Department
for Environment
Food & Rural Affairs

National Pollinator Strategy:

Pollinator Action Plan, 2021 to 2024

May 2022

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Any enquiries regarding this publication should be sent to us at

Defra
Nature Strategy Team
Seacole Building
2 Marsham Street
London
SW1P 4DF
beesneeds@defra.gov.uk

PB 14747

www.gov.uk/defra

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Forward

Bees and other pollinators are an essential part of our environment and play a crucial role in food production - they contribute the equivalent of more than £500 million a year to UK agriculture and food production, by improving crop quality and quantity – and are also vital to our wider, natural ecosystems.

Pollinators are a priority for us. They are critical to our food industry, our green spaces, wider biodiversity and ensuring healthy and productive ecosystems. Everyone can help them flourish by leaving patches of garden to grow wild, growing more flowers, cutting grass less often, not disturbing insect nests, and carefully considering how we use pesticides. For my part, last year I sowed my own wildflower meadow at home in Somerset to help create pollinator-friendly habitats.

I am very excited to publish the latest Pollinator Action Plan for 2021 to 2024, which sets out how we will continue to work together with valued partners to address the needs of pollinators. We published the first Action Plan in 2014 and we have made real progress, including the establishment of a world-leading pollinator monitoring scheme – but there is much more to do.

Our world-leading Environment Act committed us to halt the decline of species by 2030. This Action Plan is going to work alongside that commitment. We want to see bigger and better flower-rich habitats to support pollinators across the country; healthy populations of pollinators which are resilient to threats including climate change; no further extinctions; awareness of the needs of pollinators and real action to support pollinators and pollination services.

This Action Plan is a collaborative endeavour on the part of government alongside beekeepers, conservation groups, farmers, researchers and others. I am immensely grateful to the hard work and dedication of all our partners for their input into this plan.

Through the plan, we will be strengthening evidence to better understand the needs of pollinators. The plan will work alongside our farming schemes to ensure that our land provides pollinators with food and a home. We have already seen an uptick in Countryside Stewardship applications, which increased by 40% last year.

We published the Healthy Bees Plan 2030 and have continued to engage with the wider public through the Bees' Needs campaign.

Everyone can have a part to play in improving the status of pollinating insects and we know that the great British public love to see beautiful butterflies and buzzing bees and are eager to help. As a constituency MP, I receive hundreds of emails about bees – including

from many schools in my local area. We will make sure that there is advice and guidance for anyone who wants to get involved.

Anyone can take part in our ‘5 simple actions’ to help pollinators at home or in your local area. Not only this, but anyone can spend ten minutes counting the insects that land on flowers, before sending the data through the Flower-Insect Timed Counts app. Every single count makes the data in our Pollinator Monitoring Scheme more meaningful.

We will encourage everyone to take action in gardens, balconies, window boxes and allotments to make them pollinator friendly. Why not enter your great work into our annual Bees’ Needs Awards and see if you can become a Bees’ Needs Champion!

Rebecca Pow MP, Parliamentary Under Secretary of State for Environment, Food and Rural Affairs

Introduction

The National Pollinator Strategy (NPS) is a 10 year plan published in 2014, developed after a thorough review of the evidence base and wide consultation. It sets out how government, beekeepers, conservation groups, farmers, researchers, industry and the public can work together to improve the status of pollinating insect species in England.

This NPS action plan sets out more specifically how we will act to fulfil the vision, aims and objectives of the NPS, over the period 2021 to 2024. It details what we will do and how we will monitor progress. It also reflects the refreshed aims of the NPS, as agreed with the Pollinator Advisory Steering Group (PASG) as we reached the NPS's midpoint in 2019 to 2020.

Many of these actions are well underway and have been carried over or updated from those in the previous NPS implementation plan, which covered the period of 2018 to 2021.

Others are new, they reflect progress made and needs identified since the publication of the NPS, the 2019 review of evidence to support the NPS,[1] and associated implementation plans.

The actions were developed in consultation with the PASG, under four themes or 'action areas':

- strengthening the evidence base
- managing our land
- pollinator health
- engaging people

The Environment Act 2021 requires a new legally-binding target to be set to halt the decline in species abundance by 2030. Action taken under this plan will complement and support wider action to achieve this target, helping to deliver nature recovery and to reverse declines in species, including pollinators.

