-operation between a large number of groups, Government and NGO's (<https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy>);

Wales

- The Water Framework Directive (WFD) National measure, **Alignment of statutory duties under permitting and planning legislation to support a holistic approach to nitrogen deposition in Wales**, integrates both air and water quality impacts and engages with external stakeholders to deliver a natural resources management approach.
- Wales has a new legal framework which recognised that everyone's wellbeing - economic, social, cultural and environmental - depends on healthy and resilient ecosystems, which in turn, depend on biodiversity. **The Wellbeing of Future Generations (Wales) Act 2015** (<http://www.legislation.gov.uk/anaw/2015/2/contents>), and **the Environment (Wales) act 2016** (<http://www.legislation.gov.uk/anaw/2016/3/contents/enacted>) give Wales both the opportunity and a legal imperative to shift the focus away from managing the symptoms to tackling root causes. They put biodiversity and resilient ecosystems at the very centre of planning and decision-making, at all levels across all sectors. Videos explaining the new legislation can be found at <https://www.youtube.com/watch?v=rFeOYlxJbmw> and https://www.youtube.com/watch?v=YYKcswL_u7c.
- The Welsh Minister's **Natural Resources Policy** sets out the national priorities for the sustainable management of natural resources drawing from the national evidence base in the State of Natural Resources Report (<https://naturalresources.wales/evidence-and-data/research-and-reports/the-state-of-natural-resources-report-assessment-of-the-sustainable-management-of-natural-resources/?lang=en>).
- NRW's **Area Statements** contribute to implementing the Natural Resources Policy in a local context, taking a place-based approach. Taking a place-based approach focuses on collaborative working to deliver better results at a local level. Communities are best placed to shape local priorities and opportunities linked to the national priorities and find practical solutions that bring the widest possible benefits, ensuring local people benefit fully from the natural resources in their locality. Further information can be found at <https://naturalresources.wales/about-us/area-statements/?lang=en>.
- The **Nature Recovery Action Plan** for Wales (<https://www.biodiversitywales.org.uk/Nature-Recovery-Action-Plan>) is aimed at addressing the underlying causes of biodiversity loss by putting nature at the heart of our decision-making, increasing the resilience of our natural environment and taking specific action for habitats and species. It sets out how Wales will deliver the commitments of the UN Convention on Biological Diversity and the EU Biodiversity Strategy to halt the decline in

our biodiversity by 2020 and then reverse that decline. The Action Plan sets out those actions which have been specifically identified to meet our objectives to reverse the decline of biodiversity. Working groups for each objective will now further develop the detail under each of these actions. The Welsh Government has established an Implementation Group involving statutory authorities and NGOs to take forward delivery of the Nature Recovery Action Plan.

- Biodiversity and ecosystem resilience have a vital role in the sustainable management of natural resources. NRW has published a strategic steer for biodiversity to 2022 called **Vital Nature**. It establishes a high-level framework of actions for biodiversity in line with the Nature Recovery Action Plan for Wales. Through a series of goals and high-level commitments it shows how, working with others, NRW will deliver the biodiversity and ecosystem resilience duties (<https://cdn.naturalresources.wales/media/686482/vital-nature-final-230718-english.pdf?mode=pad&rnd=13179228355000000>).
- As Wales continue to harmonise requirements of the Habitats Directive and the Water Framework Directive, **River Basin Management Plans** contribute to relieving the pressures facing Wales' water environment. Rivers, lakes, wetlands, ground waters, estuaries and coastal waters, including those in protected areas all fall under these plans which are updated on a six-yearly cycle and are prepared in consultation with a wide range of organisations and individuals. The approved River Basin Management Plans and supporting documents are available on NRW's website at <https://naturalresources.wales/evidence-and-data/research-and-reports/water-reports/river-basin-management-plans-published/?lang=en>.
- In 2014, Welsh Ministers approved **Shoreline Management Plans** which span the entire coast of Wales ([SMP 19 Anchor Head to Lavernock Point \(Severn Estuary\)](#), [SMP 20 Lavernock Point to St Ann's Head \(South Wales\)](#), [SMP 21 St Ann's Head to Great Orme's Head \(West of Wales\)](#), [SMP 22 Great Orme's Head to Scotland \(North West England and North Wales\)](#)). These plans, developed by partnerships of Local Authorities, NRW and other interested parties, set the high-level policies for coastal management for the next 100 years taking climate change effects into account and seeking to promote sustainable management approaches. In addition, **the National Habitat Creation Programme** has been established by NRW on behalf of Welsh Government to deliver compensatory habitat to offset habitat lost due to coastal squeeze in relation to flood and coastal erosion risk management projects carried out to implement the policies in the Shoreline Management Plans.
- In 2016, the **Welsh Marine Protected Area (MPA) Management Steering Group** was set up to improve management across the network of MPAs in Wales, including Natura 2000 sites. The steering group is made up of representatives of the main management authorities in Wales. The group have produced an MPA Network Management Framework and Network Action plan for Wales (<https://beta.gov.wales/marine-protected-area-management-steering-group>) the action plan will be updated annually while the framework will be reviewed every six years.
- The **Wales Marine Planning Portal** (<http://lle.gov.wales/apps/marineportal/>) allows anyone to view maps online showing the distribution of human activities and natural resources in Welsh seas. The portal is an interactive planning tool that is intended to support the marine planning process by: raising awareness and understanding of the marine data that is readily available for Welsh seas, providing an understanding of the marine planning evidence base currently available, and providing interested parties with the opportunity to comment on the evidence base and the need or availability of further spatial evidence.
- NRW have undertaken a project to improve to help developers and stakeholders avoid damaging Welsh MPAs (<https://naturalresources.wales/guidance-and-advice/business-sectors/marine/marine-and-coastal-guidance/?lang=en>).
- Welsh Government has established the **Wales Marine Action and Advisory Group** to improve communications and engagement with Welsh marine stakeholders (<https://beta.gov.wales/wales-marine-action-and-advisory-group-wmaag-terms-reference>).

