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SCOTTISH NATURAL HERITAGE

The Forum

Scotland's Biodiversity: Routemap Update—The Report Card

Scottish Natural Heritage has a key role to play in leading the delivery of the [Scottish Biodiversity Strategy Challenge](#) and the Route Map to 2020. The [Route Map](#) was published by Scottish Government in June and covers all the key work needed to deliver on the SBS 2020 Challenge, grouped under "Six Big Steps for Nature". A variety of partners are involved in the delivery of these steps and include SEPA, FCS, the National Parks and many of the key environmental NGO's .

SNH has been asked by SG to report on the progress of all the partnership projects and collaborative work under these Six Big Steps for Nature. That's no easy task with 12 priority projects, 64 route map actions, 8 areas of supporting work and a variety of lead partner organisations who report on things slightly differently. So simplicity and avoiding over duplication as far as possible will be key and we think we have managed this in the first 6 monthly update report we have now submitted to Scottish Government. Here are the highlights:





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Contact details

Do you have a news story? Are you involved in a project? If so, then let the Biodiversity Team know! Ask for our article guidelines to help you make the most of your article.

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The views expressed in this newsletter are not necessarily the views of Biodiversity Scotland. The editors reserve the right to edit or exclude articles; the editors’ decisions are final.

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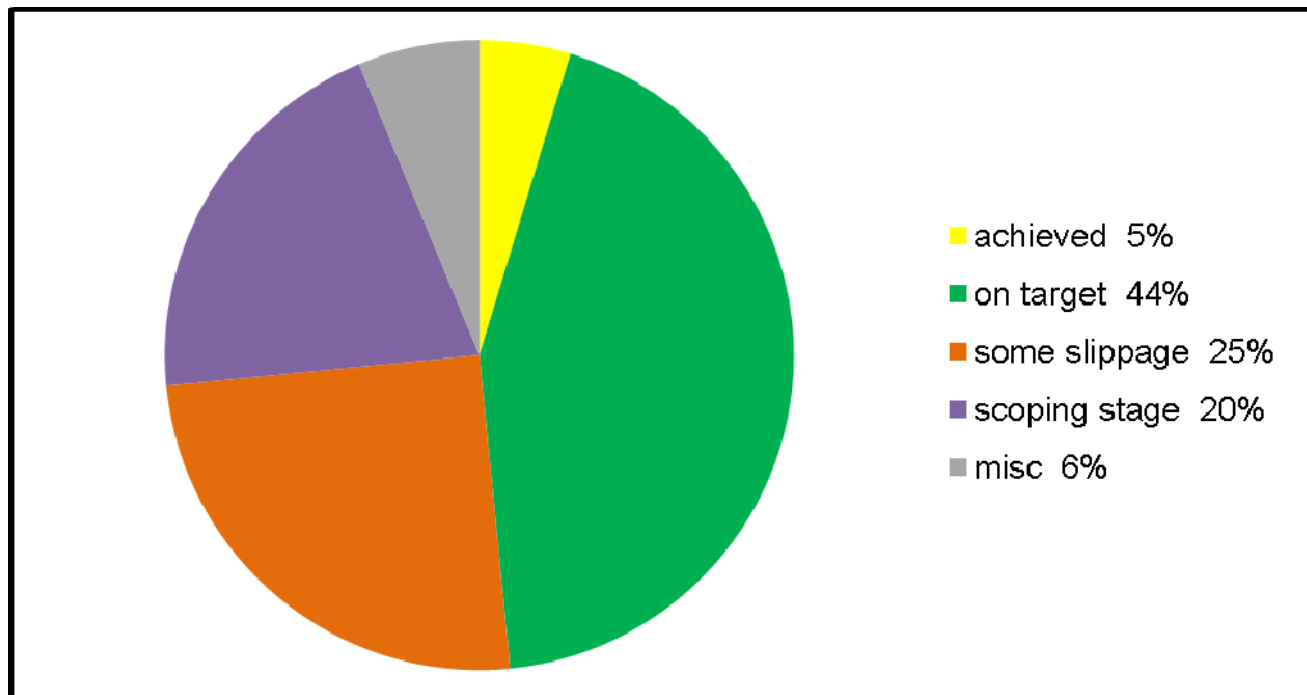
www.biodiversityscotland.gov.uk



Progress with Route Map Actions

We have made a good start, with three actions already completed.

- Meeting the target for peatland restoration, which contributes to the EU 15% degraded ecosystem restoration target.
- Publishing a national peatland plan.
- Ensuring that at least 18% of land and freshwater is designated for nature conservation.



Other notable highlights from the report include:

- Presenting the Natural Capital Asset Index to the World Forum on Natural Capital in Edinburgh
- Launching the Outdoor Learning Directory providing easy access information for teachers on services provided by ENFOR partners.
- Volunteers being recruited to help deliver the wildcat monitoring programme.
- Ailsa and Ayr hospital formally opening their NTS greenspace demonstration project.
- National Forest Estate undertaking INNS control in native woodlands.
- Launching of the Environmental Cooperation Action Fund.
- Five Estates joining the 'Heads up for Hen Harriers' project.

Scotland's Biodiversity a Route Map to 2020



The next report covering the first year will be finalised in September next year.