[1] Steele et al. 2019 Management and drivers of change of pollinating insects and pollination services

Definitions

- Wild Pollinators: Around 6,000 species of insect involved in pollination of crops or wild plants in the UK. Includes many taxa or types of insect, including bumblebees, solitary bees, moths, butterflies and hoverflies.
- Wild bees: Over 250 species of bee living in the wild in the UK, including bumblebees and solitary bees.
- Managed honey bees: A single species, Apis mellifera, kept by beekeepers and bee farmers in hives.
- Managed bumble bees: Kept in greenhouses and poly tunnels to pollinate crops. Not intended for release to the wild.
- Pollinator health: The state of well-being of wild and managed pollinators that allows individuals to live longer and reproduce more, even in the presence of pathogens, and therefore provide ecosystem services more effectively. Pollinator health is impacted by threats such as pests, parasites, disease, and other anthropogenic stressors, and access and availability of environmental requirements, such as appropriate nutrition (including larval foodplants), nest-sites, mating areas, and hibernation sites.
- Honey bee health: Relating to pollinator health but focused specifically on the state and measures taken to support honey bees, for which further information and action can be found in the Healthy Bees Plan 2030.

Delivery and review

The PASG, comprising government departments, agencies and external organisations, guide and deliver actions under the action plan, which is coordinated by Defra. PASG members also work with their supporters and partners, creating a wide network delivering benefits for pollinators across the country.

As we progress, and new evidence comes to light, we will undertake periodic evaluation of the plan to ensure that we are meeting the NPS's objectives and prioritising the right actions and approaches. Defra, supported by PASG members, will also work to better integrate, inform and support the NPS and our action for pollinators, with our wider plans and policies for nature.

Pollinator Advisory Steering Group Members

- The Association of Local Government Ecologists (ALGE)
- The Animal and Plant Health Agency (APHA)
- Bee Farmers Association
- British Beekeepers Association (BBKA)
- Buglife
- Bumblebee Conservation Trust
- Butterfly Conservation
- The UK Centre for Ecology & Hydrology (UKCEH)
- Championing the Farmed Environment (CFE)
- Country Land and Business Association (CLA)
- Environment Agency
- Friends of the Earth
- Grow Wild
- Game & Wildlife Conservation Trust (GWCT)
- Learning Through Landscapes
- Ministry of Defence
- Ministry of Justice
- National Trust
- Natural England
- Natural Resources Wales
- Nature Friendly Farming Network
- National Farmers Union (NFU)
- NatureScot
- Northumbria University
- Pesticide Action UK (PAN UK)
- Plantlife
- Royal Botanic Gardens Kew (RBG Kew)
- Royal Holloway University of London
- Royal Horticultural Society (RHS)
- The Royal Parks
- Soil Association
- The World Bee Project
- University of Cambridge
- University of East Anglia
- University of Reading
- Welsh Government
- The Wildlife Trusts

The PASG and the NPS are also supported by:

Pollinator Monitoring and Research Partnership (PMRP)

A collaborative project funded by Defra, the Joint Nature Conservation Committee (JNCC), Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs (DAERA) Northern Ireland and project partners to establish UK pollinator monitoring. It comprises UKCEH, Bumblebee Conservation Trust, Butterfly Conservation, British Trust for Ornithology, Hymettus, University of Reading, University of Leeds and Natural History Museum.

Pollinator Monitoring Research Advisory Group (PM-RAG)

Established to help support externally funded research applications and use UK Pollinator Monitoring Scheme (PoMS) derived data in research, conservation and survey planning.

Overview

Our achievements to date

Since the NPS was published in 2014, together we have made significant progress in a number of areas, including:

Improving the evidence base

In 2019, we published 'Management and drivers of change of pollinating insects and pollination services'. This provides accessible, up-to-date evidence statements and detailed summaries of the evidence of what is known (and not known) about the status, values, drivers of change, and responses to management of UK insect pollinators. The statements and summaries are authored by leading pollinator experts, within and beyond the PASG.

UK scientists, including PASG members, regularly contribute to international research and analysis, including the IPBES assessment report on Pollinators, Pollination and Food Production, which analysed a large body of knowledge to represent the state of our global knowledge and have undertaken their own cutting edge, globally important research.

Such key sources of evidence will continue to inform our collective action.