Northern Ireland

- DAERA is working with key stakeholders, including the environmental and agricultural sectors, to develop a draft **Ammonia Action Plan** to bring forward measures to reduce N deposition and support habitat recovery (<https://www.daera-ni.gov.uk/articles/ammonia-emissions-northern-ireland>). This should issue for consultation in Summer 2019.
- The Northern Ireland Environment Agency has:
 - Engaged with a wide range of organisations, including the Forest Service, NI Water and other key delivery partners to ensure appropriate management of SACs.
 - Supported key stakeholders to undertake significant works within the Natura 2000 network through the DAERA Environment Fund (<https://www.daera-ni.gov.uk/articles/environment-fund>).
 - Undertaken significant Cross-border co-operative work with the Republic of Ireland, Northern Ireland and Scotland through work on INTERREG VA funded projects Co-operation Across Borders for Biodiversity (CABB) and Collaborative Action for the Natura Network (CANN) to prepare Conservation Management Plans and carry out conservation measures across a suite of SAC's. Organisations and partners helping to deliver the CABB project include RSPB Northern Ireland, RSPB Scotland, DAERA, NIEA, Northern Ireland Water, Birdwatch Ireland, Butterfly Conservation Northern Ireland, National Parks and Wildlife Service Ireland and Scottish Natural Heritage. Organisations and partners helping to deliver the CANN project include Newry Mourne and Down District Council, Ulster Wildlife, DAERA NIEA, National Parks and Wildlife Service Ireland, Golden Eagle Trust, IT Sligo, Scottish Natural Heritage and Agri-Food and Bioscience Institute. This co-operative approach is bringing together many strands of expertise to co-ordinate delivery of conservation measures for the SAC network.

Research and survey

The list below is not exhaustive but illustrates the research and survey work that has been undertaken:

UK

- Evidence from **UK Environmental Change Network** (ECN) monitoring and research provides information on the sensitivity of the UK's natural ecosystems to variability and change in climate. The ECN collects, analyses and interprets a wide range of long-term data from a network of sites, including from within SACs such as site is on Eryri / Snowdonia SAC, where information is gathered about the pressures on and responses to environmental change in physical, chemical and biological systems. A recent Special Issue of the journal Ecological Indicators has been published showcasing 20 years of research using ECN data and sites (<http://www.ecn.ac.uk/publications/ecn-at-20-special-issue>).
- A **Review of the Population and Conservation Status of British Mammals** has now been completed (<https://www.mammal.org.uk/science-research/mammal-review-2018-technical-summary/>). The Review provides an estimate of the population size of each terrestrial mammal in Britain, along with information on trends

and conservation status. The project reports to Natural England, Natural Resources Wales and Scottish Natural Heritage, and has been produced in collaboration with the Biological Records Centre and incorporates records from 1995 to 2016.

England

- The **Improvement Programme for England's Natura 2000 sites (IPENS) project** funded and produced a wealth of evidence products that were critical in improving understanding of the threats and pressures on SACs in England, and developing appropriate responses (<https://www.gov.uk/government/publications/improvement-programme-for-englands-natura-2000-sites-ipens>). 35 separate evidence reports can be found here : <http://publications.naturalengland.org.uk/category/6337991412809728>.

