

# **The Scottish Government Biodiversity Duty Report**

## **2018-2020**

**July 2023**

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## 1. Introduction

Under the Nature Conservation (Scotland) Act (2004), all public bodies in Scotland are required to further the conservation of biodiversity when carrying out their responsibilities. The Wildlife and Natural Environment (Scotland) Act (WANE Act) (2011) introduced a further requirement for all public bodies in Scotland to provide a publicly available report every three years, on the actions which they have taken to meet this biodiversity duty.

Nature provides us with water, clean air and food; our crops rely on insect pollination and the biological processes that create soil; and conserving wildlife, parks and landscapes can improve our health and wellbeing. Protecting our natural environment is a priority and one that requires all of us to look carefully at how we carry out many of our activities.

The Scottish Government is committed to tackling the twin crises of climate change and biodiversity loss. We recognise that urgent action is needed, and have committed to delivering the transformative change required to protect our natural environment.

Policy on biodiversity is led by a dedicated unit within the Scottish Government's Environment and Forestry Directorate. However, in keeping with the purpose of the biodiversity duty legislation, and an increasing focus on 'mainstreaming' of biodiversity policy, all areas of the Scottish Government are expected to take the conservation of biodiversity into account when carrying out their functions, from policy development to estate management. This report sets out how various key areas of the Scottish Government have furthered the conservation of biodiversity during the period 2018 to 2020, noting that due to the Covid19 pandemic, the majority of Scottish Government functions delivered from March 2020 onwards, were undertaken through remote, online working.

The material contained in this report was drafted in late 2020, at the end of the 2018-2020 reporting period, but not published at the time due to staff resource issues caused by the pandemic. As a result, it contains some references to 'future' events, activities or pieces of work which have already taken place at the time of publication.

## 2. Natural Resources Division

Natural Resources Division (NRD) is part of the Scottish Government's Directorate for Environment and Forestry (ENFOR) and has a national policy focus across a broad range of subjects. During the reporting period 2018-2020, the division was made up of two units:

Biodiversity and Land Quality, with responsibility for policy on areas including:

- The Scottish Biodiversity Strategy and Biodiversity Programme
- International biodiversity policy and engagement
- Terrestrial protected nature sites
- Invasive Non-Native Species (INNS)
- Promoting access to the countryside, landscape and geodiversity
- Peatlands and soils
- Agri-environment delivery for biodiversity
- Public body biodiversity duty and reporting
- Contaminated land
- Environmental liability
- Noise and statutory nuisance

Wildlife and Flood Management, with responsibility for policy on areas including:

- Wildlife management
- Species reintroductions
- Grouse moor management
- Wildlife crime
- Native wildlife species control and protection
- Species licensing
- Snaring and trapping regulations
- Flood risk management, resilience and flood warnings
- Reservoirs
- Coastal erosion and coastal change
- Blue green cities/surface water.

Much of NRD's role in managing, caring for and improving Scotland's natural heritage is carried out by Scotland's nature agency NatureScot (formerly known as Scottish Natural Heritage). NatureScot produce and publish their own biodiversity duty report and so their work will not be covered in detail here.

### International obligations

The UK is a signatory of the UN Convention on Biological Diversity (CBD), and Scotland contributes to the UK report as well as reporting separately on how we meet the 20 Aichi Biodiversity Targets which were agreed at COP10 in 2010. Reporting has been undertaken on a regular basis by NatureScot, so is not covered here. The annual report for 2019, and the final report to end 2020, are under preparation by NatureScot in 2020 for agreement by Scottish Government ahead of publication in 2021. This precedes the negotiations for a post-2020 global biodiversity framework due to take place at COP15 in 2020 (delayed due to the

global Covid19 pandemic) - which will set out the global strategy and targets for 2030 and beyond in a new global biodiversity framework (GBF).

## 2.1 Actions To Protect Biodiversity And Connect People With Nature

Biodiversity work in Scotland to date had largely been in the context of the Scottish Biodiversity Strategy (SBS), which consists of our 2004 Strategy, '[Scotland's Biodiversity: It's in Your Hands](#)' and our '[2020 Challenge for Scotland's Biodiversity](#)', published in 2013.

### Biodiversity Programme and Strategy

To further support our ambitions for biodiversity, the Scottish Biodiversity Programme was established in May 2019. Led by the Scottish Government and governed by a Programme Board which is co-chaired with NatureScot, the Programme has a remit to improve cross-government and wider stakeholder engagement, accountability and governance for the SBS, providing oversight for biodiversity on behalf of Scottish Ministers. Activity is arranged across 7 projects:

- Build on and learn from existing policy and delivery mechanisms under the 2020 Challenge for Scotland's Biodiversity, the Route Map to 2020 and a range of relevant delivery projects led by the public, private and third sector.
- Increase Scotland's engagement and profile on biodiversity internationally, including to inform preparation for UN CBD's COP15 meeting, and to engage with the CBD global subnational constituency (non-state governments, city and local authorities) in order to increase recognition of their role in shaping and delivering the post-2020 global biodiversity framework (GBF).
- Develop a new policy framework and strategy for biodiversity in Scotland which reflects the new post-2020 GBF and its targets, fits with Scottish Ministers' wider policies on the environment, sustainable development, climate change and a green recovery; with a suitable monitoring framework to measure and report on progress.
- Report on international targets and on progress in delivering the biodiversity strategy and route map, and identify and address gaps in the evidence base to inform the development of the future policy framework and strategy and any associated delivery plans.
- Develop communications to help galvanise public interest in and appreciation of biodiversity and nature; and raise the profile of biodiversity with stakeholders to help ensure an inclusive and participatory approach to delivering the future strategic framework.
- Mainstream biodiversity across government policy and relevant public sector partners in partnership, wherever possible, with policies and plans to address climate change.
- Influence increased biodiversity outcomes under current funding arrangements, provide evidence to help maintain or secure increased funding and engage with others to develop new and innovative funding streams to support biodiversity related activities and projects.

Recognising the impact of Covid-related delays to international negotiations on a new GBF and the risk that uncertainty around future direction could pose, we published a high level [Statement of Intent](#) on biodiversity on 14 December 2020. The Statement of Intent signals our ambitions for biodiversity in Scotland, our international action, and announces that the post-2020 biodiversity strategy will be an entirely new strategy; confirms continuity, and enhancement where possible, of delivery under our existing biodiversity strategy until it is replaced; and signals some of our priorities, including announcing that:

- we would endorse the *Leaders' Pledge for Nature*, launched at the UN General Assembly in September
- we will extend the area protected for nature in Scotland to at least 30% of our land area by 2030 and commission advice on whether we could go even further, as we already have in the marine environment, with 37% of Scotland's seas within Marine Protected Areas
- our work on National Planning Framework 4 will develop new proposals to secure positive effects for biodiversity through development
- we will highlight the need to help create new, locally driven projects to improve ecological connectivity across Scotland – such as Cairngorms Connect.

## Biodiversity Challenge Fund

In February 2019, the Scottish Government launched the Biodiversity Challenge Fund (BCF), a new competitive fund encouraging applications for innovative projects to improve biodiversity and address the impacts of climate change. The priorities for the fund aligned with the five direct drivers of biodiversity loss identified by IPBES:

- Land and sea-use change
- Direct exploitation of organisms
- Climate change and its impacts
- Pollution
- Invasive non-native species (INNS).

21 projects were funded through the initial round in 2019. A second round was launched in December 2019 with an additional focus on nature-based solutions, with a further 16 projects funded in July 2020. A third round of funding was launched in December 2020.

A list of all funded projects is available on the [NatureScot](#) website.

## International Work

In 2020 the Scottish Government hosted a series of online international consultations to address biodiversity loss through the 'Edinburgh Process', which mobilised a

global network of biodiversity-focused partners in Sub-National Governments, Cities and Local Authorities. The process involved three strands of work:

- producing the 'Edinburgh Declaration', a statement which sets out the commitments of the Scottish Government and international partners to work for nature over the coming decade;
- reporting on the global consultation for the new post-2020 GBF and drafting a renewed Plan of Action for sub-national bodies to ensure implementation of actions that will deliver the framework; and
- building a coalition of supportive State Parties to the UN CBD, calling for the CBD to directly include sub-national governments within the post-2020 framework.

The resulting [Edinburgh Declaration](#) highlights our deep concern about the loss of biodiversity and a changing climate, and our shared ambition to take urgent action across the 'whole of government' and the 'whole of society' to help biodiversity to recover, for the benefit of the planet and of people.

### Protected Area Restoration

During 2018-2020, the Scottish Government continued to work in partnership with stakeholders including Scottish Mines Restoration Trust, East Ayrshire Council and RSPB Scotland, to oversee restoration of the Muirkirk and North Lowther Uplands Special Protection Area in East Ayrshire. The protected features of this site had been left badly damaged following the collapse of Scottish Coal in 2013. The Scottish Government provided £2 Million per year towards the cost of restoration in 2018, 2019 and 2020, as part of a £10 Million commitment over five years. The restoration work was on schedule to be completed by the end of March 2021.

### Species Management

The Cabinet Secretary for Environment, Climate Change, and Land Reform had announced on 24 November 2016 that the **beaver** populations in Knapdale in Argyll and in the Tay and Earn catchments can remain in Scotland and be allowed to expand their populations naturally. Beavers are appropriately managed where there is a conflict with other interests and land use, such as flooding of agriculture but as of May 2019 beavers in Scotland have been granted protection under the law as a European Protected Species.

In 2016, SNH (now NatureScot) undertook a review to assess the effectiveness of current **deer management** arrangements in protecting the public interest, with specific attention on the impact on the natural heritage. A report from the Scottish Parliament's Environment, Climate Change and Land Reform Committee into the review highlighted the need for action across the deer sector to develop a more sustainable approach to deer management in Scotland. Following this review, the Scottish Government set up an independent expert group in October 2017 to look at deer management issues and a separate panel to look at lowland deer management. The report, published on 16 January 2020, makes 99 recommendations to improve

the management of wild deer across Scotland and can be read at:  
<https://www.gov.scot/publications/management-wild-deer-scotland/>.