Dougie Pollok - on behalf of the SNH Biodiversity Team.



Buglife—John Muir Pollinator Way

Over 3 million hectares of wildflower-rich grassland has been lost in the UK over the last 70 years. This has led to widespread declines in some of our most loved wildlife, including insects that provide free pollination services and are an essential part of our natural heritage.

The 'John Muir Pollinator Way' is a Buglife project funded by Scottish Natural Heritage and the Central Scotland Green Network ideas fund. This inspirational landscape scale project aims to map opportunities for grassland habitat creation, enhancement and management along the John Muir Way to form Scotland's first B-line. This will provide an essential first step for a much wider habitat creation partnership project that will ultimately help to



reconnect fragmented habitats

across the central belt of Scotland from Dunbar to Helensburgh.

These new connected habitats will help to improve important pollinator populations in the Central Scotland Green Belt allowing them to be more resilient to climate change and habitat loss in our ever changing world. This will also provide a nature rich experience for walkers and cyclists, and improve local green spaces and enhance green infrastructure for some of Scotland's most deprived communities.

Additionally, Buglife will be running training workshops along the entire route of the John Muir Way on grassland habitat creation and management as well as pollinator identification and monitoring with a focus on bumblebees, hoverflies and other insects.

For more information on the project and how to get involved please contact Suzanne Burgess on suzanne.burgess@buglife.org.uk and 01786 447504.



TAYSIDE BIODIVERSITY ACTION PLAN

CONSULTATIVE DRAFT – 2ND EDITION (SECOND PHASE)

There was an excellent response to our First Phase public consultation and we are now in the process of updating the three sections in readiness for publication in 2016. These include the Urban & Built Environment, Water & Wetland and Coasts & Marine sections. These are still on our website “for information”. The Second Phase sections are now ready for consultation – these are published on the website

<http://www.taysidebiodiversity.co.uk/action-plan/action-plan-new-lbap-2015/>. They include:

- Woodland
- Farmland
- Upland

Tayside Biodiversity Partnership



The Tayside Geodiversity Action Plan will be added to this page soon.

Your comments on these consultative drafts will be most welcome. Brief questions are shown on each of the sections on the website, but you may respond in your own way via

taysidebiodiversity@pkc.gov.uk.

The deadline for comments on the current Consultative Drafts is 25th January 2016

Background Information – the 1st Edition of the Tayside Biodiversity Action Plan (2002-2017) preceded both the Nature Conservation (Scotland) Act 2004 and the Scottish Biodiversity Strategy which was also published by the Scottish Government in 2004. The 2020 Challenge for Scotland's Biodiversity was launched mid-2013 and is Scotland's response to the Aichi Targets set by the United Nations Convention on Biological Diversity, and the European Union's Biodiversity Strategy for 2020. It is a supplement to “Scotland's Biodiversity: It's Your Hands (2004)”; the two documents together comprise the Scottish Biodiversity Strategy. With an emphasis on ecosystems, as well as habitats and species, and the many new Scottish targets to meet, it was time to review our own Tayside Biodiversity Action Plan and update its full suite of Actions.

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Trees for Life:

With a host of new pests and diseases attacking the UK's native treescape, a new consortium of Scottish organisations, working with Kew's Millennium Seed Bank, are tackling the threat, as part of the UK National Tree Seed Project. The UK does not currently have comprehensive and genetically representative seed collections of native tree populations for research and use in practical conservation. The UK National Tree Seed Project, launched in 2013, seeks to fill the gap and will make seed collections available for researchers working on challenges facing UK woodlands and forestry such as pests and diseases and climate change. The Project has been rolled out across England with great success, and will now be extended throughout Scotland and Wales.

Thanks to support from players of People's Postcode Lottery, seeds from Scotland's best loved and most vulnerable trees and shrubs will be collected and protected in long-term storage in the vaults of the Millennium Seed Bank facility at Wakehurst in Sussex. The Millennium Seed Bank already safeguards practically the entire UK flora in its vaults and works to restore native plants and trees to their natural habitats.

Fifteen organisations across Scotland are partnering with Kew for the project, including Forestry Commission Scotland, Scottish Wildlife Trust, Trees for Life, and the Woodland Trust, among several other conservation organisations. Many of these partners already undertake tree seed collection and use at a local level but MSB staff has also provided training in order to meet the rigorous standards required for the Millennium Seed Bank collections. Together, this consortium of like-minded organisations will ensure that the collections already protected in Kew's Millennium Seed Bank will grow and become more comprehensive, eventually representing the full genetic diversity of Scotland's tree populations. This will create a vital resource for those working to develop more resilient woodlands across the UK.

The project will also raise the capacity for collection and supply of seed of native species for planting across Scotland. Forestry Commission Scotland is a key partner, providing advice on target species distribution and help with collecting seeds.



Common juniper

Scottish Government Environment Minister, Dr Aileen McLeod, said: "This is a long-term project that will deliver longer-term results. It has great potential to make a significant contribution to the health of our forests and woodlands. It is to be commended and applauded and I am pleased that Forestry Commission Scotland has committed to the effort to safeguard our future forests."