Wales

- The **Atlas of Marine Mammals of Wales** consists of information from survey projects run by 16 groups who have been surveying marine mammals in Welsh waters for over 20 years (<http://www.seawatchfoundation.org.uk/wp-content/uploads/2015/05/ATLAS-Marine-Mammals-of-Wales-FINAL.pdf>). The aim was to provide the most-up-to date and relevant information on distribution, abundance, and seasonality of marine mammals found in Welsh Seas in order to support good environmental stewardship.
- The Natura LIFE project **Assessing and Addressing Atmospheric Nitrogen Impacts on Natura 2000 Sites in Wales** (<https://naturalresources.wales/media/674560/life-n2k-aanis-report.pdf>).
- The **CENNAD: Lichen Apprenticeship Scheme** is a specialist lichen training programme of supported learning activities, including specialist identification skills in the field, where beginners are brought to a level where they can usefully contribute to monitoring lichens. Trained by experts from Wales and across the UK, participants have carried out air quality surveys which show how lichens can determine how healthy the air is across Wales. The data the trainees collect will be used by NRW to inform policy and management. For further information on the apprenticeship scheme see <http://www.plantlife.org.uk/wales/our-work/projects-wales-cymru/cennad-lichen-apprenticeship-sche>.
- NRW have completed **Great Crested Newts Spatial Action Plans** for Flintshire (<https://cdn.naturalresources.wales/media/684991/report-078-spatial-action-plan-gcn-flintshire.pdf>), Wrexham (<https://cdn.naturalresources.wales/media/684989/report-077-spatial-action-plan-gcn-wrexham.pdf>) and Anglesey (<https://cdn.naturalresources.wales/media/684987/report-076-spatial-action-plan-gcn-anglesey.pdf>).
- To provide evidence of the scale of exploitation of Sphagnum Bog mosses, a survey of moss harvesting activity in Wales was commissioned by NRW (<https://cdn.naturalresources.wales/media/685033/report-185-assessing-sphagnum-moss-collection-wales.pdf>).
- *Vertigo geyeri*, is found at three North Wales localities. Whilst one small population appears stable, the remaining two are in unfavourable condition as a consequence of either under or over grazing. This needs to be rectified as a matter of urgency to restore to suitable conditions before populations are lost, as further survey failed to find the species in some areas. *Vertigo angustior* appears to be confined to a relatively small area of Welsh coastline in Carmarthenshire and West Glamorgan. The picture is mixed with some populations decreasing, and one not recorded since 2014. Populations at the three localities are under threat and one has declined markedly and has gone from abundant to being difficult to find. *Vertigo moulinsiana* are found at various localities. The need to control invading scrub control was highlighted and addressed in some areas where this was threatening some localities. A reasonable population at one site was thought to have been lost

by recent ditch clearance and grazing. However, 100s of snails were found across the western part of the site in October 2016, associated with short vegetation along ditches and within field compartments. This is arguably the most robust population in the UK. The remainder of this site was surveyed in October 2017, and outside a small area of fen meadow, the rest of the central and eastern part of the site was unsuitable.

- The first comprehensive detailed vegetation survey of the limestone grassland and heathland of the South Gower Coast (part of Limestone Coast of South West Wales / Arfordir Calchfaen De Orllewin Cymru SAC) was undertaken in 2014. Conservation assessments of the site and vegetation communities are included. The results of the survey show that the south Gower coast is of exceptional conservation importance for both its calcareous grassland and limestone heath Annex 1 habitats. The site supports very notable areas of these habitats, and a wide range of different forms, including some which are apparently restricted or largely restricted to the site in both a Wales and UK context. See Smith, S., Birch, K., Bosanquet, S., Guest, D., Westwood, S., Wilkinson, K. & Woodman, J. 2018. A vegetation survey and conservation assessment of the Gower Limestone Coast SS58/1. NRW Evidence Report No.188.
- A series of marine reports have been published many of which are linked to our SAC network and improving knowledge of the marine habitats and species of Wales (<https://naturalresources.wales/evidence-and-data/research-and-reports/marine-reports/publications-and-research-related-to-marine-biotopes-and-species/?lang=en>).
- A series of reports have been published on marine invasive species (<https://naturalresources.wales/evidence-and-data/research-and-reports/invasive-non-native-species-inns/publications-and-research-related-to-invasive-non-native-species/?lang=en>) which helps us understand the impact of these species on European Marine Sites in Wales.
- The **Mammals in a Sustainable Environment** INTERREG project has improved understanding of otters and bats in Wales (<https://www.keep.eu/project/3256/mammals-in-a-sustainable-environment>).
- A set of **Rare Plant Registers (RPR)** for Wales was completed in 2017 for each Vice County. The project was funded by NRW but was undertaken by The Botanical Society for Britain & Ireland Vice County Recorders. Each RPR lists the locations of British, Welsh and Vice County (VC) vascular plant rarities and the date of the most recent record and sometimes size of population. It is the intention that these will be updated regularly by the Vice County recorder. Most of the registers can be located here <http://bsbi.org/rare-plant-registers>. Not all have been published electronically.
- A strictly confidential report **Killarney fern: A review and analysis of the sporophyte generation of the Killarney fern, *Vandenboschia speciosa* (Willd.) Kunkel (syn. *Trichomanes speciosum* Willd.) in Wales** was written in 2017, with the survey work mostly completed between 2013 & 2017.