In 2019, the **mountain hare's** conservation status in the UK was downgraded from "favourable" to "unfavourable-inadequate" – the term "inadequate" referring to a lack of data. In recognition of this change in conservation status, the Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Act 2020 strengthened the protections for mountain hares. The new protections, which come into force in early 2021, remove the open season for mountain hare, so that any control of their numbers must be done under licence, for permitted purposes, such as preventing serious agricultural damage, protecting timber and preventing the spread of disease.

The Scottish Government has [indirectly] supported activity by SNH (NatureScot) related to management of **white-tailed sea eagles** and **red squirrels**. Details of actions related to these activities can be found at [Sea Eagle Management Scheme](#) and [Saving Scotland's Red Squirrels](#).

## Grouse Moor Management

Following widespread concern about the disappearance of satellite-tagged golden eagles, the Scottish Government commissioned a report from SNH (NatureScot) on the circumstances of these disappearances. The [report](#) was published in May 2017 and showed that around one-third of tagged golden eagles had disappeared in suspicious circumstances many of which were on or near grouse moors. As part of a package of responses the Scottish Government established the **Grouse Moor Management Group** in November 2017 to look at the environmental impact of grouse moor management practices.

The Grouse Moor Management Group's [report](#) (the 'Werritty Review') was published on 19 December 2019. It recommended licensing of grouse shooting businesses, but only if they fail to improve ecological conditions after 5 years. It also made recommendations on other aspects of grouse moor management including muirburn, medicated grit and mountain hares. Mairi Gougeon, the then Minister for Rural Affairs and the Natural Environment, responded to the recommendations in a [statement](#) to Parliament on 26 November 2020. The full Scottish Government response to the recommendations can be found at <https://www.gov.scot/publications/scottish-government-response-grouse-moor-management-group-recommendations/>. This included commitments to bring forward legislation, following public consultation, in the next Parliament to introduce licensing regimes for driven grouse shooting and muirburn, and to ban muirburn on peatlands, except in rare cases as part of an approved habitat restoration programme.

As one of the five main drivers of biodiversity loss, the Scottish Government takes the control of **invasive non-native species (INNS)** seriously and we worked with a range of partners across the reporting period, to minimise their negative impacts. Our Programme for Government 2020-2021 announced that we would extend targeted investment to help combat the drivers of biodiversity loss highlighted by



IPBES, with a further £3 million of funding provided for biodiversity, including through the Biodiversity Challenge Fund (BCF).

Round one of the Biodiversity Challenge Fund (BCF) funded projects aimed at controlling INNS across Scotland;

- The 'Invasive non-native species (INNS) control in North West Scotland' project has tackled plant species at National Trust Scotland properties at Balmacara, Corrieshalloch, Torridon and Inverewe;
- The Tweed Invasives Project was awarded £100,000 to control a range of plants, including giant hogweed, Japanese knotweed and American skunk cabbage, along 300 miles of the River Tweed and its Scottish tributaries during 2019 and 2020; and trialled the biological control of Himalayan balsam using different strains of a rust fungus from the plant's native range. Other projects funded under the BCF that tackled INNS include the St Andrews Green Corridors project, the Little France Park project in Edinburgh, and the Seven Lochs and Cumbernauld SpRiNT project in Glasgow and North Lanarkshire.

Round two of the BCF in 2020 provided funding to tackle invasive rhododendron, Japanese knotweed and American skunk cabbage around Inversnaid on the east shore of Loch Lomond.

In 2018, the Scottish Invasive Species Initiative, a 5-year partnership project led by NatureScot, began. This is tackling INNS alongside rivers and other watercourses across 29,500km<sup>2</sup> of northern Scotland. The project has focused on the removal and treatment of Himalayan balsam, giant hogweed, Japanese knotweed, American skunk cabbage and white butterbur in addition to the control of American mink.

The Scottish Government continued to work closely with England and the other Devolved Administrations in relation to putting in place measures to tackle INNS, through;

- providing funding towards the costs of maintaining the Great Britain Non-native Species Secretariat website, and supporting the work of APHA - one of our key partners on the Scottish Government chaired Non-native species Action Group.
- participating in INNS Pathways Action Plan working groups on angling, boating and zoos which initiated a range of actions aimed at controlling INNS such as 'Check, Clean, Dry' and 'Be Plant Wise' campaigns to help stop the spread of INNS. In March 2020 a year long poster campaign was launched at Inverness Airport to raise awareness of *Gyrodactylus salaris*, a parasitic worm of freshwater fish, among anglers arriving from abroad.

In preparation for the UK's exit from the EU, against Scotland's wishes, a significant amount of work had to be undertaken to create and amend INNS legislation to ensure that the retained Regulation (EU) 1143/2014 remained operable within Scotland. This work included the creation of the Invasive Non-native Species (EU

Exit) (Amendment etc.) Regulations 2020 which amend the retained EU Regulation and which came into force on 31 December 2020.

## 2.2 Mainstreaming Biodiversity

The Scottish Government recognises the importance of taking biodiversity into account across all policy areas. In the reporting period we continued to engage with key priority policy areas, across Planning, Climate Change, Agriculture and Rural Environment, and the ENFOR Directorate, to identify areas of commonality and find opportunities for cross-working, with particular focus on addressing the twin crises of climate change and biodiversity loss. When the Biodiversity Programme was established in 2019, one of the key projects identified was focused on mainstreaming biodiversity more effectively across the Scottish Government.

This resulted in the 'Edinburgh Declaration' commitment for mainstreaming biodiversity across public and private sectors.

## 2.3 Nature-Based Solutions, Climate Change And Biodiversity

### **How has your organisation integrated biodiversity into nature based solutions to the climate emergency and other socio-economic outcomes?**

Nature-based solutions which address both climate change and biodiversity loss are increasingly important part of the Scottish Government's work.

Restoring peatlands is one of the most effective ways of locking in carbon and peatlands also provide a special and unique habitat for wildlife in Scotland. In February 2020 the Scottish Government announced an investment in peatland restoration of more than £250 million over the next 10 years.

Our Programme for Government 2020-2021 also announced an increased woodland creation target of 18,000 ha/yr by 2024-2025 together with £150 million of funding support through forest grants (£100m), increased state nursery production (£20m) and expansion of Scotland's national forests (£30m).

### **What steps has your organisation taken to incorporate biodiversity outcomes into partnership initiatives, wider strategies or initiatives of relevance to climate change?**

In focusing our mainstreaming actions across this reporting period we have provided co-ordinated advice to ministers on issues addressing the climate and biodiversity crises.

We also provided input in to the updated Climate Change Plan 2020, and worked with colleagues to ensure the climate change linkage within the Edinburgh Declaration (2020).

### **Looking ahead, what do you think will be the main climate change related challenges for biodiversity over the next three years?**

We ask a lot of our land, and the demands we make of it are growing. The climate and nature emergencies that are the most urgent challenge of our generation cannot be addressed without changes to the way we use, manage and live on our land.

We have set ambitious targets to reach net-zero by 2045, and the government's independent advisers on Climate Change, the UK Committee on Climate Change, have highlighted Scotland's land assets as one of the main reasons we are in a position to achieve net-zero five years earlier than the UK as a whole. In their report ['Net Zero: the UK's contribution to stopping global warming'](#) they cite: "the excellent opportunities to remove CO<sub>2</sub> from the atmosphere through afforestation and carbon capture and storage in Scotland".

In realising these opportunities, we must identify opportunities for nature-based solutions as they can be pivotal in mitigating and adapting to climate change whilst restoring nature. We must also look at new approaches to financing this work to ensure we can maximise its potential such as optimising the impact of both public and private investment.

If we are to achieve a just transition to a sustainable future that addresses the climate and biodiversity crises, it is essential that we understand where the costs and benefits from the way we own and use our land lie. As set out in the Climate Change Plan update published December 2020, our landscape will look very different in the future, with significantly more afforestation and peatland restoration. We will need to produce our food in the most efficient and environmentally friendly way possible, and we will have to restore and enhance important habitats.

Peatland restoration and increased woodland creation both play an urgent role in this regard and we have committed to putting in place a long-term programmes across these areas. We are also committed to develop a new Scottish Biodiversity Strategy, which will align to the new GBF, and will set out actions for the next decade to ensure nature protection, and restoration, as well as habitat connectivity at landscape scale. Implementation of actions will need to involve the whole of society in order to make the transformational changes needed to provide high quality areas for nature that are resilient, and can adapt to climate change.

## **2.4 Public Engagement And Workforce Development**

### **Public Engagement**

In 2019, NRD worked with SEFARI and the Royal Botanic Garden Edinburgh to co-fund and promote an exhibition called 'Food Forever', highlighting positive examples of sustainable crops and food production. The exhibition was displayed in Scottish Government buildings and in a number of external locations.

### **Workforce skills and training**

Training for officials is provided largely through 'on the job' training and engagement with delivery agencies.

## **2.5 Research And Monitoring**

**Describe any research activities that your organisation has undertaken to help develop understanding and awareness of biodiversity**

NRD works with NatureScot (SNH) and the Scottish Government **Rural and Environment Science and Analytical Services** (RESAS) division to understand gaps in knowledge, summarise complex reports, and to translate complex information for policy-makers and ministers. One example is in the development of a single Biodiversity Indicator, for use in the Scottish Government's National Performance Framework – this was based on research commissioned by RESAS in 2018 and required liaison across marine and terrestrial biodiversity teams in SG and NatureScot in order to collate a large amount of complex data, into a simplified metric. This indicator was finally published after the period, in 2021.

**What follow-up actions or monitoring have you undertaken to assess the impacts of the actions you have taken? How have you measured this? If you do not carry out any monitoring activities, please explain why.**

Monitoring activities are undertaken by NatureScot on behalf of SG.

## **2.6 Biodiversity Highlights And Challenges**

**Describe your organisation's main achievements for biodiversity over the reporting period and what you are most proud of (this can include processes, plans, projects, partnerships, events and actions).**

Key achievements, which are covered in more detail in the preceding sections, include:

- Leading the Edinburgh Process & developing the Edinburgh Declaration – important internationally to ensure the involvement of all levels of government in implementing positive actions for biodiversity.
- The launch of the Biodiversity Challenge Fund (BCF)
- Establishing the Biodiversity Programme Board in 2018
- Continued working with NatureScot and wider agencies, for example on the Pollinator strategy.