Establishing a world-leading pollinator monitoring scheme, 'PoMS'

In collaboration with research institutes and volunteer organisations, Defra and the Devolved Administrations established the UK Pollinator Monitoring Scheme (PoMS), which generates systematic data on the abundance of bees, hoverflies and other flower-visiting insects – the only scheme doing so on a national scale.

Together with other data sets, this forms an invaluable resource from which to measure trends in pollinator populations and target our conservation efforts, including updates of the UK Pollinator Indicator at species and country-level resolution. Its approach is being hailed and followed internationally.

A new website and app have helped enhanced PoMS' appeal, including interactive charts allowing anyone to explore how frequently different insect groups visit certain flowers, based on data collected during the surveys.

Creating, enhancing and mapping beneficial habitats

In 2015, the UK government introduced Countryside Stewardship, an updated and simplified agri-environment scheme - a funding programme for farmers, woodland owners, foresters and land managers to make environmental improvements. This included a 'Wild Pollinator and Farm Wildlife Package' to make it easier for farmers to provide pollinator habitats.

The Countryside Stewardship Facilitation Fund, which also began in 2015, supports individuals and organisations who bring together farmers and other land managers to improve the environment at a landscape scale.

Advice and support from bodies such as Buglife, the Wildlife Trusts and the Game and Wildlife Conservation Trust, often alongside Natural England, has been instrumental in ensuring habitat creation funded by agri-environment schemes is targeted and tailored to maximise benefits for insects.

Between 2014 and 2019, Natural England estimates that the area of farmland covered by agri-environment scheme options delivering food and fuel for pollinators increased by 30,000 hectares (ha), largely driven by the package, while pollinators also benefited from managing existing habitat such as protected sites or hedgerows.

Other government and partner initiatives have brought together stakeholders at landscape scale to create pollinator habitat and to identify further opportunities. For example:

- Buglife's 'B-Lines' project has helped to identify habitat beneficial for pollinators and show where links could be made to improve habitat connectivity. Working in partnership with local authorities, conservation partners, land managers and businesses, Buglife has produced county-level maps which demonstrate where habitat creation and restoration could be targeted and combined them to create a nationwide map.

- CFE have facilitated farmers to manage land for pollinators by offering discounted pollen and nectar mixes. Between 2014 and 2017, over 1,500 packs of CFE seed mixes were sold, creating 1,500 ha of wildflowers and enhancing 50,000 ha of farmland. Between 2014 and 2016, CFE also delivered over 90 farm workshops to over 1,750 farmers and advisers on best practice management for pollinators.

Restrictions on neonicotinoids

In 2018, the Defra Secretary of State supported tough restrictions on the use of 3 neonicotinoid pesticides - Clothianidin, Imidacloprid and Thiamethoxam based on scientific evidence of the risks to pollinators. All outdoor uses were withdrawn from 19 December 2018.

It remains possible to consider emergency authorisations (in accordance with the relevant legislation) in special circumstances where authorisation for limited and controlled use appears necessary because of a danger that cannot be contained by any other reasonable means.

In deciding applications for emergency authorisation of neonicotinoids, the risks to pollinators would be an important consideration.

Sustaining honey bee health

The NPS recognised the work of the long-established honey bee health programme delivered by the National Bee Unit (NBU) and the 'Healthy Bees Plan'.

Through these programmes, we have a good understanding of the pest and disease risk in honey bees and have been able to advise beekeepers on the management of these risks, in collaboration with key partners such as the British Beekeepers Association and the Bee Farmers Association.

Around 6,500 inspections have been carried out per year by the NBU in England and Wales, through which advice on good husbandry has been provided to thousands of beekeepers to help them manage pests like Varroa. We have also continued to tackle threats from invasive, non-native species such as the Asian hornet.

The Healthy Bees Plan 2030, published in November 2020, is our framework for improving the health of honey bees in England and Wales.

Engaging wider audiences through our Bees' Needs campaign

Our 'Bees Need Food and a Home' message and its '5 simple actions' show that everyone can play their part to support pollinators, wherever they are:

1. Grow more flowers, shrubs and trees.
2. Let your garden grow wild.
3. Cut your grass less often.
4. Do not disturb insect nest and hibernation spots.
5. Think carefully about whether to use pesticides.

The annual Bees' Needs Champions Awards have recognised community groups, local authorities, schools, farmers and businesses who have taken action to higher levels.