Increased availability of information

An underpinning mechanism to increase engagement, improve management, and enhance cooperation is to improve the availability of information. The following provides examples of how information has been made more available, both to professionals and to the public:

England

- The **MAGIC website** provides geographic information about the natural environment from across government (https://magic.defra.gov.uk/About_MAGIC.htm). The information covers rural, urban, coastal and marine environments across Great Britain. It is presented in an interactive map which can be explored using various mapping tools that are included. Users do not require specialist software and can access maps using a standard web browser.
- Interactive mapping now available for over 100 marine sites (<https://defra.maps.arcgis.com/apps/webappviewer/index.html?id=e2bb368f17f1475dbcb3624b33cde076>).

Scotland

- In Scotland SNH's **SiteLink database** provides key information to all on individual Natura sites (<https://www.nature.scot/information-library-data-and-research/snhi-data-services>).

Wales

- Information on designated sites in Wales, including maps and qualifying features, can be found at: <https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/designated-sites/?lang=en>.
- In early November 2018, the **National Biodiversity Network (NBN) Atlas Wales** released the Invasive Non-Native Species (INNS) Portal (<https://wales-species-inns.nbnatlas.org/>). The Portal supplements the GB Non-native Species Information Portal (<http://www.nonnativespecies.org/factsheet/index.cfm>) and its Alerts mechanism by providing a new facility to view and search for INNS specifically of interest to Wales. The Portal includes over 300 terrestrial, freshwater and marine species of interest to Wales and allows species occurrences and distribution to be searched for and downloaded individually or collectively by list. Species include those listed under EU and national legislation and those of policy and practical interest, including those identified as Wales Priority Invasive Non-Native Species for Action by the Wales Biodiversity Partnership INNS Group (<https://www.biodiversitywales.org.uk/Invasive-Non-Native-Species-Group>). As well as being of help in Wales, the unique access to species via lists will be of benefit at GB, UK and European level.
- NRW's **Special Sites Programme** has gathered and published comprehensive information about all Natura 2000 sites in Wales. This includes definitive maps, legal designation documents and management information. These can be found at <http://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/designated-sites/?lang=en>
- In Wales, the **Lle Geo-Portal** has been developed as a partnership between Welsh Government and NRW and serves as a hub for data and information covering a wide spectrum of topics, but primarily around the environment (<http://lle.gov.wales/home>).

- In Wales, NRW has identified priority evidence needs relating to marine biodiversity work which includes a list of high priority projects which will improve our understanding of marine biodiversity in Wales (<https://naturalresources.wales/evidence-and-data/research-and-reports/marine-biodiversity-collaborative-research-priorities/?lang=en>).
- A Welsh Government task and finish group has developed a list of marine habitats and species most suitable for enhancement and restoration (<https://beta.gov.wales/marine-conservation-biodiversity>) this will encourage and guide suitable project that will enhance marine biodiversity.
- A series of videos raising awareness of different Natura 2000 habitats and species are available on NRW website, and were supported by EU LIFE funding (<https://naturalresources.wales/about-us/our-projects/nature-projects/life-n2k-wales/life-n2k-films/?lang=en>).

Northern Ireland

- In Northern Ireland, <https://www.daera-ni.gov.uk/articles/special-areas-conservation> provides information for every terrestrial and coastal SAC, including literature on reasons for designation, conservation objectives and a location and boundary map.
- The **Centre for Environmental Data and Recording** (CEDaR) is the Local Records Centre for Northern Ireland and supports biological recording through working in partnerships with numerous individuals and organisations. It collects, stores, manages and releases information on the wildlife of Northern Ireland and its coastal waters. It also manages a number of recording initiatives, such as species surveys, websites and training courses (<https://www.nmni.com/CEDaR/CEDaR-Centre-for-Environmental-Data-and-Recording.aspx>).

Mediterranean biogeographic region - Gibraltar

Information on implementation of the Habitats Directive in Gibraltar is organised under the following headings:

- Examples of initiatives undertaken in the SACs
- Improved management of the SAC/SPA Network
- Assessing additional benefits and services provided by the Natura 2000 SAC/SPA Network
- Initiatives that combine Natura 2000 sites with the local economy
- Positive changes in public acceptance towards biodiversity protection
- Monitoring and research
- Improved co-operation and dissemination of information between authorities, nature conservation organisations, stakeholder groups and the wider public

For more information, please see the following weblinks (<https://www.gibraltar.gov.gi/environment/environment>, <http://www.thinkinggreen.gov.gi/>, <http://www.gonhs.org/>).