**Looking ahead, what do you think will be the main challenges over the next three years?**

EU Exit was not Scotland's choice, and the Scottish Government made a commitment that following the UK's exit on 1 January 2021 there would be no weakening of protection for our natural environment, including protected sites which were part of the pan-European Natura network. Legal protection for Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) remains enshrined in domestic law through the Habitats Regulations. However, EU Exit has led to uncertainties over some funding sources for biodiversity projects, including loss of access to the EU LIFE programme which provided match funding for large scale, multi-year biodiversity and wider environmental projects.

Significant work will be required to fully develop proposals for expanding the percentage of Scotland's land protected for nature to 30 per cent by 2030.

The EU Regulation (Regulation (EU) No 1143/2014) on the prevention and management of the introduction and spread of invasive alien species has also been retained in domestic legislation and modified so that it continues to function effectively in Scotland. The loss of access to the EU LIFE programme funding remains a concern, particularly in relation to maintaining biosecurity against invasive predators on Scotland's seabird islands.

The lockdown due to the Covid-19 pandemic in spring 2020 resulted in the cessation of fieldwork for the control of INNS, with work resuming under Phase 1 of the Covid-19 route map. However, in light of the 'stay at home' regulations, engaging the public in voluntary work to manage INNS was suspended by many projects.

### 3. Rural and Environment Science and Analytical Services

#### 3.1 Mainstreaming Biodiversity

To support mainstreaming biodiversity, Rural and Environment Science and Analytical Services (RESAS) is committed to developing and funding a new Centre of Expertise on Biodiversity. We committed to this as a part of the draft research strategy for 2022-7 [Draft Strategy for Environment, Natural Resources and Agriculture Research 2022-2027 - Scottish Government - Citizen Space \(consult.gov.scot\)](#). The Biodiversity Centre of Expertise will supply research advice to Scottish Government, agencies and public bodies, which will work on a wide range of policy issues to mainstream biodiversity evidence into public policy and practice.

#### 3.2 Nature-Based Solutions, Climate Change And Biodiversity

**Looking ahead, what do you think will be the main climate change related challenges for biodiversity over the next three years?**

Our primary biodiversity related challenge will be setting up and commissioning the Biodiversity Centre of Expertise, as outlined in our research strategy.

#### 3.3 Public Engagement And Workforce Development

This is not a function we deal with directly in RESAS. However as a part of the COVID-19 response RESAS funded institutes put together home-schooling information for teachers. This includes a range of resources at primary and secondary education level designed to help children understand the challenges of biodiversity: [SEFARI Online Education Resources Table - August 2020](#).

#### 3.4 Research And Monitoring

**Describe any research activities that your organisation has undertaken to help develop understanding and awareness of biodiversity**

The Scottish Government invests in science, including biodiversity research through the Environment, Rural Affairs and Food Strategic Research Programme 2016-21. This broad portfolio includes research on Scotland's natural assets (soils, water and biodiversity). A key objective is to better understand the processes that underpin the functioning and resilience of our natural assets, in particular biodiversity. The research should provide new approaches to deliver sustainable land management, and new metrics for monitoring the health of ecosystems and the services they provide.

The research conducted was relevant to a broad range of stakeholders, as it aimed to provide information on how biodiversity helped to regulate ecosystem functions, how environmental management impacted on biodiversity and ecosystem functions, and how management actions could be targeted to achieve outcomes – including the delivery of ecosystem services.

The work addressed the challenge of protecting and restoring our natural capital. Specifically the research intended to:

- Deliver an improved understanding of the linkages between biodiversity and ecosystem function.
- Provide an improved capacity for targeted environmental management through the development of Ecosystem Health metrics, including understanding how the connectivity of ecosystems might affect ecosystem function.
- Improve the understanding of the impacts of management interventions (including restoration) on Ecosystem Service flows, and of associated trajectories of change.
- Investigate components of resilience that might help predict the consequences of environmental and climate change on species, habitats and ecosystem health, and to manage them such that their resilience is enhanced.
- Help Scotland meet biodiversity goals as set by the Aichi Targets, EU Biodiversity Strategy and Scottish Biodiversity Strategy, by considering management measures and potential options for safeguarding against biodiversity loss.

Three particular examples of projects conducted through the research programme are:

- Development of [WaderMap](#): an online web app that enables stakeholders to interact with a map of management-relevant information and wader conservation initiatives and contribute data on their own wader conservation initiatives.
- [Research](#) into how residents and visitors use and place value on woodlands with a high conservation value, which gave insights about perceptions of both biodiversity and woodland management initiatives that focus on improving biodiversity.
- [Analysis](#) of citizen science data to document a five-decade decline in species that are associated with Scotland's ancient woodlands and identify solutions to reverse the trend.

The Scottish Government monitors trends in biodiversity as one of the 81 National Indicators in the National Performance Framework. RESAS is responsible for updating this indicator. To date we have monitored biodiversity performance using the Index of abundance of Terrestrial Breeding Birds. In recognition of the limitations of this existing indicator, we commissioned a study to develop a replacement high-level indicator to measure and report trends in both terrestrial and marine biodiversity in Scotland. The new indicator will measure trends of either abundance or occupancy across more than 2000 species and provide a much better assessment of biodiversity in Scotland. This new indicator will be used from Spring 2021.

In the last year RESAS hosted a PhD student intern to complete a project for the Scottish Government biodiversity policy team analysing public bodies' biodiversity duty reporting submissions from 2018. The project has helped demonstrate the scope of biodiversity actions being undertaken in Scotland



### 3.5 Biodiversity Highlights And Challenges

**Describe your organisation's main achievements for biodiversity over the reporting period and what you are most proud of (this can include processes, plans, projects, partnerships, events and actions).**

We have developed a research strategy which will fund a Biodiversity Centre of Expertise as a part of our next programme.

We also arranged the sale of one of our research farms, which was no longer in use, at Hartwood, near Shotts, to Forestry and Land Scotland (FLS). This land included a derelict open-cast coal mine. Both the ex-research farmland and the coal mine will be used by FLS to develop new woodlands which will transform a derelict site to one of great biodiversity and public amenity. Additionally as this location is in Central Scotland, it will be available to a wide local population for benefit and enjoyment of nature.

**Looking ahead, what do you think will be the main challenges over the next three years?**

There will be continued resource pressures on the RESAS research budget, and we will work to mitigate that where possible.



## 4. Marine Scotland

Marine Scotland is a Directorate of the Scottish Government and is responsible for the integrated management of Scotland's seas. Marine Scotland's purpose is to manage Scotland's seas for prosperity and environmental sustainability, working closely with our key delivery partners and others. Marine Scotland has a vision for “clean, healthy, safe, productive, biologically diverse marine and coastal environments, managed to meet the long-term needs of people and nature.”

The key responsibilities are:

- Work towards achieving good environmental status through our marine planning, licensing and other functions, to help ensure a healthy and sustainable environment;
- Promote sustainable economic growth from the marine renewables industry and other marine and maritime industries through integrated planning and, where appropriate, streamlined regulatory frameworks;
- Promote sustainable, profitable and well-managed fisheries and aquaculture industries in Scotland;
- Ensure sustainably-managed freshwater fish and fisheries resources;
- Ensure a sound evidence base to inform the development and delivery of marine policy, planning and services;
- Ensure effective compliance and enforcement arrangements;
- Continue to integrate our functions and resources, and to develop our organisational skills, competencies and capacity to ensure effective and efficient marine management arrangements in Scotland.

Marine Scotland has participated in a broad range of national and international groups over the reporting period:

UN Convention on Biological Diversity Open Ended Working Group (OEWG) on the development of the Post 2020 Global Biodiversity Framework – this group is negotiating the new global goals and targets which will be agreed at COP 15. Scottish Government is also leading the Edinburgh Process which is a global consultation of Subnational and Local Government as part of the OEWG process.

OSPAR Commission and Coordination Group Meetings, which agree all policy decisions with OSPAR and provide the regional coordination of the UK Marine Strategy.

OSPAR Committees on Biodiversity (BDC), Environmental Impacts of Human Activities (EIHA) and Hazardous Substances and Eutrophication (HASEC) – Marine Scotland is the incoming chair of EIHA and current vice-chair of BDC.

OSPAR group to manage preparation and publication of the Quality Status Report 2023 (ICG QSR) – Marine Scotland is providing input to the development of this key output with will also contribute to the next Part 1 of the UK Marine Strategy .

OSPAR Protection & Conservation of Species and Habitats group (ICG POSH) – Marine Scotland is currently a co-convenor of this group which seeks to ensure that

appropriate action is taken to improve the status of habitats and species on the threatened and/or declining list.

OSPAR Marine Protected Areas group (ICG MPA) – Marine Scotland participates in this group which aims to support delivery of a well-managed MPA network in the North-East Atlantic.

OSPAR Coordination of Biodiversity Assessment and Monitoring group (ICG COBAM) – Marine Scotland participates in this group which delivers assessments of biodiversity status in the North-East Atlantic.

British-Irish Council (BIC) – Marine Scotland participates in Sub Groups on the Marine Environment, Marine Litter and Invasive Non-Native Species (INNS). The Sub Groups identify areas for collaboration between administrations e.g. biodiversity, Marine Protected Areas and ocean acidification are themes being addressed through the Marine Environment Sub Group.

ICES Working Group on Deepwater Ecology (WGDEC) – Marine Scotland participates and provides monitoring data on the presence of indicators Vulnerable Marine Ecosystems, which lead to an international advisory process resulting in spatial measures for fisheries.

Marine Scotland participated in 65 other ICES expert groups, contributing to a wide range of fisheries, aquaculture and marine environmental science and international advice. These included non-native species, benthic ecology, marine planning, developing EU advice for sustainable fisheries management, pollution impacts, species and habitats.

#### **4.1 Actions To Protect Biodiversity And Connect People With Nature**

Marine Scotland's [Nature Conservation Strategy](#) outlines Marine Scotland's vision, aims and objectives for protecting marine biodiversity.