The champions have restored:

- wildflower meadows and created urban pollinator-friendly habitats
- run community-based wildlife surveys and educational campaigns
- gathered 'Pollinator Promises' across society and much more, embodying and inspiring the efforts and impacts that everyone can make

We have celebrated these and other efforts and opportunities in the annual Bees' Needs Week, with the PASG front and centre of action to promote and profile pollinator action everywhere.

Strategy outcomes, priorities and approach

The NPS set out to achieve 5 high level outcomes, agreed by the PASG in 2014. As part of our review and refresh of the NPS in 2020 to 2021, the PASG has helped to clarify these:

- more, bigger, better, joined-up, diverse and high-quality flower-rich habitats (including foodplants, nesting places and shelter) supporting pollinators across the country
- healthy populations of wild pollinators and managed bees which are more resilient to threats, including but not limited to climate change
- no further extinctions of known threatened pollinator species
- enhanced awareness across a wide range of businesses, other organisations and the public of the essential needs of pollinators
- evidence of actions taken to support pollinators and pollination services

We have also refreshed the scope and components of our 4 priority areas, to help us deliver against these outcomes. These are set out in the diagram below. The detailed actions which we commit to take under these 4 areas, from 2021 to 2024, follow in 'Actions'.

Figure 1: The 4 priority areas of the NPS

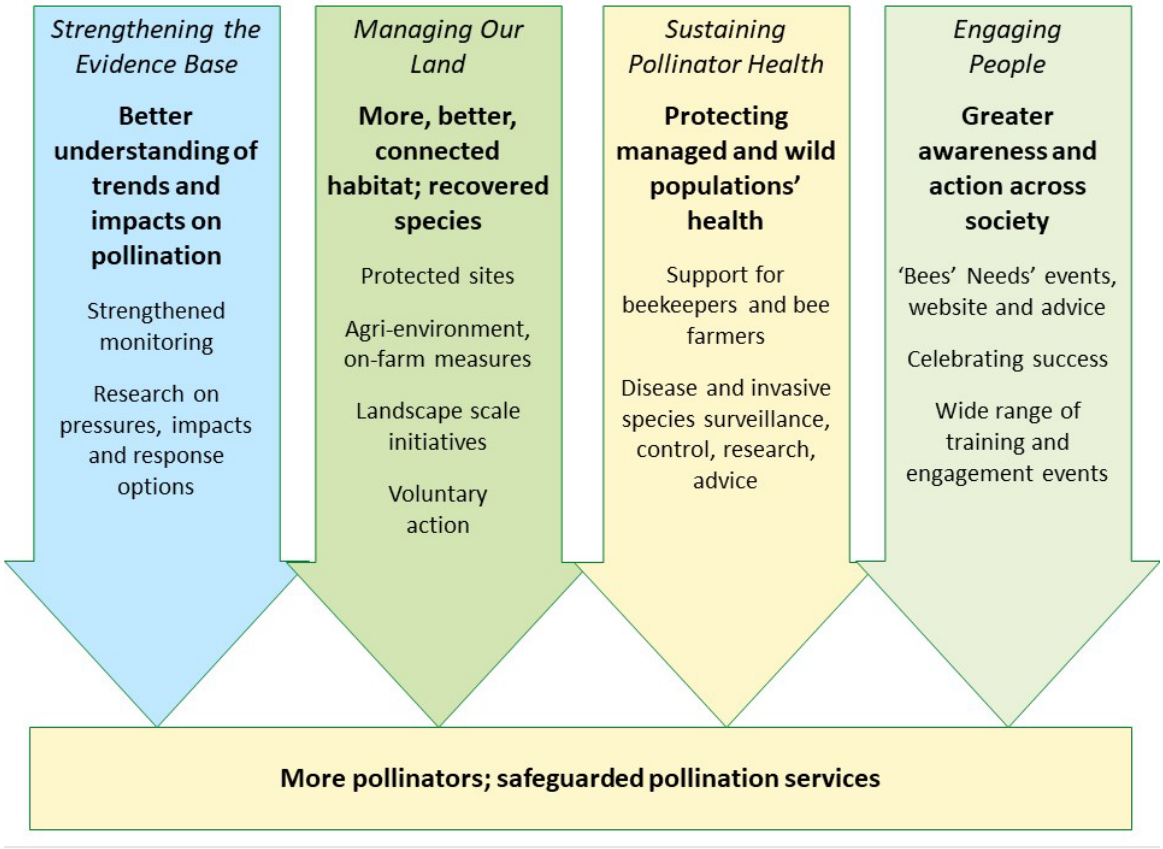

Figure 1 shows the 4 priority areas of the NPS are illustrated in a diagram as 5 arrows pointing towards the outcomes of 'more pollinators and safeguarded pollination services':