Examples of activities undertaken in the SACs

- **Citizen Science Programme for terrestrial and marine species**
- **Physical improvements to the Nature Reserve:**
 - o Management of nature trails
 - o Extension of the nature reserve
 - o Clearing of invasive species
 - o Increased number of waste and recycling bins
 - o Habitat management to clear dense maquis
- **Improved signage:**
 - o Flora and fauna interpretation
 - o Vehicular speed limit signs and speeding deterrent measures
- **Environmental Enforcement & Wardens:**
- **Improved Habitat and Wildlife management**
- **Educational programmes**
 - o Training of operators working within the nature reserve
- **Awareness campaigns**
 - o No littering campaigns
 - o Barbary Macaque (*Macaca sylvanus*) awareness campaigns
 - o Cetacean Protocol Campaign
 - o Ribbed Mediterranean limpet (*Patella ferruginea*) awareness campaign
 - o Minimum fish sizes
- **Habitat and species campaigns**

Specific campaigns have been designed and deployed to protect listed species and habitats. The species highlighted have been Lesser Kestrels (*Falco naumanni*), Schreiber's bat (*Miniopterus schreibersii*), Swift spp., all cetaceans and marine reptiles found in British Gibraltar Territorial Waters (BGTW) and *Patella ferruginea*. The Department of the Environment in conjunction with GONHS and the Gibraltar National Museum have led specific campaigns regarding bats and swifts in

heavily urbanised areas including the installation of bat and swift boxes. Reefs, Dunes with *Euphorbia terracina*, and Vegetated sea cliffs of the Mediterranean coast (with endemic *Limonium* spp.) are some of the habitats that have been subjected to intensive conservation campaigns.

Improved management of the SAC/SPA Network

The management of both SACs/SPAs designated in Gibraltar, namely the Rock of Gibraltar SAC/SPA and the Southern Waters of Gibraltar SAC/SPA, is carried out by the Department of the Environment in consultation with key stakeholders. Since the adoption and incorporation of the two SAC/SPA management plans, greater coherence has been achieved between all authorities and partners working within the SACs/SPAs.

Assessing additional benefits and services provided by the Natura 2000 SAC/SPA Network

Several strands of work have contributed to the assessment of the additional benefits and services provided in the Gibraltar SAC/SPA network. For example:

Research and monitoring programmes are fundamental tools in the development of the management of the Gibraltar Nature Reserve; They form the basis for the planning and use of the resources within the Nature Reserve, thus ensuring that activities occurring within the Nature Reserve are compatible with the sustainability of the 'products' offered i.e., wildlife and heritage in the case of the Upper Rock component. Only monitoring programmes with continual research and investigation can assess the impact of decisions taken in the management of a Nature Reserve. These serve to diagnose changes in environmental and socio-economic activities, and in the long term will provide indicators to continually upgrade the development of the Reserve and its management plan.

Monitoring and research

Studies within and outside the reserve are generally out by the Government of Gibraltar Department of the Environment, the Gibraltar Ornithological Natural History Society (GONHS), the Gibraltar Museum and universities and institutes from other countries. Since 1991 an intensive bird-ringing programme has been run by GONHS from the Jews' Gate Field Centre. This study compiles data mainly on small passerines, recording age, sex and biometric data. An annual breeding bird of prey survey monitors the status of Gibraltar's resident owls and raptor species, including the endangered lesser kestrel *Falco naumanni*. Bird migration monitoring is also carried out every year e.g. soaring bird migration.

Research into the Barbary macaques (*Macaca sylvanus*) also takes place on a regular and continuous basis. This is carried out largely by the GONHS in conjunction with universities and institutes such as the University of Vienna, Notre Dame University in Indiana, Washington University as well as other individual researchers

GONHS has on-going surveys into Gibraltar's biodiversity with the aim of cataloguing the Rock and its waters' fauna, flora and fungi. As part of this, the Upper Rock has over the past years been surveyed for its invertebrate fauna, particularly Lepidoptera (butterflies and moths), Coleoptera (beetles), Hymenoptera (ants, wasps and bees) and Odonata (dragonflies and damselflies). Other arthropod groups are currently being studied. The vascular plants, molluscs, reptiles, amphibians, birds and mammals of

the Upper Rock are already well documented, but much remains to be learnt, all of which will continue to bring clear benefits to the SAC/SPA. Bat populations are frequently monitored by the Gib-Bats team including regular surveys of a Schreiber's bat (*Miniopterus schreibersii*) roost within the terrestrial SAC/SPA.