The strategy sets out our vision and framework for marine nature conservation based on a three pillar approach:

- species conservation
- site protection
- wider seas policies and measures

During the reporting period a key achievement is the near completion of a coherent marine protected area (MPA) network. Over 230 MPAs cover 37% of Scotland's seas. Recent additions to the MPA network include:

- the West of Scotland MPA which as the largest MPA in Western European waters provides protection for a wide range of deep sea habitats and species
- the designation of MPAs for basking shark, minke whale, Risso's dolphin and a range of benthic habitats
- the classification of 12 Special Protection Areas for over 30 different species of seabird, sea-duck, diver and grebe.

Management measures in the MPA network and for Priority Marine Features are being delivered in phases; the first phase being delivered in 2016. It takes time for

the full biodiversity benefits of these measures to be realised. Further enhancement of biodiversity will be delivered through subsequent phases, with work on Phase 2 underway.

Implementation of the [Scottish Marine Protected Area Monitoring Strategy](#) has continued. The strategy sets out how Scotland will determine whether the conservation objectives for protected sites are being met, and will provide the information required for reporting on the protected area network. From 2017 – 2020, part of this MPA monitoring was delivered through a project to engage fishing industry in environmental survey and monitoring. This project was funded by the European Maritime and Fisheries Fund and was a partnership between Marine Scotland and NatureScot. Fishing vessels were used to gather drop-down video footage of the seabed, to improve our understanding of the distribution and status of benthic habitats both within and outside of MPAs. Fourteen MPAs were visited over eight surveys carried out during 2018 and 2019.

We have increased protection for seals in the Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Act 2020 by amending the Marine (Scotland) Act 2010. This removes two specific grounds for which Scottish Ministers were able to grant licences to kill, injure or take seals. We have also increased the penalties associated with the offence of killing, injuring or taking a live seal (intentionally or recklessly) in line with the most serious wildlife offences as laid out in the Animals and Wildlife Act. The amendments improve the conservation of seals in Scotland by prohibiting their intentional mortality in specific circumstances and increasing the penalties associated with such offences. During the reporting period, abundance indicators for demersal marine fish species (those that live on or near the sea floor e.g. Cod, Haddock, Saithe), for the Celtic Seas and the Greater North Sea, show signs of recovery following improved fisheries management, from very low baselines and a history of overexploitation. However, the UK administrations' latest assessment of progress towards Good Environmental Status (GES) under the Marine Strategy Regulations 17 confirmed GES will not be met by 2020 for fish, commercial fish and shellfish, and benthic habitats. A new Programme of Measures is under development to further improve progress.

Wild Atlantic salmon is an iconic species for Scotland, and our world renowned fishing symbolises the close link between biodiversity, the economy and mental health and wellbeing. The decline in salmon returning to Scotland's river is of great concern, which is why considerable work has taken place through the Conservation of Salmon (Scotland) Regulations to improve their conservation status. We are currently developing a Wild Salmon Strategy to protect and enhance wild salmon stocks.

We are clear that growth of the Scottish aquaculture sector must have due regard for the environment. We are considering the Salmon Interactions Working Group (SIWG) report (published May 2020) which contains over 40 recommendations for improving the interactions between the wild and farmed salmon sectors. A regulator's Technical Working Group (working in parallel with the SIWG) has been developing a practical framework for assessing the level of risk posed to wild salmonids. The framework takes account of the best available scientific evidence. We continue to prioritise work around the containment of farmed fish, including

working with the sector to upgrade the equipment and training requirements through improvements to the Technical Standard for Scottish Finfish Aquaculture (published 2015). Marine Scotland now expects a condition requiring an Environmental Management Plan (EMP) to be delivered for any consents for marine aquaculture planning applications where there is the potential for interactions of wild/farmed fish.

### **Invasive Non-Native Species (INNS)**

Marine Scotland leads the Marine INNS Group, a multi-agency /discipline group which develops INNS policy and also acts as a response team when action to manage an INNS threat is required. In responding to INNS either via policy or response action, the impacts on biodiversity and the natural environment of INNS are important considerations. This has been demonstrated through the development of an Action Plan on *Didemnum vexillum* (Carpet Sea Squirt) in collaboration with the British-Irish Council, which will seek to address pathways of spread for this and other problematic invasive non-native species. Biosecurity Plans for Loch Creran and Loch Fyne have also been developed in response to Carpet Sea Squirt, enabling actions to be taken at a local and regional scale to help address impacts and minimise threats to marine biodiversity.

We have developed the Scottish Marine Environmental Enhancement Fund. The Fund is intended to enable users benefiting from Scotland's rich natural marine resource to voluntarily re-invest in the health and biodiversity of our seas, thereby safeguarding and enhancing that natural resource to support the sustainable growth of those industries into the future, and in turn helping to build a wellbeing economy for Scotland's coastal communities.

### **4.2 Mainstreaming Biodiversity**

Marine planning, as provided for the Marine (Scotland) Act 2010, is being implemented at a national and regional level. The National Marine Plan was published in March 2015. It is statutory document directing decision making by public authorities and it takes an ecosystem based approach, meaning the health and function of marine ecosystems is central to marine planning policy and decisions made in accordance with the plan. A range of policies which relate to issues important for ecosystem health and function, and also policies protecting biodiversity, apply to all decisions by public authorities which may affect the marine environment. Marine planning at a regional level is currently established, meaning that national policy will be adapted to apply to local ecosystems, issues and circumstances. The second review of the plan will be undertaken in 2021.

Marine Scotland is the sponsoring Directorate for Crown Estate Scotland, a new public body created on 1 April 2017 which manages land and property owned by the Monarch in right of the Crown and leases land and property including the seabed to third parties. Marine Scotland works with Crown Estate Scotland to seek to optimise the management of the assets to deliver a wide range of benefits to communities and Scotland as a whole and these assets are significant in supporting the delivery of Scottish Ministers' wider objectives including those relating to the environment. Crown Estate Scotland developed a Biodiversity Delivery Statement and the 'Six Big Steps for Nature' set out in Scotland's Route Map to 2020 informed their work.

Crown Estate Scotland is also supporting 'Investment in Natural Capital' as set out in the 2020 Routemap, by developing a trial project for land based businesses in partnership with several other organisations. As the sponsoring Directorate, Marine Scotland works closely with Scottish Crown Estate on behalf of Scottish Ministers, to ensure their management of the assets and powers contributes to sustainable development and wider social, economic and environmental benefits.

### 4.3 Nature-Based Solutions, Climate Change And Biodiversity

#### **How has your organisation integrated biodiversity into nature based solutions to the climate emergency and other socio-economic outcomes?**

The Scottish Marine Assessment 2020 (SMA2020) is a peer-reviewed scientific assessment prepared by Marine Scotland, NatureScot, SEPA, JNCC and MASTS, spread across a number of topics including four topics articulated in Scotland's vision for the sea: Physical Characteristics; Clean and Safe; Healthy and Biologically Diverse; and Productive. It has been a significant joint scientific endeavour for Scotland, developed over the last two years, and represents a major advance on the 2011 Marine Atlas. It identifies climate change as a key pressure acting upon the marine environment to negatively impact on a wide range of biodiversity. The assessment outputs will be used to develop future marine policy in response to a range of pressures including climate change. This will include the development of the Blue Economy Action Plan, the review of Scotland's National Marine Plan (NMP) in 2021 and for regional marine planning.

In recognition of the importance of the marine environment for naturally storing carbon, we have committed **over £570,000** to our Blue Carbon Research Programme. The research programme's current focus revolves around measuring the ability of various habitats to sequester carbon, understanding how it is stored for the long term, and building an evidence base on the effects that human activities may have on these process.

Marine Scotland is partnering with St Andrews University and Glenmorangie to deliver a 2 day Blue Carbon Conference during COP26, at the Royal Society of Edinburgh, on 11-12 November 2021. The meeting will:

- bring together policy makers and researchers to share the latest research and best practice in managing blue carbon habitats in the context of a global climate emergency.
- showcase Scotland's leadership in blue carbon research.

### Climate Ready Scotland

Scotland's Climate Change Adaptation Programme 2019-2024 (SCCAP2) was published in September 2019 and has 7 high-level outcomes, including on marine and coastal specific goals.

## **What steps has your organisation taken to incorporate biodiversity outcomes into partnership initiatives, wider strategies or initiatives of relevance to climate change?**

Marine Scotland is partnering with St Andrews University and Glenmorangie to deliver a 2 day Blue Carbon Conference during COP26. The meeting will recognise the wider benefits of blue carbon habitats, such as biodiversity and protection against coastal erosion and flooding.

Marine Scotland contributes to the Marine Climate Change Impacts Partnership. We provide annual funding for the writing of report cards, and Marine Scotland Science provide the results of their research and monitoring to include in the reporting and assessments.

The Scottish Marine Assessment 2020: A new online platform which assesses the condition of Scotland's marine environment and the human activity it supports has been launched. More than 250 scientists have contributed to Scotland's Marine Assessment 2020 which brings together data from 183 studies to provide an up-to-date review of Scotland's seas. The assessments found that progress is being made to improve the health of Scotland's seas. It also found that:

- progress is being made to reduce the levels of nutrients and contaminants in our seas;
- the marine economy is providing significant economic and social benefits to coastal communities while the growth of industries like offshore wind, wave and tidal energy are of increasing importance to the Scottish economy;
- Marine Protected Areas and measures to tackle marine litter need more time to be fully effective;
- climate change is the most critical factor affecting our seas and impacts on coastal flooding, erosion and marine species.

The findings will be used to inform the forthcoming review of Scotland's National Marine Plan and the development of the Blue Economy Action Plan.

## **Looking ahead, what do you think will be the main climate change related challenges for biodiversity over the next three years?**

Next steps include improving our understanding and ability to respond to the impacts of climate change on Scotland's seas. This is expected to involve a wide range of measures such as the need to assess cumulative pressures, improve natural capital assessments and our understanding of ecosystem services.

### **4.4 Public Engagement And Workforce Development**

#### **Public Engagement**

Marine Scotland held an International Marine Conference in 2019 which focused on national and international actions to protect the marine environment. Through breakout sessions the conference identified emerging threats to our seas and consider what new measures were required to protect the marine environment for



future generations. The conference, which was attended by 300 participants including policy makers, academics, stakeholders, and the general public, covered a wide range of topics but particularity addressed marine litter.

Marine Scotland attends the annual Scottish Biodiversity Strategy stakeholder engagement event, where a wide range of stakeholders are brought together to raise awareness of the biodiversity work taking place across Scotland.