Initiative with Kew Gardens to Protect Scotland's Trees Takes Root

Clare Trivedi, UK National Tree Seed Project Coordinator, said: "We are delighted to welcome these new Scottish organisations to the UK National Tree Seed Project and look forward to working closely with them in the coming years. In recent times we have seen an increasing threat to our trees from many newly arrived, often very aggressive pests and diseases, and challenges associated with climate change. Establishing the UK's first comprehensive national tree seed bank is absolutely crucial. The UK's tree cover is amongst the lowest in Europe. Avoiding further degradation of our woodlands, and the wider environmental, economic and social impacts of this, ultimately hinges on conserving the valuable genetic diversity of our trees and shrubs."

Species targeted in the Project include:

Common juniper (*Juniperus communis*) This evergreen species is one of only three native conifers in Britain and is at risk from the fungus-like pathogen *Phytophthora austrocedrae*.



Scots pine

Scots pine (*Pinus sylvestris*): The national tree for Scotland is increasingly at risk from pests and diseases including Dothistroma needle blight, pinewood nematode, pine processionary moth and the pine tree lappet moth.

Common ash (*Fraxinus excelsior*) <http://www.kew.org/science-conservation/plants-fungi/fraxinus-excelsior-european-ash> At threat from ash dieback (*Chalara fraxinea*), which first came to the public's attention in spring 2012. This fungus kills the leaves and bark tissue, causes shoot death, cankers, crown dieback and ultimately the demise of the entire tree. Ash is also at potential risk from the emerald ash borer beetle.

Common alder (*Alnus glutinosa*): This water-loving species, typically found in wet woodlands or alongside streams and rivers, is at risk from the pathogen *Phytophthora alni*.

Silver birch (*Betula pendula*) and **downy birch** (*Betula pubescens*): <http://www.kew.org/science-conservation/plants-fungi/betula-pendula-silver-birch> The silver birch is a genuine native, growing in the UK since the end of the Ice Age. Its papery-white bark distinguishes it from the downy birch, which has reddish bark that turns grey with age.

Kew's Millennium Seed Bank Partnership is the world's most ambitious plant conservation initiative and Kew's Millennium Seed Bank is the largest facility of its kind. Collecting and conserving wild plant seeds provide an insurance policy against extinction, supports practical conservation and provides options for the future use of plants for the benefit of people and the planet. Most of the collections are available for research and over a third have a known use to people.

Featured Fungus: *Flammulina velutipes* (Velvet Shank, Winter Mushroom)

The cold months of the year bring with them freezing temperatures and fewer daylight hours, so one would barely expect to find edible mushrooms growing wild. However, *Flammulina velutipes* is a great exception as it is commonly found throughout October until May. And so it clearly earns its common name 'Winter mushroom' as it is often seen fruiting throughout light snowfall and is even known to continue growth after it has thawed from freezing.



Both photos © Andy Taylor

This saprotrophic species grows in dense clusters or tufts on hardwood trees or stumps. The reddish yellow to orangey-brown cap (2-7 cm in diameter) and a dark brown and densely velvety stem (up to 10 cm high) being yellowish coloured at the top make *F. velutipes* fairly easily recognisable. However, untrained eyes might confuse it with the deadly *Galerina marginata* species which often occupy similar habitats and are even found fruiting site by site. *Galerina marginata* possesses an annulus (ring) around the stem which can however, fall off or disappear when handled roughly. It is therefore recommended to make a spore print from your collected mushrooms to confirm identification. The spore print of *F. velutipes* is white while the spore print of *G. marginata* is brown.

Flammulina velutipes is known to be good edible fungus. This feature and its ability to be cultivated, has brought Enoki (the cultivated form of *F. velutipes*) to rank 5 of the most produced mushrooms worldwide.



Occurrence: The fungus is commonly found from October until May and, in colder regions, from July until August.

Habitat: Growing in clusters on deciduous logs including elm, willow, aspen and poplar

Distribution: Fairly common, widespread in Great Britain and Ireland as well as throughout Europe, North America and Asia.

Woodland Trust—More Fabulous Fungi

For more interesting facts on fungi take a look at the latest issue of The Woodland Trust's magazine -

Fabulous Fungi:

<http://www.woodlandtrust.org.uk/publications/2015/11/wood-wise-autumn-2015/>



Well worth a read and includes the following headings:

- The wonders of fungi
- Decomposers fuelling life
- A tale of two communities
- The bad and the ugly
- The Lost and Found Fungi Project (supported by Scottish Fungi)
- Foraging



Top quote:

'Were it not for the industrious fungi and friends, these elements would be tied up in the bodies of the dead, and the dead would be ruling the world.'



Over £150m National Lottery investment in Scottish land and biodiversity

The Heritage Lottery Fund (HLF) has announced almost £7.5million investment in three large-scale Scottish landscapes from the remotest islands of Orkney to the rivers of Galloway. The North Isles in Orkney, Callander's Pass on the eastern edge of the Loch Lomond & The Trossachs National Park and the Galloway Glens will benefit from this major funding package which is set to impact on 916km² of countryside while providing training for over 260 people, full time jobs for 13 people and a further 310 volunteering places. Today's awards brings HLF's total investment in land and biodiversity projects in Scotland to over £150million helping to conserve key habitats, save rare species and reconnect communities with the natural heritage on their doorstep.