In addition to research in the terrestrial reserve, extensive bathymetry and ecological surveys are carried out in British Gibraltar Territorial Waters to accurately determine the distribution of protected marine habitats and species. Gibraltar's marine environment ranges from sea cliffs and caves, to reefs and sandy marine habitats; all of which form part of the marine ecosystem found along the southern shores of Gibraltar. The abundance and richness of species is largely influenced by the strong currents and upwellings that are so characteristic of the Straits of Gibraltar. Seasonal abundance, due to migratory movements between the Mediterranean and the Atlantic, results in a multitude of pelagic and predatory fish along with cetaceans including the striped dolphin *Stenella coeruleoalba* and the common dolphin *Delphinus delphis*; the latter of which breeds in the Bay of Gibraltar. In recognition of its economic value and significance, as well as being an important habitat in British Gibraltar territorial waters, the GONHS launched an artificial reef project in order to secure, protect and restore biodiversity whilst aiming to drive sustainable tourism. Research on both local and migratory cetacean populations as well as water quality take place on a monthly basis.

Initiatives that combine Natura sites with the local economy

Initiatives aimed at building consensus and connecting the Natura 2000 site series with economic activity have been progressed within Gibraltar. For example:

- Both the Rock of Gibraltar SAC/SPA and Gibraltar's Southern Waters SAC/SPA are valuable to Gibraltar's economy.
- The Gibraltar Nature Reserve is a key attraction for tourists and a key driver for the local economy.
- Gibraltar's Southern Waters have a high recreational value as it is very popular with local people and tourists. Through recreation, the public can obtain a greater understanding of conservation issues by means of awareness campaigns that are currently delivered by the Department of the Environment. Tourism also has an important impact within the Southern Waters SAC, with large numbers of visitors coming from abroad, particularly Spain and the UK. The Southern Waters of Gibraltar consequently forms an important part of the tourist product that Gibraltar has to offer. However, under the Southern Waters Management Plan, the Nature Protection Act of 1991 and the Marine Protection Regulations 2014, a robust network of legislative and practical operational and surveillance protection is provided for this SAC/SPA.
- An artificial reef programme and sustainable diving and research tourism.
- Sustainable cetacean tours which have both economic benefits and increase surveillance and survey data for local and migratory cetacean populations.

Positive changes in public acceptance towards biodiversity protection

Steps have been taken to improve public engagement and their perception of biodiversity protection; for example:

Benefits of Marine Protection Regulations

- Fish stock protection
- Increased reef and existing reef protection

- Introduction of sustainable recreational fishing practices
- Introduction of a guide to the fish of Gibraltar

Education and Information

The Department of the Environment of the Government of Gibraltar takes part in educational campaigns. Seminars are organised annually during World Environment Day, which have tackled such subjects as biodiversity conservation and climate change. The Department also lectures at schools on wildlife and environmental issues and helps coordinate clean-up campaigns, within and outside of the SACs/SPAs. A comprehensive Management and Action Plan exists for the Gibraltar Nature Reserve https://www.gibraltar.gov.gi/uploads/documents/environment/publications/Gibraltar_Nature_Reserve_Management_Plan.pdf which comprises a very large proportion of the terrestrial SAC/SPA. A biodiversity action plan <http://www.gonhs.org/bapsun1.htm> also exists, which includes actions for priority habitats and species. The DEHCC and GONHS also publish leaflets and booklets with the aim of promoting and conserving Gibraltar's species and habitats. The GONHS also produces a biannual magazine, an annual bird report and frequent scientific papers. The website of the GONHS (www.gonhs.org) provides ample information on Gibraltar's species and habitats and their conservation.

The Marine Environment is managed in line with the Gibraltar Marine Reserve Management Plan (see: https://www.gibraltar.gov.gi/uploads/documents/environment/publications/Gibraltar_Marine_Reserve_Management_Plan.pdf). This establishes a framework to enable the Relevant Authorities to carry out their responsibilities and functions in line with the requirements of the Nature Protection Act 1991, the Marine Strategy Regulations 2011 and the Marine Protection Regulations 2014. These legislative provisions aim to protect both the habitats and species for which the Southern Waters of Gibraltar European Marine Site was designated but extend to the whole of British Gibraltar Territorial Waters. The Management Plan is concerned with promoting the sustainable use of a living, working environment. It aims to bring together all existing management measures in place and provides the mechanism by which these can be delivered so that they do not damage the habitats or species for which the site has been designated.

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Improved co-operation and dissemination of information between authorities, nature conservation organisations, stakeholder groups and the wider public

A series of measures have been undertaken to improve co-operation between authorities, nature conservation and other groups. For example, the Department of the Environment has:

- i) engaged with a wide range of organisations, including the Gibraltar Ornithological & Natural History Society, The Nature Conservancy Council, the Environmental Safety Group, the Gibraltar Museum, the Gibraltar Heritage Trust as well as other key delivery partners to ensure appropriate management of the Rock of Gibraltar SAC/ SPA and the Southern Waters of Gibraltar SAC/SPA;
- ii) supported key stake holders to undertake significant works within the SAC network through the specific SAC on-going management plans; and
- iii) co-ordinated or facilitated a number of major projects, covering a range of habitats and species, which bring together representatives from the relevant Departmental, Agency and non-government partners to provide a focus for conservation activities. This is reflected in the creation of working groups such as the Gibraltar Port Environment Working Group, and the continuous liaison with Gibraltar policing bodies to ensure enforcement of wildlife offences and adequateness of penalties.