Marine Scotland led a three-year project which was aimed at engaging the fishing industry in marine environmental survey and monitoring, which delivered monitoring required under the Scottish MPA monitoring strategy (see above). This project allowed fishing vessels the opportunity to take research surveys to collect drop-down video footage of seabed habitats, and carry out other survey work. Over the three year project, six fishing vessels were used to carry out various survey work. In addition, the fishing industry was engaged more widely through attendance at industry conferences and outreach via mailing lists and newsletters.

### **Workforce skills and training**

Marine Scotland scientists attended a variety of training events, where participants were hosted by partner organisations to improve taxonomic (species identification) skills to improve the accuracy of monitoring work and improve ability to identify changes for example on plankton biodiversity and the arrival on non-native species.

A number of international scientific conferences are attended covering aspects of biodiversity, including “coastal futures”, the ICES annual science conference, MASTS annual science meeting and Scottish biodiversity conference.

### **Identify any opportunities that are available to your staff to take part in practical actions**

Volunteers from Marine Scotland have participated in a number of marine litter clean-ups. Notably the Marine Laboratory conduct regular clean-ups of shoreline in Torry.

## **4.5 Research And Monitoring**

### **Describe any research activities that your organisation has undertaken to help develop understanding and awareness of biodiversity**

A report on the status of the Marine Protected Area network was laid in Parliament in December 2018.

The UK assessment of progress towards Good Environmental Status was published in Autumn 2018.

The Scottish Marine Atlas 2020 provides the most recent assessment of progress towards our vision for Clean and Safe, Healthy and Biologically Diverse and Productive Seas.

**What follow-up actions or monitoring have you undertaken to assess the impacts of the actions you have taken? How have you measured this? If you do not carry out any monitoring activities, please explain why.**

The Scottish MPA monitoring strategy provides the basis for Marine Scotland's data gathering for the purpose of assessing the MPA network including evidence of impact from pressures and effectiveness of management measures. SMA2020 provides a significant updated assessment against the Marine Atlas baseline published in 2011.

Marine Scotland makes a significant contribution to the annual State of Nature reports.

**Does your monitoring show any significant trends or highlight any areas of concern?**

Both SMA2020 and The UK assessment of progress towards Good Environmental Status (2018) provide comprehensive assessments for the marine environment, including key pressures. The Marine Strategy Programme of Measures is currently being revised to enable us to make further progress towards Good Environmental Status.

#### **4.6 Biodiversity Highlights And Challenges**

**Describe your organisation's main achievements for biodiversity over the reporting period and what you are most proud of (this can include processes, plans, projects, partnerships, events and actions).**

Highlights since 2018 include:

- the percentage of Scotland's seas protected by MPAs has increased from 22% to 37%;
- the MPA network is more coherent and now protects the most important areas for minke whale, basking shark, Risso's dolphin and over 30 species of seabird, sea-duck, diver and grebe;
- our assessment of the status of the marine environment has significantly improved through the delivery of both the UK Marine Strategy Assessment in 2018 and SMA2020.

**Looking ahead, what do you think will be the main challenges over the next three years?**

We will continue to be a strong and influential partner on the international stage and through OSPAR, our regional seas convention, we will work to protect and conserve the marine environment of the North-East Atlantic. In 2021, we will contribute to development and adoption of the new North-East Atlantic Environment Strategy. After adoption, we will play our role in implementing the actions to achieve a clean, healthy and biologically diverse North-East Atlantic Ocean, which is productive, and used sustainably.



Many of our obligations under the OSPAR Convention and EU marine environmental obligations are implemented through the UK Marine Strategy. This provides a collaborative framework for the four UK Administrations to work together to protect what are some of the most biologically diverse and productive seas in Europe. The UK Marine Strategy provides a comprehensive framework for assessing, monitoring and taking action across our seas to achieve the UK's shared vision for clean, healthy, safe, productive and biologically diverse seas. In 2021 we will consult on a new Programme of Measures to help progress towards good environmental status, addressing biodiversity concerns.

The National Marine Plan continues to provide a framework for sustainable development in Scottish Seas. The second review of the plan will be undertaken in 2021. Regional marine planning allows for national planning policies, including those for biodiversity, to be adapted to reflect local circumstances and issues. To date, three Regional Marine Planning Partnerships have been established – Shetland, Clyde and Orkney, and these partnerships are working to develop their first regional plans. The Scottish Government will continue to support these partnerships, and progress work to establish further partnerships in other regions.

The vision set out in our National Marine Plan is very closely aligned to delivering the aims of a Blue Economy approach. The Blue Economy Action Plan will significantly contribute to economic recovery, enabling Scotland to “build back better”. The four key outcomes will be: inclusive Blue Economy growth, creation of resilient places, contributing to a just transition to net zero and improving marine biodiversity and environment. The National Marine Plan, and the regional plans that will be developed, are key long-term delivery mechanisms for this, and the National Marine Plan review will consider whether changes might be necessary to best deliver the Blue Economy approach.

We believe that supporting biodiversity in our seas is vitally important, alongside taking account of the wider ecosystem when developing and delivering policies and in our decision making processes. The fishing industry has much to offer, and we want to ensure it can grow sustainably and make a positive contribution to our economy and our communities. But we also understand the importance of balancing fishing activities against ensuring that the right protections are in place for the marine environment. We will address these issues as part of our upcoming Future Fisheries Management Strategy which will set out our approach to managing Scotland's fisheries in a responsible and sustainable way.

We will complete the delivery of our commitment to create a coherent network of Marine Protected Areas including developing proposals for appropriate fisheries management measures and our approach to monitoring. The work on vulnerable PMFs will support the Scottish MPA network through providing connectivity between habitats (and is equivalent to work on ecological corridors on land).

We will take forward work on recovery and enhancement of Scotland's seas through development of the Scottish Marine Environmental Enhancement Fund. The Fund will enable users benefiting from Scotland's rich natural marine resource to voluntarily re-invest in the health and biodiversity of our seas, thereby safeguarding and enhancing that natural resource to support the sustainable growth of those

industries into the future, and in turn helping to build a wellbeing economy for Scotland's coastal communities.

In 2021, we will also consult on conservation strategies for both dolphins, porpoises, minke whale and seabirds. This strategic approach will for the first time bring together actions to optimise the conservation prospects for these iconic species.

Wild Atlantic salmon is an iconic species for Scotland, and our world renowned fishing symbolises the close link between biodiversity, the economy and mental health and wellbeing. The decline in salmon returning to Scotland's river is of great concern, which is why we are developing a Wild Salmon Strategy to protect and enhance wild salmon stocks.

## 5. Agriculture And Rural Economy

The SG Agriculture and Rural Environment Directorate (ARE) has the mission to influence, develop and implement innovative policies in partnership with its customers and stakeholders to grow the rural economy and maximise the social, economic and environmental benefit for rural Scotland; and, to provide income and support to enable these policies.

ARE is the largest Directorate in SG with over a thousand staff across eight divisions. Its main roles in relation to biodiversity during 2018-2020 were:

- delivery of the Scottish Rural Development Programme by the Rural Payments & Inspection Division (RPID). This role includes the most significant funding mechanism for the delivery of the Scottish Biodiversity Strategy via the targeted challenge fund Agri-environment and Climate Scheme (AECS) which is managed jointly with NatureScot who manage applications on Designated Sites;
- delivery of the Single Farm Payment element (Pillar 1) of the Common Agricultural Policy by RPID which requires compliance with environmental measures and conditions that provide support for biodiversity;
- development and monitoring of the quinquennial Land Use Strategy under the Climate Change (Scotland) Act 2009 by the Land Use Policy Division; and,
- Environmental research undertaken by the Science and Advice for Scottish Agriculture Division.

### 5.1 Actions To Protect Biodiversity And Connect People With Nature

#### Agri-environment and Climate Scheme (AECS)

AECS is the most important targeted investment in biodiversity in Scotland. Since 2015, it has provided challenge funding support for land management practices, including organic farming, that protect and enhance Scotland's biodiversity and that adapt to climate change. It awarded £75 million during 2018-2020 to new contracts so that in total over 2,700 five-year contracts were in operation during 2018-2020 across Scotland, covering 1.1 million hectares of land including 560,000 ha of land within designated nature conservation sites.

#### Single Farm Payment element (Pillar 1) of the Common Agricultural Policy

The Single Farm Payment (SFP) provides direct funding to the vast majority of land managers on agricultural land. It requires compliance with environmental measures and conditions that provide support for biodiversity, comprising:

- **Greening** – managing the application of the Greening payment element of the Single Farm Payment which delivered around £142 million of funding to 17,500 eligible businesses covering an area of over 4m hectares for compliance with wider environmental measures each year. This payment

supports the protection of biodiversity on farms (e.g. Ecological Focus Areas comprising a minimum of 5% of arable area); and

- **Environmental standards on Single Farm payments** – overseeing the implementation of the cross compliance requirement, Statutory Management Requirements (SMRs) and Good Agricultural and Environmental Conditions (GAECs) on farm payments which apply to all landholdings in receipt of SFP. These standards include measures to safeguard soils, habitats and landscape features on agricultural land and protection for wild birds, flora and fauna.

## Land Use Strategy

This Strategy has three main objectives and these align with elements of the Scottish Biodiversity Strategy:

- Land based businesses working with nature to contribute more to Scotland's prosperity;
- Responsible stewardship of Scotland's natural resources delivering more benefits to Scotland's people; and
- Urban and rural communities better connected to the land, with more people enjoying the land and positively influencing land use.

Within the current 2016-2021 Land Use Strategy there is a commitment to encourage the development of Regional Land Use Partnerships (RLUPs). The development of this concept during 2018-20 has been led by ARE with piloting expected from 2021 onwards. RLUPs have a focus on supporting delivery of Climate Change Plan targets but these measures will also deliver biodiversity benefits (e.g. restoration of peatlands).

There are also contributions to the Scottish Biodiversity Strategy from other schemes and initiatives managed by ARE.

## Less Favoured Area Support Schemes (LFASS)

LFASS provides essential income support to farming businesses in remote and constrained rural areas. It is not targeted at biodiversity outcomes but provides financial support for high nature value farming in marginal areas.