HLF's Landscape Partnership programme – which has now been running for over a decade - is the most significant grant scheme available for landscape-scale projects. To date, £177m has been invested in 99 different areas across the UK helping forge new partnerships between public and community bodies and ensuring people are better equipped to understand and tackle the needs of their local landscapes. Over its life-span, the Landscape Partnership programme has helped repair over 100 km of dry stone walls, enabled 810,000 people to participate in learning activities and helped more than 45,000 volunteers get involved – the equivalent of 64,000 working hours.

Callander's Pass – Mind the Gap – Loch Lomond & The Trossachs National Park, Scotland - £1,551,200, including £119,600 development funding:

This Landscape Partnership project is at the easternmost corner of Scotland's first National Park, Loch Lomond & The Trossachs. Set in an exquisite landscape along the Highland Boundary Fault in a geological "gap" between the Lowlands and Highlands, Callander provides a natural gateway to the National Park and the Highlands. Ambitious plans in this community-led project include transforming the town of Callander into the 'Outdoor Capital of



the National Park', developing both cultural and natural heritage, creating a cycling and walking network and enhancing visitor interpretation to encourage people to make the most of getting active in the outdoors.

North Isles Landscape Partnership Scheme, Orkney - £2,998,600 including £169,400 Development grant

One of the most remote landscapes in Britain, the North Isles Landscape Partnership covers 23 islands including Shapinsay, Westray and North Ronaldsay which are dispersed across 757km² of sea. Their low lying fertile land where machair, one of the rarest habitats in Europe, thrives contrasts with high sea cliffs and hilly slopes.



The land reflects its history with influences of Picts, Vikings, Norse and lairds evident across the islands including the Knap of Howar on Papa Westray which is thought to be the oldest standing stone house in north-west Europe. The islands are also home to some of the largest colonies of kittiwake, guillemot and razorbills while rare reef habitats can be found in the seas between them. The Landscape Partnership will protect and celebrate this rich natural heritage in a way which helps support the fragile island communities, encouraging young people to stay and work on the islands. Orkney College will be involved in providing training while a new heritage trail and interpretation will encourage visitors to the archipelago.

Galloway Glens Landscape Partnership - £2,915,700 including £185,500 development funding

A landscape formed by ice and water, modified by agriculture and farming, and strongly influenced by industry, the Galloway Glens LP covers the catchment area of the rivers Dee and Ken covering an area of 590km². The area is the first UK Dark Sky Park, Scotland's first Biosphere, has Scotland's only bat reserve and contains seven priority habitats which are home to a host of wildlife. However changing land and water management has resulted in a



dramatic decline or loss of many species – water vole, willow tit, night jar, black grouse, Arctic char, Atlantic salmon and European eel. The Landscape Partnership will work with communities in conserving and restoring this fragile landscape. Practical works will allow fish to negotiate the power station, peatland will be restored and forestry restructured. There will be training for 16-24year olds in heritage and business skills while local businesses will be trained in promoting nature-based tourism.

Minke whale baby boom off Scotland's west coast?

Sightings of juvenile minke whales off Scotland's west coast increased in 2015 to the highest ever recorded within a survey season, during marine research expeditions carried out by Hebridean Whale and Dolphin Trust – indicating either a significant increase in actual numbers or an influx of minke whales from elsewhere. The charity's 2015 research season also recorded the highest annual number of common dolphin sightings since its expeditions began, with 723 individuals observed over 63 encounters. The common dolphin was once uncommon in the Hebrides, but the trust's encounter rate with the species has more than doubled over the past 12 years, also for reasons that remain unclear .

Kerry Froud, Hebridean Whale and Dolphin Trust Biodiversity Officer, said: "These intriguing changes in Scotland's marine life highlight the importance of long-term monitoring of cetaceans – so that we can better understand what is happening in our waters, and then make management recommendations to better protect this world-class area of marine biodiversity."

The studies were carried out between May to October by scientists and volunteers on board *Silurian*, the trust's dedicated research yacht. The research forms part of the trust's unique long-term monitoring of whales, dolphins and porpoises in the Hebrides. Information on basking sharks is also collected during the surveys.

A steady increase in the encounter rate with minke whale juveniles since 2011 was particularly marked this year, with the highest rate of young whales recorded since the trust started boat-based surveys in 2003. The 2015 surveys documented an encounter rate of 1 young minke whale per 286 km – three times the average over the trust's entire dataset. The minke whale is the smallest of the baleen whales – species which utilise baleen plates rather than teeth to feed – in the North Atlantic, measuring up to 10 metres in length, and is the most commonly sighted baleen whale species in the UK. Hebridean Whale and Dolphin Trust holds an identification catalogue of 125 minke whales known to have visited the Hebrides – of which some individuals return to the same areas annually, while others may only be passing through.

While an increase in the encounter rate with young minke whales is encouraging, there are still very serious issues regarding the conservation of this migratory species. To the north of



Scotland, both Iceland and Norway still hunt minke whales. It remains unknown whether or not the minke whales that swim through Scottish waters frequent the waters where they risk being hunted.



Highest number of young recorded since surveys began

The record number of common dolphin sightings – coupled with the most northerly sighting of the species ever recorded in September this year, off Tromsø in Norway – suggests that changes are underway within our seas and oceans. The causes, and wider effects on the marine environment and other species, are still unclear – underlining the importance of on-going research.