Appendix 2. Metropolitan UK Natura 2000 (pSCI, SCIs & SACs, including terrestrial sites and sites with marine components) – site designation (Article 4) (Annex A Section 3)

NB. The following table is supplementary to the table in Annex A Section 3 (Natura 2000 (pSCIs, SCIs & SACs) – site designation (Art. 4)). It includes information on SACs with ‘marine components’ (i.e. those sites which include qualifying marine habitats and/or species as defined and identified by the UK’s Statutory Nature Conservation Bodies) and the corresponding terrestrial SACs as per this method. This method is used for defining the UK Marine Protected Area network.

Natura 2000 (pSCIs, SCIs & SACs)	pSCIs, SCIs, SACs		SACs only	
	Number of pSCIs, SCIs, SACs	Surface area of pSCIs, SCIs, SACs	Number of SACs	Surface area of SACs
3.1 All sites	658	134,851	648	50,033.2
3.2 Terrestrial site area (excluding all sites as defined as sites with marine components)	<i>(no information requested)</i>	12,188.3	<i>(no information requested)</i>	12,152
3.3 Sites with marine components*	115	122,662.7**	105	37,881.2***
3.4 Date of database used	September 2018			

* For further information on SACs with marine components in the UK see <http://jncc.defra.gov.uk/page-1445>.

** Of this area total of ‘sites with marine components’ that are pSCIs, SCIs and SACs, 964.7km² occurs above Mean High Water (i.e. is effectively terrestrial).

*** Of this area total of ‘sites with marine components’ that are SACs only, 962.8km² occurs above Mean High Water (i.e. is effectively terrestrial).

Appendix 3. Gibraltar Natura 2000 (pSCIs, SCIs & SACs) – site designation (Article 4) (Annex A Section 3)

The following table is supplementary to the table in Annex A Section 3 (Natura 2000 (pSCIs, SCIs & SACs) – site designation (Art. 4)). It includes information on Gibraltar's Natura 2000 sites.

Natura 2000 (pSCIs, SCIs & SACs)	pSCIs, SCIs, SACs		SACs only	
	Number of pSCIs, SCIs, SACs	Surface area of pSCIs, SCIs, SACs	Number of SACs	Surface area of SACs
3.1 All sites	2	56.87	2	56.87
3.2 Terrestrial area of sites (excluding marine area)	<i>(no information requested)</i>	2	<i>(no information requested)</i>	2
3.3 Marine sites	1	54.87	1	54.87
3.4 Date of database used	September 2018			

Appendix 4. Set of conservation measures and management plans for metropolitan UK Natura 2000 sites (SACs, including terrestrial sites and sites with marine components) (Art. 6(1)) (Annex A Section 4)

NB. The following table is supplementary to the table in Annex A Section 4 (Set of conservation measures and management plans for Natura 2000 sites (SACs) (Art. 6(1))). It differs by splitting the summary statistics across the whole metropolitan UK SAC network into the terrestrial site network and marine site network. It includes information on SACs with 'marine components' (i.e. those sites which include qualifying marine habitats and/or species as defined and identified by the UK's Statutory Nature Conservation Bodies) and the corresponding terrestrial SACs as per this method. This method is used for defining the UK Marine Protected Area network.

		All sites	Terrestrial sites	Marine sites (with marine components*)
4.1 Necessary conservation measures have been established according to Art.6(1) and are applied	Proportion (% area) of the SAC network	16.9	62.7	12.8
	Proportion (% number of sites) of the SAC network	73.3	77.2	54.8
	Number of sites	482	419	63
4.2 Conservation measures have been set out in a comprehensive management plan or a similar instrument	Proportion (% area) of the SAC network	34.6	11.4	36.7
	Proportion (% number of sites) of the SAC network	25.8	18.6	60
	Number of sites	170	101	69

*For further information on SACs with marine components in the UK see <http://jncc.defra.gov.uk/page-1445>.

Appendix 5. Set of conservation measures and management plans for Gibraltar Natura 2000 sites (SACs) (Art. 6(1)) (Annex A Section 4)

The following table is supplementary to the table in Annex A Section 4 (Set of conservation measures and management plans for Natura 2000 sites (SACs) (Art. 6(1)). It includes information on Gibraltar's Natura 2000 conservation measures and management plan statistics only.