## Knowledge Transfer and Innovation Fund (KTIF)

KTIF supports farmers and crofters in rural and island communities to explore new ways of protecting and restoring biodiversity, habitats and ecosystems. Project examples can be found on the Rural and Environment webpage: [Rural and Environment Supporting green innovation in farming - Rural and Environment \(blogs.gov.scot\)](https://blogs.gov.scot)

The majority of these biodiversity based projects have only recently started but are expected to garnish interest from hundreds in the sector and the rural community.

## Farm Advisory Service (FAS)

The FAS offers general (i.e. one to many) and bespoke (i.e. one to one) advice to farmers, crofters and land managers. This service includes advice on management for biodiversity.

Since 2018, the “one to many” element has provided:

- 18 biodiversity events attracting 295 attendees;
- 26 biodiversity videos attracting 6,276 views;
- 9 biodiversity podcasts attracting 1,719 downloads; and
- 268 webpages including technical notes attracting 22,260 views.

Since 2018, the ‘one to one’ service, which offers bespoke consultant advice to farmers, crofts and land managers, has provided:

- 347 Integrated Land Management Plans which all provided a biodiversity review as a baseline; and
- 54 pieces of specific biodiversity and conservation specialist advice.

## LEADER

The LEADER programme (an acronym in French - *Liaison entre actions de développement de l'économie rurale* – meaning links between actions for the development of the rural economy) is a required component of the 2014-2020 Scottish Rural Development Programme (minimum 5% budget). The aim of LEADER is to build social and economic capital. It uses a grassroots, partnership approach to identify local needs and put forward innovative, local solutions to aid rural development across Scotland. The suite of projects supported across Scotland has included over 100 environmental initiatives.

## Environmental Research and Monitoring

Chemistry staff at Science and Advice for Scottish Agriculture (SASA) provided a lead in the monitoring and prevention of wildlife poisoning through the misuse of abuse of pesticides and/or biocides. In particular the chemistry team support partner organisations seeking to prosecute wildlife crime cases, notably those involving raptor persecutions. This capacity has been extended by SASA to include molecular forensics to support prevention of other forms of wildlife crime including trade in endangered species.

SASA worked in partnership with growers of Scottish landrace crops such as Bere Barley, Hebridean Rye and Shetland Kale. The growers of these traditional crops are becoming fewer in number and as such they are at risk of being lost. The growth of these varieties is an integral part of managing and maintaining the machair, a globally important habitat.

## 5.2 Nature Based Solutions, Climate Change And Biodiversity

SASA has implemented a number of positive management initiatives for biodiversity on its estate, including:

- strips of fruit trees companion planted with wildflowers as a novel replacement for lost field boundaries;
- an integrated management plan setting out how the amenity areas of the site are managed, which demonstrates our ambition to reduce our reliance on herbicides;
- a network of hedgerows which have been managed and improved upon through the years; and
- planting of wildflowers on field margins and banks.

## 5.3 Public Engagement And Workforce Development

In addition to our work on KTIF, FAS and LEADER, the Scottish Rural Network (SRN) has raised awareness over the programme period of the importance of biodiversity innovation with rural stakeholders including to communities, young people and the public, through a variety of channels and platforms:

- **Weekly Newsletter** – The SRN regularly features articles within its weekly newsletter, on the news section of its website, and through its social media channels promoting innovation, good practice and funding opportunities that support biodiversity. These has included the promotion of plans to commission a Scottish Centre of Expertise in Biodiversity through a webpage news [article](#), and the announcement of Flow Country community [consultation](#).
- **Case Studies** – The SRN has developed and promoted case studies relating to SRDP funding projects that make a positive contribution to biodiversity ambitions including LEADER and Improved Public Access. It also features articles in its weekly newsletter relating to SRDP schemes impacting on biodiversity, such as Knowledge Transfer and Innovation Fund (KTIF) [milestones](#).

**Scotland's Rural innovation Support Service (RISS)** – RISS is now two years old, and is already establishing itself as a useful way to enable rural businesses to adapt to change. As climate change and biodiversity loss move up the public agenda, several RISS facilitated groups are directly tackling those issues. The groups cover a wide range of projects having a positive effect on biodiversity, including: Clyde Valley Waders, a group trying to map what brings threatened wading birds back to certain farms; Aspen Agroforestry who are exploring the potential of native aspen trees in farm systems; and Net Zero Arran, a group of farmers aiming for net zero farming emissions on the island. Case studies of [projects](#) are added to the dedicated RISS website and promoted through the RISS newsletter.

## 5.4 Research And Monitoring

A key element of the Scottish Biodiversity Strategy is prevention of biodiversity loss due to the destructive effects of Invasive Non Native Species (INNS), many of which are also referred to as quarantine organisms or in some cases are regulated non-quarantine pests.

Science and Advice for Scottish Agriculture (SASA) has a robust monitoring programme for such organisms, particularly microorganisms, which cause diseases in crop plants, or organisms that can be present in traded plants and pose a risk to Scotland's environment. Specific examples include annual surveillance programmes for the potato rot causing bacteria, *Dickeya solani*, monitoring agricultural soils for the quarantine nematodes from the genera *Globodera* and monitoring nursery plants for presence of tree diseases.

The Horticultural and Marketing Inspectorate also monitor produce imported directly into Scottish ports for the presence of potentially damaging pests. This work was supported through the creation of the Scottish Centre of Expertise for Plant Health comprising experts across a range of disciplines with relevance to plant health and plant protection who are now organised to give rapid response to Scottish Government in the face of emerging issues threatening plant biodiversity in Scotland.

SASA has also become more involved in citizen science projects and continues to build on this work. Recent examples include engaging with bee keepers to survey pollen sources to establish which plant species are important for foraging honey bees, and surveillance of leaf hopper larvae (spittle bugs) which are a potential vector for the emerging disease *Xylella fastidiosa*.

## 6. Directorate For Energy And Climate Change

### Water

The Scottish Government play an active role in maintaining and improving the quality of all fresh and marine waters in Scotland, and in ensuring that our water resources are managed and supplied responsibly. We work closely with partners to ensure that environmental protection is balanced with the interests and safety of industry and consumers.

Scotland's public drinking water and sewerage services are provided by Scottish Water, a public company accountable to Scottish Ministers and Scottish Parliament. Scottish Ministers are responsible for setting the objectives for the water industry. One of the directions placed on Scottish Water is to support the achievement of the Scottish Government's targets for the proportion of natural features in favourable condition. Scottish Water is required to work with Scottish Natural Heritage (now NatureScot) to identify and undertake management activities at identified sites that will contribute to achievement of the national indicator 'Improve the condition of protected nature sites'. Scottish Water support Scotland's biodiversity strategy by managing landholdings across Scotland, primarily to protect rivers and reservoirs that supply drinking water in Drinking Water Protected Areas (DWPA), and working with landowners and tenants to protect healthy ecosystems and maintain landscape value.

Scottish Water's 25-year strategic plan – Our Future Together – was published in February 2020 and outlines the impact of the changing climate and how the organisation will reduce emissions to become net zero by 2040 including peatland restoration work that not only helps lock up carbon but has additional benefits for improved biodiversity. The Net Zero Routemap gives further examples of natural solutions being applied across land owned by Scottish Water to improve biodiversity and the target of a net gain in biodiversity by 2030. Further information on actions undertaken by Scottish Water to support and promote biodiversity are detailed in its Sustainability Report 2019.

### Energy Consents

As part of the Directorate, the Energy Consents Unit (ECU) processes applications under the Electricity Act 1989 to construct and operate generating stations and/or electricity grid infrastructure. These generating stations and grid infrastructure projects are typically of a size that require the applicant to complete an Environmental Impact Assessment (under The Electricity Works (Environmental Impact Assessment) (Scotland) Regulation 2017). This requires a report to be submitted to the ECU as part of the application process.

Once received, the ECU consult with a wide range of stakeholders, specifically Scottish Natural Heritage (SNH) in relation to any impacts identified by the applicant on Scotland's flora and fauna. SNH, through the medium of standing advice and tailored advice bespoke to a particular application, advise the ECU if the application will be acceptable or indeed if an objection should be raised. In determining any application, Ministers will take this advice, along with other consultees views, into



account to consider if the project should be consented or refused. Procuring NatureScot's expert advice, among other consultees, allows Ministers to assess the application's merits, and where appropriate attach conditions that will either enhance biodiversity and/or help to conserve biodiversity.

Additionally, for applications that do not require an Environmental Impact Assessment, consideration is always given to conserving and where possible enhancing Scotland's biodiversity through the use of planning conditions (if consent is received).

## 6.1 Nature Based Solutions, Climate Change And Biodiversity

**What steps have your team taken to incorporate biodiversity outcomes into partnership initiatives, wider strategies or initiatives of relevance to climate change?**

### Scottish Climate Change Adaptation Programme

The Scottish Climate Change Adaptation Programme 2019-2024 sets out how we are responding to the main climate risks for Scotland – as identified by the Climate Change Committee (CCC) and covering a range of global warming scenarios. In total, there are around 170 policies and proposals across Scotland. The programme aims to achieve seven high-level outcomes under which adaptation policies are grouped. Although biodiversity cuts across the programme, the two outcomes which set out a number of policies to increase and protect biodiversity in Scotland are:

- Outcome 5: Our natural environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change
- Outcome 6: Our coastal and marine environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change set out a number of policies which will, among other goals, increase and protect biodiversity in Scotland.

To complement adaptation policy goals, the Programme also includes research outcomes to improve the evidence base on adaptation. In collaboration with ClimateXChange and the John Hutton Institute we published a report on measuring the vulnerabilities of soils to climate change in October 2020 and hope to build on this research with a second paper in 2021.

**Looking ahead, what do you think will be the main climate change related challenges for biodiversity over the next three years?**

### Adaptation

The Climate Change (Scotland) Act 2009 includes a statutory framework for monitoring progress on adaptation. Under this framework, the Scottish Government reports annually to the Scottish Parliament on progress to its current Adaptation Programme. The most recent annual report in the biodiversity duty reporting period was laid in Parliament on 29 May 2020 and included an initial assessment of the impacts of Covid-19 on the policies in the Programme. Statutory independent assessments of the Adaptation Programmes are also undertaken by the UK

Committee of the Committee on Climate Change on a regular basis, with the most recent one having been published in 2019.