Additionally, the number of white-beaked dolphin encounters almost doubled in comparison to 2014, although many of these encounters were made during one particular day of survey around the Butt of Lewis. This rarer, colder water species is confined to the north Atlantic



© L Rumpel

and prefers temperate to sub-Arctic waters – meaning that the warming of Hebridean seas, at a rate of 0.5°C per decade, is expected to exert increased pressure on the populations found off Scotland’s west coast. White-beaked dolphins have been the focus of acoustic research by Hebridean Whale and Dolphin Trust, with a study in 2013 discovering that white beaked dolphin populations off the east and west coasts of Scotland have distinct acoustic signatures, almost like accents.

Alongside warming seas and climate change, human activities causing increasing stress on cetaceans and basking sharks include fisheries by-catch, pollution, underwater noise and habitat loss. Cetacean entanglement in litter and fishing gear can cause mobility problems, injury and even death, and the trust is working cooperatively with the fishing industry and other researchers in the UK to better understand this problem so that it can be addressed. This year, ironically whilst the Silurian crew was celebrating a volunteer’s 60th birthday, a bunch of balloons was retrieved from the water – a reminder that celebratory balloons, even if marketed as ‘biodegradable’, can have lasting consequences for our wider environment.

The trust – based in Tobermory on the Isle of Mull – is recruiting volunteers for its 2016 surveys, to live and work as citizen scientists onboard Silurian for expeditions of one to two weeks from April to September. Participation costs cover boat expenses, support the trust’s research programme and include accommodation, training, food and insurance.

For details, contact Morven Russell at volunteercoordinator@hwdt.org, call 01688 302620, or visit www.hwdt.org. Hebridean Whale and Dolphin Trust has been monitoring marine mega fauna in the Hebrides for 13 years, and is the only organisation collecting long-term data on such a large scale on Scotland’s west coast. A short film about its marine surveys can be seen at https://youtu.be/M_3r-GKfh8o

Parliament Publications

The Scottish Government's Public Sector Climate Change Duties Report, 2014-2015

The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order 2015 requires Scottish public authorities to prepare annual reports on compliance with their climate change duties. This report is the first one written in-line with the new requirements. It replaces the Public Sector Sustainability Report (PSSR), that we published alongside the Scottish Government's Annual Reports and Accounts.

The report sets-out:

- our commitment and strategy for reducing our carbon emissions,
- the targets we have in place to help gauge the success of the strategy,
- the key people/teams responsible for climate change management activities,
- the carbon emission reduction activities that we have implemented,
- an overview of our performance,
- information about sustainable procurement, and our adaptation activities.



We are committed to leading by example on tackling climate change and have set ourselves a target to reduce our carbon emissions by 30 per cent by 2020. This report shows that we are currently on track to meet this target, having reduced our carbon emissions by 17.6 per cent since 2009/10



Young Leaders Development Programme

Earlier this year two members of SNH staff, Anna Brand and Julia Quin, successfully gained places on the Young Leaders Development Programme (YLDP). The YLDP is a Scottish Government-funded initiative for 120 young people between 20 and 30 years old who work on or study climate change. It is run by the 2050 group, the youth arm of Scotland's 2020 Climate Group, a collection of businesses and NGOs that support and enable Scottish society to reach their climate targets. The goal of the programme is to educate, empower and engage the young leaders and to give them a voice on climate change and transitioning to a low carbon economy in Scotland.

The programme consists of six workshops taking place in 2016. Three of them are on topics related to sustainability: food, consumption and energy. The other three are cross-cutting themes on leadership, self-awareness and values, and understanding and influencing others. Each workshop will discuss engagement, behaviour change and communication. The aim is to inspire a generation and inform 2050 policy and position statements, government consultation responses and policy development, such as RPP3 ([Report on Proposal & Policies](#)).

At the induction in October the Environment Minister, Dr Aileen McLeod, was delighted that the Scottish Government was supporting the ambitious leadership programme, and SEPA's Chief Executive Officer, Terry A'Hearn, and Scottish Water's Chief Executive Officer, Douglas Millican, both spoke positively about tackling the challenges together. The leaders of the YLDP also spoke, sharing experiences from their last year on the small youth team in the 2050 group. They spoke about their own challenges to adapt their behaviour, sharing tips on what we can do to live more sustainably, and looked ahead to the future and the changes that need to be made.

It was a thought-provoking evening that sought an initial task from the young leaders to calculate their own carbon footprint. This was a wake-up call that inspired an internal SNH climate challenge week, where everyone was encouraged to reduce their carbon footprint. This was done by assigning points to certain behaviours, such as taking the bus to work, car-sharing, cycling, and eating sustainably. Over 100 staff signed up to the challenge and began sharing their experiences and tips with other staff, encouraging others to challenge themselves.

The workshops taking place next year will no doubt be challenging and thought-provoking, but with the historic agreement made in Paris, there is great momentum to inspire change.



ECAF—Environmental Cooperation Action Fund

The Environmental Co-operation Action Fund promotes the delivery of landscape-scale environmental projects by groups of farmers, foresters and other land managers.