1. The first arrow represents 'strengthening the evidence base' and will lead to a better understanding of trends and impacts on pollination. This involves strengthened monitoring and research on pressures, impacts and response options.
2. The second arrow represents 'managing our land' and will lead to more, better, connected habitat and recovered species. This involves protected sites, agri-environment and on-farm measures, landscape-scale initiatives and voluntary action.
3. The third arrow represents 'sustaining pollinator health' and will lead to protecting managed and wild populations' health. This involves support for beekeepers and bee farmers and disease and invasive species surveillance, control, research and advice.
4. The fourth and final arrow represents 'engaging people' and will lead to greater awareness and action across society. This involves Bees' Needs events, website and advice celebrating success and a wide range of training and engagement events

Actions

The following sections set out the actions that the UK government and wider PASG members commit to pursue and undertake between 2021 and 2024.

Lead and partner organisations are identified, though this does not exclude other organisations' participation or support.

The intended, or ideal, timeline for each action is represented under annual headings. Where relevant, 'planned' indicates an action which requires resources or funding confirmation before it can be undertaken.

Strengthening the evidence base

Our commitments:

- we will sustain a long-term monitoring programme to better understand pollinators' status and the causes of any declines
- we will improve our understanding of the status of pollinators, their role in maintaining healthy ecosystems and the services they provide, the drivers of change and the impact of management responses
- we will improve our understanding of the values and benefits pollinators provide to our economy and wider society, and how resilient natural and agricultural systems are to changes in their populations
- we will assess the population-level impacts of management actions on pollinators and understand where management actions would be most effective

Table 1: Monitoring

Monitoring	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Continue to support the Pollinator Monitoring and Research Partnership (PMRP) of academic and research institutions, to oversee, advise and deliver as appropriate on wider actions related to monitoring of pollinators.	UK Centre for Ecology and Hydrology (UKCEH)	Defra, Devolved Administrations, JNCC and PMRP partners (See introductory box)	Yes	Planned	Planned
Continue to implement including seeking long-term support for the UK Pollinator Monitoring Scheme (PoMS) with professionals and volunteers (including the Flower-Insect Timed Count (FIT Count) and 1 km square surveys).	Defra, Devolved Administrations and PMRP	JNCC	Yes	Planned	Planned
Improve communications and outreach to encourage increased participation in PoMS by citizen scientists and in public and private pollinator projects, including by developing and promoting a new PoMS website and FIT Count app.	PMRP	Defra, Devolved Administrations and PASG	Yes	Planned	Planned

Monitoring	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Promote other monitoring schemes established across the UK, including the UK Butterfly Monitoring Scheme and Bumblebee Conservation Trust's Bee Walks and work with them and PoMS to: • support data collection to estimate changes in population size of bees, hoverflies, butterflies, moths and other pollinators at regional or national levels • support consideration of linking data on drivers of change and the impact of management responses • improve standards in data collection, management and analysis for pollinators • improve understanding of who participates in volunteer recording schemes and their motivations to aid recruitment of new volunteers • encourage data sharing and exchange between monitoring schemes	PMRP, UKCEH, Butterfly Conservation and the Bumblebee Conservation Trust	Recording schemes and societies	Yes	Yes	Yes

Monitoring	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Expand the pool of taxonomic expertise and people capable of identifying the many species of insect pollinators, for example, by supporting the bee, fly and wasp identification training. Courses through UK Research and Innovation (UKRI) for early career researchers or other training for non-academics.	PMRP	PASG	Yes	Planned	Planned
Encourage registration of honeybee colonies on BeeBase and support recording commercial bumblebee use with the aim of producing a reliable data source.	National Bee Unit and Defra	BBKA, the Bee Farmers Association (BFA) and the NFU	Yes	Yes	Yes

Table 2: Evaluation

Evaluation	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Develop adaptive reporting mechanisms using the expertise of the PASG to assess progress of the NPS and how action and evaluation can be better connected to wider government policy and plans for nature.	Defra	PASG	Yes	Yes	Yes