In terms of planning for the impact of climate change on Scotland's natural environment, we are looking forward to the publication of the next UK Climate Change Risk Assessment, which will help inform the development of the third statutory adaptation programme.

## 7. Environmental Quality And Circular Economy

### Environmental Quality

Deposition of acidic pollutants leads to acidification of the environment, which damages ecosystems and reduces biodiversity. Cleaner Air for Scotland – the Road to a Healthier Future (CAFS), provides a national framework which set out the actions for the Scottish Government and its partner organisations to achieve further reductions in air pollution. These actions are focused on reducing transport emissions, air quality built into placemaking decisions and Scottish Government's climate change ambitions. Achievement of these actions is set out in Cleaner Air for Scotland – Progress report 2018-19 [Cleaner air for Scotland: progress report 2018-2019 - gov.scot \(www.gov.scot\)](http://www.gov.scot/resources/documents/2019/04/Cleaner-air-for-Scotland-progress-report-2018-2019.pdf).

An independent review of CAFS was undertaken in 2019, with revision on CAFS taking place during 2020.

### Circular Economy

Developing a circular economy helps reduce impact on the need for virgin resources thereby helping to protect habitats and the natural environment. We have done this in a number of ways:

- Taking forward 'Making Things Last' which makes links between the circular economy and biodiversity [Supporting documents - Making Things Last: a circular economy strategy for Scotland - gov.scot \(www.gov.scot\)](http://www.gov.scot/resources/documents/2019/04/Making-Things-Last-a-circular-economy-strategy-for-Scotland.pdf)
- Taking forward the National Litter Strategy which recognises the impact of litter on the natural environment [Supporting documents - Towards a litter-free Scotland: a strategic approach to higher quality local environments - gov.scot \(www.gov.scot\)](http://www.gov.scot/resources/documents/2019/04/Towards-a-litter-free-Scotland-a-strategic-approach-to-higher-quality-local-environments.pdf)
- In April 2019, the Food Waste Reduction Action Plan was published, which recognises food waste is damaging to biodiversity and habitats [Supporting documents - Food waste reduction: action plan - gov.scot \(www.gov.scot\)](http://www.gov.scot/resources/documents/2019/04/Food-waste-reduction-action-plan.pdf)

## 8. Planning And Architecture

Planning and Architecture Division (PAD) operates Scotland's planning system and are responsible for the development and implementation of national policy on planning, architecture and place.

### 8.1 Actions To Protect Biodiversity And Connect People With Nature

#### Planning

Planning authorities and all public bodies have a duty to further the conservation of biodiversity under the Nature Conservation (Scotland) Act 2004. The Scottish Government also expects public bodies to apply the Principles for Sustainable Land Use, as set out in the Land Use Strategy, when taking significant decisions affecting the use of land.

Planning plays an important role in protecting, enhancing and promoting access to our key environmental resources whilst supporting their sustainable use. Scottish Planning Policy (SPP), which is a statement of Scottish Government policy on how nationally important land use planning matters should be addressed across the country, sets out that the planning system should seek benefits for biodiversity from new development where possible, including the restoration of degraded habitats and the avoidance of further fragmentation or isolation of habitats. National Planning Framework 3 (NPF3), the spatial expression of the Government's economic strategy at the time this report was drafted, recognises that biodiversity in Scotland is rich and varied, in both our rural and urban areas.

During the reporting period, the Scottish Government worked on preparing the fourth National Planning Framework (NPF4), the long-term spatial strategy for Scotland to 2050. This will take account of new requirements introduced by the Planning Scotland Act 2019 for the National Planning framework to; 'secure positive effects for biodiversity, and have regard to the desirability of protecting peatland. We commissioned NatureScot to prepare draft options for securing positive effects for biodiversity through NPF4 and welcome the resulting report.<sup>1</sup> Since then we have published our NPF4 Position Statement<sup>2</sup> setting out current thinking, in which we confirmed our intention to develop ambitious new proposals which deliver positive outcomes for biodiversity from development without the need for overly complex metrics, and to consider how they can support wider approaches to natural infrastructure. The NatureScot report will help to inform our ongoing policy development, and we are also convening a working group to explore the options and emerging themes with wider stakeholders.

The Planning Scotland Act 2019 also establishes new statutory duties on planning authorities to prepare Open Space Strategies that set out a strategic framework of the planning authority's policies and proposals as to the development, maintenance and use of green infrastructure in their area; and Forestry and Woodland Strategies.

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<sup>1</sup> Delivering Scotland's Ambition to Secure Positive Effects for Biodiversity (NatureScot August 2020) [securing-positive-effects-for-biodiversity.pdf \(transformingplanning.scot\)](#)

<sup>2</sup> [Scotland's Fourth National Planning Framework Position Statement \(www.gov.scot\)](#)

In the 'Call for Ideas' for NPF4 we sought suggestions on national developments. As part of that, biodiversity was highlighted within one of the criteria. We are considering which national developments will be included in the draft NPF4.

## Planning for places

We committed in Programme for Government 2020-2021 to work with local government to take forward our ambitions for 20 minute neighbourhoods – as well as access to shops, leisure activities, schools, doctors surgeries and workplaces – we recognise this also means having greenspace on your doorstep and a local environment that encourages active travel to promote health and well-being.

Scottish Government is committed to supporting place-based working and adopted the Place Principle – developed in partnership with COSLA - in March 2019. The Place Principle provides a shared understanding of place, it helps overcome organisational and sectoral boundaries, encourages better collaboration and community involvement, and improves the impact of combined energy, resources and investment. It therefore provides a focus to support inclusive and sustainable economic recovery that helps improve lives and creates more successful and sustainable places.

## Housing

Looking ahead, we have asked people across Scotland to help us set out a vision for how we want our homes and communities to look in 2040 and what we need to do to get there. We will use this to set out a 20-year plan to deliver good quality, energy efficient, zero carbon housing with access to outdoor space, transport links, digital connectivity and community services.

Housing is much more than just bricks and mortar – it is somewhere that should enhance people's sense of wellbeing and promote better physical and mental health. Now, our homes will also be somewhere many of us work from. We will improve the quality of all Scottish Government grant funded homes, with a specific focus on social homes, by increasing the conditionality of public investment. We will develop guidance to target three issues of quality:

- **Carbon:** Greater use of offsite construction for new social housing. This has the potential to speed up delivery of affordable homes, reduce waste and achieve the quality of construction needed to support zero emissions homes, and it offers opportunities to improve productivity and attract a more diverse workforce.
- **COVID-19 response:** Ensure all new social housing offers private or communal outdoor space with room for people to sit outside and space for home working or study.
- **Connected:** Drive forward work to make all new social housing digitally-enabled. We will work with the social housing sector to explore the options for providing ready-to-go internet connections in new social housing.

## **8.2 Mainstreaming Biodiversity**

Currently, Scottish Planning Policy sets out that the planning system should seek benefits for biodiversity for new development where possible, including the restoration of degraded habitats and the avoidance of further fragmentation or isolation of habitats. All planning authorities already have a statutory duty under the Nature Conservation (Scotland) Act 2004 to further the conservation of biodiversity and this must be reflected in development plans and development management decisions.

With a view to aligning local development plans with Scottish Planning Policy, the Scottish Government consider proposed plans during the statutory consultation process and, where necessary, submit representations to planning authorities on that basis.

## **8.3 Nature Based Solutions, Climate Change And Biodiversity**

### **The Central Scotland Green Network**

The Central Scotland Green Network (CSGN) is a national development in NPF3. It aims to deliver an integrated habitat network across the CSGN with wildlife corridors joining up important sites and habitats, and make sure that every settlement in Central Scotland sits within good-quality landscape. The project supports a wide range of environmental enhancement measures across a range of delivery partners, including activities and initiatives that do not require development consent.

### **The Social Housing and Green Infrastructure Programme**

The Social Housing and Green Infrastructure Programme was funded by Scottish Government and NatureScot, with advice and support also provided by Architecture and Design Scotland and the Scottish Federation of Housing Associations. The programme demonstrates how blue green infrastructure can be incorporated in the designs of housing developments as part of a nature based solutions and place making approach.

The programme supported three pilot projects, working with Registered Social Landlords (RSLs) and local authorities in Edinburgh and Glasgow to look at procurement and ways to encouraging higher standards of design in relation to green infrastructure.

To address identified wider concerns about costs, the programme also aimed to provide robust comparative information, for example the Meadowbank Green Roofs Feasibility study includes comparative capital and maintenance costs between green roofs and more traditional grey infrastructure.

The pilots have provided real life examples to share learning and understanding of green infrastructure, helping increase knowledge and capacity amongst the social housing sector. Scottish Federation of Housing Association's Development

Conference (Sept 2020) was opened by Kevin Stewart, then Minister for Housing, Local Government and Planning, and showcased the pilots to housing associations and their designers, showing what can be done.

## 8.4 Public Engagement And Workforce Development

### Place Standard tool and place-based approaches

The award-winning Scottish Place Standard is a simple tool to evaluate the physical, economic and social aspects of places, considering 14 themes (including 'natural space') with a particular emphasis on reducing health inequalities.

Based on learning from the success and widespread uptake of the Place Standard tool (PST) across Scotland and internationally since its launch in 2015, the recent PST Improvement Programme led by the Scottish PST implementation partners has involved engagement with stakeholders and communities including those with a particular interest in climate change adaptation and mitigation and environment. By integrating enhanced prompts relating to place-based climate change adaptation and mitigation, biodiversity and sustainability within the relevant tool themes, the contribution of the Place Standard tool towards engagement to inform action around these issues will be strengthened. This will build on the existing strengths of the tool to deliver co-benefits around health and wellbeing, environment and tackling inequality.

This independently pre-tested and enhanced new version of the [Place Standard tool](#) will be launched on a [new Place website](#) along with revised guidance and further information to support place-based approaches, delivery of the Place Principle, and engagement with communities in early 2021.

Work building on an early pilot will also continue in partnership with SNIFFER, Sustainable Scotland Network, Adaptation Scotland, and local authority, community and other partners. The "Place Standard tool with a climate lens" toolkit will be designed to support projects with a specific climate-action and environmental focus to take a place-based, collaborative, and community-led approach to addressing climate change, sustainability and biodiversity issues in a holistic way, co-delivering health, wellbeing and other place-benefits alongside environmental action..