	Number of SACs	Proportion (% area) of the SAC network
4.1 Necessary conservation measures have been established according to Art.6(1) and are applied	2	100%
4.2 Conservation measures have been set out in a comprehensive management plan or a similar instrument	2	100%

Appendix 6. Reintroductions of Annex II / V species (Annex A Section 7)

NB. The following table is supplementary to the table in Annex A Section 7 (Reintroduction of Annex IV species (Art. 22.a)). It differs by providing information on reintroductions of Annex II / V species, as opposed to Annex IV species.

7.1 Species code	7.2 Species scientific name	7.4 Common name	7.5 Reintroduction period	7.6 Reintroduction location and number of individuals reintroduced	7.7 Is the reintroduction successful? ¹	7.8 Additional information on the reintroduction
S1357	<i>Martes martes</i>	Pine marten	2015 - 2017	Mid-Wales, 51 adults translocated from Scotland	Yes	Translocation undertaken by the Vincent Wildlife Trust to reinforce the small remnant population in Wales. Animals have established well across a wide area and are breeding successfully (https://www.vwt.org.uk/projects-all/pine-marten-recovery-project/)
S1092	<i>Austropotamobius pallipes</i>	White- clawed crayfish	2012 - 2014	3 sites within the Irfon (Wye SAC) catchment, 2534 11-month-old captive reared juvenile White-clawed Crayfish released	Yes	This work was carried out as part of the Irfon Special Area of Conservation (ISAC) EU Life + funded project led by the Wye and Usk Foundation (Talgarth, Brecon, UK). This involved a baseline survey of the catchment (Slater, F. Cardiff University, UK 2010) and identification of receptor sites, followed by crayfish culture and release (2012–2014). Two receptor streams were selected with 2 release sites identified on the Chwefru and 1 on the Cneiddion.

¹ Indicating if natural reproduction has already taken place and/or population is growing

					<p>Berried females were taken as broodstock from robust populations in the Rhymney and Monnow catchments and released at point of capture post maternal brooding. Survival of juveniles from egg to release on average varied between 60 and 80%.</p> <p>For further information see: https://naturalresources.wales/about-us/news-and-events/news/welsh-first-as-captive-bred-crayfish-reproduce-in-the-wild/?lang=en</p> <p>WYE AND USK FOUNDATION (2014). Re-introduction of white clawed crayfish into designated streams. In LIFE08NAT/UK/000201 final report. Irfon Special Area of Conservation project (ISAC): 31–34. Talgarth: Wye and Usk Foundation. http://webcam.wyeuskfoundation.org/isac/publications.php</p> <p>J. NIGHTINGALE, P. STEBBING, P. SIBLEY, O. BROWN, B. RUSHBROOK & G. JONES (2017). A review of the use of ark sites and associated conservation measures to secure the long-term survival of White-clawed crayfish <i>Austropotamobius pallipes</i> in the United Kingdom and Ireland. International Zoo Yearbook, 51, 1-19.</p>
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Appendix 7. Reintroductions of Eurasian beaver *Castor fiber*

The Eurasian Beaver *Castor fiber* is currently not a European Protected Species in the UK (and therefore is not on the Article 17 checklist of UK species), It would therefore not be appropriate to include information on these reintroductions in either Section 7 (Reintroduction of Annex IV species (Art. 22.a)) in the UK's Annex A report or Appendix 4 (Reintroductions of Annex II / V species (Annex A Section 7)) of this UK Annex A appendices document. Therefore, information on these reintroductions are included here as additional information.

7.1 Species code	7.2 Species scientific name	7.4 Common name	7.5 Reintroduction period	7.6 Reintroduction location and number of individuals reintroduced	7.7 Is the reintroduction successful? ²	7.8 Additional information on the reintroduction
1337	<i>Castor fiber</i>	Eurasian Beaver	2015 - 2020		For England, the reintroduction of this species is in the trial stages.	The UK Government has supported a trial reintroduction of Eurasian beaver by the Devon Wildlife Trust which is investigating the potential benefits and impacts of beavers in the wild. This 5-year trial is due to conclude in 2020. The UK Government continue to provide opportunities for the reintroduction of native species and Natural England has granted licences for a number of enclosed reintroduction trials across England.
1337	<i>Castor fiber</i>	Eurasian Beaver	Since 2009	Official trial reintroduction at Knapdale, Argyll, Scotland between 2009-2014, with reinforcement	Overall yes – at the Scottish level, and in ecological terms of restoring the Eurasian beaver.	Further information on the reintroduction process can be found in the SNH “Beavers in Scotland” report to Scottish Government published in 2015 (www.snh.gov.uk/beavers-in-scotland).

² Indicating if natural reproduction has already taken place and/or population is growing

				phase from 2017-2020.		
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Unofficial reintroduction in Tayside started before 2007. Precise dates are not known nor are the numbers of animals that were illegally released or escaped. It is understood that no further releases are taking place.