Table 3: Research into threats and drivers

Research into threats and drivers	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Improve understanding of the threats, impacts and response options for the effects of pests and diseases on wild and managed pollinator species. This includes the extent to which pests and diseases are transmitted between managed and wild pollinators (see also 'Pollinator Health' actions), and the impact of trade and use of managed pollinators. For example, through the 'PoshBee' and 'Safeguard' projects.	University of Reading, BBKA, Royal Holloway University London (RHUL) and PASG	DNA Centre of Excellence (Defra, JNCC and RBG Kew)	Yes	Yes	Yes
Expand our understanding of the impact that land management has on pollinators, including soil management, crop rotations, urban regeneration, nature-based solutions and changing livestock demands. For example, through the Safeguard, H3, ASSIST and FoodSEqual projects.	University of Reading, University of Cambridge and RHUL	Northumbria University and UKCEH	Yes	Yes	Yes
Improve understanding of the impacts that climate change and future land use change and extreme weather will have on insect pollinators and pollination services, including spatial and temporal changes. For example, through the 'DRUID' and 'Safeguard and Pollinator phenology' projects.	PASG, PM-RAG and the University of Reading	UKCEH	Yes	Yes	Yes

Research into threats and drivers	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Extend the understanding of the exposure and impacts of agro-chemicals on wild and managed pollinators and effectiveness of response options to reduce risks. For example, through the 'PoshBee' project.	University of Reading, BBKA and PASG		Yes	Yes	Yes
Keep other, potential and emerging threats such as artificial light at night (ALAN), radiofrequency electromagnetic radiation (EMR), traffic, nitrogen and other nutrient pollution, and pathogen spread under review to determine their impact on pollinators at behavioural, physiological and population levels.	Defra and PASG	Royal Holloway University of Reading University of Cambridge Butterfly Conservation	Yes	Yes	Yes
Modelling the nutritional landscape of the UK to determine the distribution of nutritional resources, especially lipids and protein, for wild bees and how this influences pollinator diversity. For example, through FATBee and the NERC Sterol landscapes projects.	RBG Kew	The Universities of Leeds, Oxford and Bristol	Yes	Yes	Yes

Table 4: Research into habitats

Research into habitats	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Assess the population-level impacts of management actions on pollinators, across a range of habitats, including urban and agricultural settings, to inform specific guidance and interventions. For example, through the LANDSPAES, H3, SafeGuard and BEESPOKE projects.	PASG	Natural England, UKCEH, University of Cambridge and GWCT	Yes	Yes	Yes
Understand the level of habitat diversity, heterogeneity or configuration required for sustained delivery of pollination services to crops and wild plants, to inform effective conservation interventions. For example, through 'Modelling Landscapes for Resilient Pollination Services'.	PASG and the University of Reading	PM-RAG	Yes	Yes	Yes

Research into habitats	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Determine the suitability of sites, and effectiveness of different management approaches for pollinator conservation, of: • urban and rural road verges and other amenity areas • railway embankments • brownfield sites • industrial areas • university and college campuses • hedgerows (Close the Gap Project) • gardens and cultivated landscapes (RHS Sustainability Strategy) For example, through RBG Kew's 'Landscape Ecology Program' at Wakehurst Place, including with Ground Control.	PASG	Natural England, University of Reading, Northumbria University, UEA, BBCT, University of Exeter, RBG Kew, Buglife and Royal Horticultural Society (RHS)	Yes	Yes	Yes

Table 5: Research into natural capital and pollination services

Research into natural capital and pollination services	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Develop an understanding of pollinator natural capital distribution, its local value, and areas of possible pollination deficit. This includes the geographic extent and temporal changes of pollination deficits in crops and wild flowering plants. For example, through the 'Modelling Landscapes for Resilient Pollination Services', 'FABulous Farmers', 'DRUID' and 'Landscape Ecology Programme' at Wakehurst Place projects.	University of Reading, Soil Association and DRUID project partners	RBG Kew	Yes	Yes	Yes
Estimate the economic costs of action to improve pollinators' status in England, and how they may be made more cost-effective.	Defra and Inner City Fund (ICF)	PMRP (advisory)	Yes	No	No