Biodiversity action on individual land-holdings can be very important locally. However our habitats and species,



and the pressures on them, typically function over much larger areas. At this landscape scale, collaboration between land managers is crucial. It adds value to on-the-ground biodiversity action through strategic planning. This aims to ensure management of individual holdings is complementary in its detail and its timing, maximising the benefits for biodiversity. Co-operative action can also be efficient through sharing issues, solutions and resources.

The fund supports the costs of planning and facilitating these co-operative projects, to deliver the following environmental priorities throughout Scotland:

[Habitat and Degraded Ecosystem Restoration](#)

[Conservation of Vulnerable Priority Species](#)

[Control of Invasive Non-Native Plant Species](#)

[Deer Management](#)

[Catchment Management for Water Quality](#)

[Physical Restoration of Water Bodies](#)

[Natural Flood Management](#)



ECAF—Environmental Cooperation Action Fund

Applications may subsequently be made to the Agri-Environment Climate Scheme, the Forestry Grant Scheme and / or other public funding to support the delivery of works on the ground. By supporting the facilitation of landscape-scale projects the Environmental Co-operation Action Fund will help to:



- deliver the [2020 Challenge for Scotland's Biodiversity](#)
- contribute to Scotland's world-leading climate change targets
- meet obligations to improve water quality and the physical restoration of rivers under the EU Water Framework Directive
- control flooding through natural flood management

The scheme is delivered jointly by the Rural Payments and Inspections Division of the Scottish Government, Scottish Natural Heritage, the Scottish Environment Protection Agency and Forestry Commission Scotland.

Who Can Apply

Applications can only be submitted by:

- an individual or appointed facilitator who has identified the need for a landscape-scale environmental project and intends to develop and deliver collaborative action with relevant land holdings and key stakeholders
- or
- an organisation that wishes to appoint a facilitator. If applying through this route you must be one of the following:
 - a public sector organisation
 - a private sector organisation
 - a constituted not-for-profit organisation
 - a constituted group.



Sustrans Greener Greenways Scotland

Greener Greenways is a Sustrans project launched in 2013 and partly funded by Scottish Natural Heritage. Its focus is recording and managing the biodiversity on the traffic-free routes of the National Cycle network, which comprise nearly 600 miles of the total network of 2600 miles in Scotland. The project engages volunteers in wildlife recording and practical habitat management - recording biodiversity on the traffic-free routes and delivering habitat enhancement to benefit a range of species, in particular pollinator species.



We have had two very busy years having recruited over 90 volunteers and working with over 15 partner organisations delivering training to our volunteers. Records generated by our volunteers contribute to several national recording schemes, such as the Bumblebee Conservation Trust's BeeWalk Scheme, the Amphibian and Reptile Conservation Trust's Record Pool or the Woodland Trust's Nature's Calendar.

We have also been working hard to develop and consult on habitat management plans for 12 traffic-free routes across the central belt of Scotland (predominantly under Local Authority ownership) and these are now being implemented on the ground by volunteers as well as contractors. It has been a busy autumn packed full of workdays and training delivered to us by The Conservation Volunteers. Our wildlife champions have had opportunities to learn traditional grassland management technique of scything and have since scythed and raked large sections



of grasslands to encourage native wildflowers. More recently, we have ran woodland and scrub management training courses and throughout the winter the volunteers will be managing these habitats along the routes.

During 2015, in partnership with the Sustrans Greener Greenways initiative in England & Wales, the project was nominated and awarded second place overall in the Exemplary Initiative category of the 7th European Greenways Awards, organised by the European Greenway Association.

Sustrans Greener Greenways Scotland

Rob Garner, SNH's recreation and access manager and our SNH project monitor, said:

“We are delighted that this innovative and imaginative project has been recognised in these awards. Funded by SNH for the past three years, Greener Greenways brings alive our ambitions for improving Scotland's environment for people and nature.

“Together the team have helped deliver tangible greenspace and biodiversity improvements, enhance access to and enjoyment of the



National Walking and Cycling Network; and increase community involvement and public engagement in citizen science.

As the project is now progressing towards the end of its funding, we are working hard to develop options to continue the work already started and continue this going forward. We are eager to build on the momentum over the last two years and are currently exploring a number of possible directions the project could take.

We are keen to hear any ideas or suggestions and talk to partners that may wish to get involved in a future project with focus on biodiversity and conservation of greenways.

For further information contact Lenka Sukenikova (Ecologist)
lenka.sukenikova@sustrans.org.uk
or Laura White (Volunteer programme coordinator)

laura.white@sustrans.org.uk or call 0131 346 1384.



RSPB—Nature of Scotland Awards

At a special ceremony hosted by Springwatch presenter Iolo Williams, Scotland's wildlife champions were honoured on the 19 November, as the winners of the RSPB Nature of Scotland Awards. Butterflies, seabirds and peatland restoration were just some of the inspiring projects to take home top prizes during the event, which is now in its fourth year. Scotland is renowned worldwide for its beautiful wild places and abundant wildlife and the awards recognise and celebrate excellence, innovation and outstanding achievement in nature conservation.



The winners are..