We will also be launching a Design version of the Place Standard tool in early 2021 – this is specifically intended to support the design process – e.g. commissioners and architects designing and delivering a new development, or spatial planners working on a new Masterplan. Again, climate change adaptation and mitigation, sustainability and biodiversity will be integrated where ever appropriate.

There are also new versions of the Place Standard tool being developed, aimed specifically at supporting conversations with children and young people.

## 8.5 Research And Monitoring

To support the development of the fourth National Planning Framework (NPF4), Scottish Government commissioned independent research on the adoption of

Scottish Planning Policy in Local Development Plans. The research found that policies on valuing the natural environment work well for plan making, and provide clear and articulate direction for appropriate reasons to refuse a proposal. The research further found that the policy could provide more detail on the treatment of biodiversity and ecosystem services and a review of the National Planning Framework (including Scottish Planning Policy) is currently underway.



## 9. Learning Directorate

Scottish education policy is set by Scottish Ministers however statutory responsibility for delivery sits with Scotland's 32 local authorities. Local authorities will work with associated schools and other formal educational settings to enact education policies in line with local contexts and priorities. Education Scotland, as Scotland's education improvement agency, support both the development of policy and its implementation at a local level.

The development and delivery of education policies related to the promotion of biodiversity sit within this structure.

### 9.1 Actions To Protect Biodiversity And Connect People With Nature

#### Learning for Sustainability

Connection with nature is a central objective within the cross-curricular theme of Learning for Sustainability (LfS). LfS encourages learners and educators to explore issues of global sustainability across curriculum areas and subjects. Outdoor learning sits as one of the three constituent parts of LfS (the others being sustainable development education and global citizenship education). By ensuring that young people can experience nature first-hand they are able to better understand their impact on and interdependence with the natural world.

In recognition of the importance of Learning for Sustainability, the Scottish Government published a [Learning for Sustainability Action Plan](#) in 2019. The plan focuses action around:

people and the public, through a variety of channels and platforms:

- adapting curriculum and assessment practice;
- increasing the skills and confidence of educators;
- obtaining leadership buy in;
- adapting the learning estate; and
- developing a strategic approach to delivery.

The combined impact of actions within the plan will help to ensure that young people are routinely learning about aspects of sustainable development including consideration of biodiversity. It will also support the development of buildings and ground for schools and other educational settings. This will allow more opportunity for outdoor learning and the development of connections with nature. Significantly, our [Learning Estate Strategy's](#) guiding principles state that outdoor learning and the use of outdoor learning environments should be maximised.

Schools and nurseries were also invited to apply for capital funding for food growing projects through the Scottish Government's £3.5m Community Climate Asset Fund which launched in October 2020. The fund aims to support the provision of outdoor learning and greater contact with nature. This is part of a wider programme for community climate action.

## 9.2 Mainstreaming Biodiversity

### Biodiversity within Curriculum for Excellence

Biodiversity is mainstreamed in Scottish education as it is included in curriculum content. As a result, all young people in Scotland learn about the importance of biodiversity.

Learners must cover experiences and outcomes related to biodiversity and interdependence at each curriculum level. In the context of the curriculum, learning about biodiversity and interdependence is defined as:

- exploring the rich and changing diversity of living things and developing an understanding of how organisms are interrelated at local and global levels;
- exploring interactions and energy flow between plants and animals (including humans);
- developing an understanding of how species depend on one another and on the environment for survival; and
- investigating the factors affecting plant growth and developing an understanding of the positive and negative impact of the human population on the environment.

## 9.3 Nature Based Solutions, Climate Change And Biodiversity

### Eco-Schools Scotland

The Scottish Government has funded the [Eco-Schools Scotland](#) programme for a number of years. The programme provides participating schools with a seven step programme by which they can assess and improve the environmental impact of their establishment. This can include adopting nature based solutions to promote biodiversity and fight climate change.

As part of the seven step programme participating schools must choose 3 of 10 relevant topics. Litter is a mandatory topic, but schools have the option to explore biodiversity and their school grounds for their two remaining topics.



The 10 Eco-Schools Scotland topics: [www.keepsotlandbeautiful.org](http://www.keepsotlandbeautiful.org).

## 9.4 Public Engagement And Workforce Development

### Climate Ready Classrooms

The Scottish Government has committed to funding Keep Scotland Beautiful between 2019–2021 to deliver [Climate Ready Classrooms](#). Climate Ready Classrooms is a one-day accredited carbon literacy training course designed for young people aged 14–17 years as well as their teachers and other educators. It uses interactive activities and examples to start a conversation about climate change. Biodiversity can be part of this conversation.

Upon completing the course, participating young people receive carbon literacy accreditation.

### Teaching Learning Outdoors and Supporting Learning Outdoors

The Scottish Government has funded the development of two online learning courses for education practitioners. The [Teaching Learning Outdoors](#) course for qualified teachers and the [Supporting Learning Outdoors](#) course for other educators.

The courses are free to access for practitioners across Scotland and they support the development of the knowledge and skills needed to take learning from across the curriculum outdoors.

## 9.5 Research And Monitoring

### Learning for Sustainability Literature Review

In 2019 the Scottish Government commissioned an independent literature review into the educational outcomes associated with Learning for Sustainability. The [review](#) was carried out by the University of Edinburgh and confirmed the relationship

between educational improvement and Learning for Sustainability – and outdoor learning in particular.

The results of the review support the Scottish Government's commitment to progressing the Learning for Sustainability action plan.

### **Learning for Sustainability Action Plan – Key Performance Indicators**

Action 1.3 of the Learning for Sustainability Action Plan commits the Scottish Government to developing key performance indicators to demonstrate the impact of the plan.

As part of this work the Scottish Government will periodically survey young people to ask the extent to which their school experience has helped them to:

- be aware of how their actions affect the environment;
- understand what they can do about the big issues our world faces; and
- live in an environmentally friendly way.

The results from this and other key performance indicators will influence how Learning for Sustainability policy implementation is taken forward.

## 10. Scottish Procurement And Property Directorate

### Sustainable Procurement Duty

Appropriate policy and legislation is in place to maximise the contribution that public procurement in Scotland can make to economic, social and environmental wellbeing, primarily in the form of the [Procurement Reform \(Scotland\) Act 2014 \(The Act\)](#).

The [sustainable procurement duty](#) in the Act requires that before a contracting authority buys anything, it must think about how it can improve economic, social, and environmental wellbeing and then must act in a way to secure these improvements.

To help public authorities address economic, social and environmental risks and opportunities through their procurements, a number of sustainability tools and supporting guidance have been developed.

These include guidance on how to consider and address risks and opportunities related to Biodiversity:

(<https://sustainableprocurementtools.scot/index.cfm/guidance/biodiversity/>)

### Preparing for the Decarbonisation of heat and implementing new technologies

Scottish Procurement contract manages the Warmer homes contract which is supporting biodiversity by reducing carbon emissions. Warmer Homes Scotland has already changed and adapted a great deal since it was launched in 2015, incorporating and successfully embedding new technologies and new measures that have had a benefit for fuel poor households. For example, we installed more than twice as many heat pumps in 2019/20 as we did just two years ago. The percentage of total heating installations powered by renewable technologies such as heat pumps and biomass has increased to 5.1% from 2% in 2017/18. More than 33,000 tonnes of CO2 have been saved through this contract to date.

The Scottish Government's target is for 35% of heat for domestic buildings to be supplied using low carbon technologies by 2032, meaning that schemes such as Warmer Homes Scotland will have to continue to increase the contribution being made to the rollout of reliable, accessible and effective renewable heating systems for homes.

### Renewable Electricity

Scottish Government is helping to support biodiversity through the national electricity framework. The framework enables public bodies to buy renewable energy via the purchase of Renewable Energy Guarantees of Origin (REGO's) certificates. Scottish Government, along with some Central Government, Local Authority and Higher Education / Further Education bodies buy through this framework and work is under way to further promote uptake to all public bodies under the framework.

## IT Devices

Our collaborative frameworks for laptop and desktop computers require all packaging to contain minimum levels of recycled content, maximise the use of recyclable materials and avoid the use of single-use plastics.

In the period 2018/19-2019/20 our framework supplier (HP Inc.) recycled 35.6 metric tonnes of packaging material and 4,000 devices directly related to the frameworks.

All devices supplied under our IT collaborative frameworks are required to meet or exceed the latest Energy Star and Green Electronics Council EPEAT compliance standards. This ensures devices are manufactured to conserve energy, minimise the use of environmentally sensitive materials, and increase recyclability.

The Green Electronics Council estimate that over their lifetime, compared to products that do not meet EPEAT eco-label standards, IT products purchased through [Scottish Procurement frameworks](#) in 2018/19 and 2019/20 will result in the following environmental benefits:

- Savings of 117,230 MWh of electricity
- A reduction of greenhouse gas emissions of 73,000 metric tons of CO2 equivalents
- A reduction of 296 metric tons in hazardous waste and 38,251 metric tons of primary materials.

## Minimising the Estate

The Scottish Government are continually working to improve the efficiency and environmental performance of our properties, and to reduce costs.

The Scottish Government and related bodies' estate requirements are kept under constant review and surplus property is vacated where possible. Where new property is taken on sustainability is a main criterion taken into consideration to combat Climate Change and reduce whole life costs

Every year a report is laid before Parliament (Section 76 of the Climate Change (Scotland) Act 2009) on the performance and sustainability of the Scottish civil estate using a range of metrics including recycling, water usage, energy consumption and cost per FTE.

Discussions took place with the Deputy First Minister to investigate how further property efficiencies can be made. We are broadly proposing some Scottish Public Finance Manual additions and changes in alignment with a number of other areas in SG looking at spending controls and budget restraint.



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The Scottish Government  
St Andrew's House  
Edinburgh  
EH1 3DG

ISBN: 978-1-83521-011-6 (web only)

Published by The Scottish Government, July 2023

Produced for The Scottish Government by APS Group Scotland, 21 Tennant Street, Edinburgh EH6 5NA  
PPDAS1305082 (07/23)

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