© Simon Williams Photography

Community Initiative Award: Won by Castle Loch Lochmaben Community Trust in Dumfries and Galloway. Castle Loch came up for sale in 2013 and the residents of Lochmaben and surrounds rallied together under the banner of Castle Loch Lochmaben Community Trust to purchase this SSSI site. From 2014 the Trust's ownership ensured the continued wildlife conservation of the site, while encouraging involvement from the whole community and visitors to Dumfries & Galloway. The Award was sponsored by GreenPower.

Innovation Award: Cairngorms Peatland Restoration won the 2015 Innovation Award. One-fifth of the Cairngorms National Park is blanket bog with over half in a degraded state. Supported by SNH's Peatland Action restoration work was carried out at 3 sites, covering 367 hectare, using techniques new to Scotland that will restore peatland ecosystems and enhance carbon stores. The Award was sponsored by The James Hutton Institute.

...And the Winners are...

Marine Conservation Award: KIMO UK's Fishing for Litter Scotland, based in Aberdeenshire, won the Marine Conservation Award 2015. As part of this project, fishermen and harbour staff volunteer their time to collect litter caught in fishing nets. Fishing for Litter Scotland ensures that barriers are removed by providing collection bags and disposing of the litter; both simple and effective. The Award was sponsored by NorthLink Ferries.

RSPB Species Champion Award: Won by Delivering advice to benefit Marsh Fritillary in Scotland, based in the Highlands. The category was sponsored by The Ardmore Distillery. Management advice was delivered to over two hundred sites across 20 meta-populations to assist farmers gain entry into agri-environment schemes to benefit Marsh Fritillary. The success of this project (jointly funded via the Species Action Framework project) is solely due to the co-operation and goodwill of the site landowners/managers and their agents, and the willingness to work together, and has become a blueprint for delivering management advice for threatened species.

Youth and Education Award: Belhaven Hill School Conservation Club, in East Lothian, won the Youth and Education Award, sponsored by Scottish Natural Heritage. The school aims to improve our local environment as a haven for native wildlife through a programme of meaningful and educational conservation activities. We see the integration of these activities with our academic curriculum as a key means of delivering both an enriched learning environment and the importance of living a healthy and environmentally responsible lifestyle.

Nature Tourism Award: Isle of May National Nature Reserve Visitor Centre topped this category, which was sponsored by Wild Scotland. The new Isle of May Visitor Centre provides a high quality visitor experience, providing essential facilities and a unique vantage point to unobtrusively observe the island's spectacular seabirds and seals. Information is provided about the islands rich natural heritage and the links between wildlife and the marine environment.

Sustainable Development Award: Won by Peatland Restoration at Blacklaw and Whitelee Windfarms, based in Glasgow. At Black Law and Whitelee Windfarms, Scottish Power Renewables has developed innovative new techniques for developing large-scale peatland restoration, particularly following forestry. These techniques could lead to a reduction in cost and increase in effectiveness of peatland restoration in Scotland and beyond. This award was sponsored by The Crown Estate.

Politician of the Year Award: 2015 saw joint winners for this category; Councillor Martha Wardrop and Paul Wheelhouse MSP. Martha Wardrop has represented the Hillhead district since 2007. She was one of the first Green Councillors elected to Glasgow City Council in May 2007 and is also convenor the councils of the Energy and Carbon Working Group. Paul Wheelhouse is currently SNP MSP for the South of Scotland. He was elected in 2011 and has held ministerial posts for Environment and Climate Change and is currently Minister for Community Safety & Legal Affairs.



Scottish Seabird Centre secures Heritage Lottery Fund support

The conservation and education charity, the Scottish Seabird Centre, North Berwick, has been awarded development funding of £290,000 from the Heritage Lottery Fund (HLF) to progress plans to create the 'National Marine Centre'. HLF has also given its initial support* for a £3.5million bid for the project.

The 'National Marine Centre' is the working title for an innovative and exciting project to diversify the Scottish Seabird Centre, expanding the conservation and education work of the charity. The aim is to build on the charity's existing activities and share more widely the importance, value and issues affecting Scotland's unique and fascinating marine environment and wildlife. The project will involve the extension and upgrade of the existing building to include a vital new education and interactive exhibition space. Some initial design work has been undertaken, but the Centre will now be conducting further research and developing plans in consultation with the local community, partners, members, visitors and funders.



The Scottish Seabird Centre opened in May 2000. It has won multiple awards for tourism, sustainability and its green credentials. It has led a range of high profile conservation projects and provides a well-used facility for locals and visitors all-year-round as well as supporting artists with commissions and displays.





Tom Brock OBE, Chief Executive of the Scottish Seabird Centre, said: "Over the last 15 years our staff, volunteers and trustees have worked hard to develop and deliver an award-winning visitor experience and education programmes that have informed and inspired people about seabirds. Now we look forward to building on this success by also providing enhanced conservation and education programmes about the amazing marine environment and wildlife all around Scotland. We recognise the importance of working at both local and national levels and collaboration will be vital in taking the project forward. We will work with the local community as well as with organisations all over Scotland to enthuse people across the country to conserve and protect our precious marine wildlife and environment for future generations. A massive thank you to HLF in supporting our vision: with their support we are closer to achieving what we know will be a great asset to Scotland. This is the first step in enabling us to appeal to, and work with, other funders to support this important national project that will highlight and celebrate a major part of Scotland's outstanding natural heritage."

Commenting from the Heritage Lottery Fund, Dame Seona Reid, Deputy Chair of HLF and Chair of Committee for Scotland, said: "The Heritage Lottery Fund is delighted to give its initial support to this ambitious project which we hope will inspire people to look after Scotland's amazing, and often hidden, marine heritage. Our fascinating marine environment is of international importance and home to an extraordinary array of marine life. We have the players of the National Lottery to thank that we are able to support the development of this 'National Marine Centre' which will highlight the importance of Scotland's seas in engaging and informative ways, helping to ensure the conservation and survival of marine environments and wildlife."

Is the next Japanese Knotweed already in your garden?

This is a pilot study for a project to find out if gardeners could help identify potentially invasive plant species in British gardens, before they become a problem for biodiversity and conservation.

The majority of our ornamental plants are non-native. They contribute greatly to our enjoyment of gardens and represent a long history of plant discovery and garden design. However, some have escaped the controlled environment of gardens, and a small minority of these are threatening native biodiversity or are causing severe problems for infrastructure, agriculture or forestry. Well known examples include Japanese Knotweed (*Fallopia japonica*), *Rhododendron ponticum* and Himalayan Balsam (*Impatiens glandulifera*).



Houttuynia cordata - hard to get rid of
Image: K. Dehnen-Schmutz

It can be a long time between the introduction of a species and it first being noticed as a problem, making future control problematic. In Britain on average, this time span has been more than one hundred years. Early detection of potentially problematic plants could greatly improve our ability to prevent plant species becoming invasive.

This survey is based upon the assumption that it is gardeners who are most likely to notice first if a particular ornamental plant may have the potential to spread outside the garden. (Most gardeners will know which plants tend to overgrow others or tend to spread all over the garden.) This knowledge could be invaluable in identifying potential invaders, triggering timely risk assessment.

Gunnera tinctoria colonising a roadside ditch on Benbecula.
Image: F. Donald



The survey consists of two sections. In the first section we ask you to name up to five ornamental plants in your garden that are spreading and are difficult to control. We also ask you to give us details on how these plants spread, your control measures and how they came into your garden. In the second section we would like to know a bit more about your garden. This information may help us to better understand why ornamental plants are starting to grow outside gardens.

At the end there is a section for providing feedback on the pilot survey: please tell us here about any problems you had in completing it, and suggestions for improvement. The completed survey can be downloaded and printed for your record.

For further information contact: Katharina Dehnen-Schmutz
ab6340@coventry.ac.uk

Reaching a global agreement on climate change

On the 12th December 2015 a truly historic agreement to combat climate change was adopted by 195 countries at the UN Conference on Climate Change in Paris (COP21). The agreement is a first in many ways, and has been widely celebrated as a huge achievement.

Crucially, it means that 195 countries have agreed to reduce their greenhouse gas emissions, and limit warming to 'well below 2°C'.

A number of other important elements are:

- To peak emissions as soon as possible,
- To have no net emissions in the second half of this century.
- To raise \$100 billion each year from 2020 to help countries to adapt to climate change or reduce emissions. For the first time, some developing countries will also be able to donate on a voluntary basis.
- A transparent system to track countries efforts to meet their commitments.

In the lead up to the conference, countries were asked to submit their 'intended nationally determined contributions', or INDCs, which outlined the steps they would take to reduce their emissions. But as the UN Framework Convention on Climate Change published prior to the conference, an evaluation of these contributions said that warming could still be between 2.7°C and 3°C. In response, the Paris Agreement demands that countries raise their commitments every 5 years, a great achievement that ensures that climate change is continuously at the forefront. A reversal on these contributions will not be possible; instead countries are encouraged to increase their ambition.

However, there are still challenges ahead, and the agreement itself is just the start. The science points to urgent action, led by countries, cities, businesses and individuals. For instance, to achieve no net emissions we will have to take great care of our carbon sinks, such as forests, oceans and soil; as well as supporting the transition to a low carbon economy.

The Agreement will be open for ratification on 22nd April 2016, and will be adopted when 55 countries, representing at least 55% of emissions, have ratified it. In the metaphor of the



Paris conference: the world is watching to make sure we keep our promises, and then some.

Diary Dates

30th January 2016: 6th National Moth Recorders Meeting. Birmingham and Midland Institute, Birmingham. **Advance booking is essential.** Please contact info@butterfly-conservation.org or telephone 01929 400209

24th February 2016: Royal Society of Edinburgh discussion - Life in the Soil: does it matter? 6pm RSE, George St, Edinburgh. Further information and how to book at :
<https://www.royalsoced.org.uk/events/event.php?id=420>

1st -2nd March 2016: SRUC-SEPA Conference. What Future for our Farming Systems? Environmental Challenges and Integrated Solutions. Further information at: <http://www.sruc.ac.uk/srucsepaconf>

SNH will soon be consulting on the Pollinator Strategy for Scotland. Keep an eye on the SNH and Biodiversity Scotland websites for further information on this.

The Biodiversity team would like to wish our readers a Happy New Year
Thanks to all those who contributed articles to the Forum, please keep doing so. We would like to encourage others to submit items large or small for 2016