Table 6: Knowledge exchange

Knowledge exchange	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Improve knowledge-sharing on pollinators' needs, pollination services and intervention effectiveness, between scientists, conservation practitioners and NGOs, government departments and agencies, planners, seed producers, landscape architects, and agronomists. This includes disseminating research publications, findings and outreach materials between the PMRP and PASG, and with wider delivery partners and with a view to reviewing progress and the need to update the evidence base towards completion of the NPS Action Plan 2021 to 2024.	PMRP	The academic community, Defra, Natural England, CFE and wider stakeholders	Yes	Yes	Yes
Facilitate access to published studies and reports to enhance stakeholder knowledge on key pollinator topics, and where possible provide short summaries of evidence on critical or emerging issues for PASG members and other organisations.	PMRP and PASG, academics and other experts	Defra	Yes	Yes	Yes

Table 7: Pesticides and Integrated Pest Management (IPM)

Pesticides and Integrated Pest Management (IPM)	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Keep ongoing research on Integrated Pest Management (IPM) under active review and continue to review and update guidance on IPM and the safe use of pesticides. Work with industry bodies on the development of guidance which promotes the use of integrated approaches to control pests, weeds and diseases, including practical advice on supporting pollinators.	Defra, the Health and Safety Executive (HSE) and industry partners	Pesticides Forum, NFU and CFE (and Voluntary Initiative) PAN UK, The Nature Friendly Farming Network (NFFN, Soil Association and PASG	Yes	Yes	Yes
Publish the revised National Action Plan for the Sustainable Use of Pesticides (NAP).	Defra		Yes	Yes	No
Improve indicators for exposure to, and adverse effects of, pesticides on pollinators linking this to measures of potential environmental pressure from pesticides through the development of a UK Pesticide Load Indicator.	Defra		Yes	Yes	Yes
Develop understanding of the potential impacts of novel, emerging and re-emerging (for example, pyrethroids) agrochemicals on pollinators, and how these can be assessed within the framework of risk assessment prior to their approval for use. For example, through the 'PoshBee' project.	Defra, PASG and PoshBee partners		Yes	No	No

Pesticides and Integrated Pest Management (IPM)	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Take steps to help monitor the impact of restrictions of neonicotinoid and other pesticides on pollinators, for example through the National Honey Monitoring Scheme or the Pesticide Load Indicator (in development).	Defra and PASG		Yes	No	No

Managing our land – more, better and joined-up habitat; recovered species

Our commitments:

- we will work with farmers and other land managers and growers - through existing and new agri-environment and land management schemes and voluntary initiatives - to provide food, shelter, nesting sites and breeding habitats, from plot, to whole farm to landscape scale approaches
- we will work with landowners and their advisers, contractors and facility managers to promote changes to land management to provide food, shelter, nesting sites and breeding habitats
- we will work to minimise risks to pollinators associated with pesticides and other chemicals use through best practice, including Integrated Pest Management (IPM) and other support for agroecological practices
- we will ensure that actions and advice highlight and support the importance of permanent (long-term) priority habitat as well as temporary habitats (such as wildflower options in arable habitats) and considers the impacts of climate change
- we will promote and share good practice to help pollinators and support pollination services across rural and urban locations through engaging a wide range of organisations, professional networks and the public (see actions under Table 14: Engaging the public)

Table 8: Agri-environment schemes and other land management measures on farmland and other rural habitats

Agri-environment schemes and other land management measures on farmland and other rural habitats	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Continue to promote and target action for pollinators through Countryside Stewardship, including the Wild Pollinator and Farm Wildlife Package and Organic farm payments.	Defra and Natural England	CFE and BBCT	Yes	Yes	Yes
Advise on the design of new environmental land management schemes so that they help to meet our objectives for pollinators and pollination services. This will include: • reviewing existing agri-environment scheme measures and delivery for pollinators and pollination services, and considering new options and approaches • working with farmers, land managers, environmental experts and stakeholders to test and trial, or pilot new approaches, and investigate innovative funding mechanisms, for the delivery of outcomes for pollinators and pollination services • advising Defra and Natural England on other measures for incorporation in pilots and scheme roll-out, from on-farm to whole farm to landscape scale approaches, including agroforestry • promoting, through policy and delivery channels, the benefits for and of pollinators and pollination services within the new schemes, ahead of their full roll-out from 2024	Defra and Natural England	PASG NGOs, NFU and academic partners	Yes	Yes	Yes

Agri-environment schemes and other land management measures on farmland and other rural habitats	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Promote and facilitate landscape scale pollinator conservation through guidance, partnership and support to inform and deliver other projects, measures and initiatives such as the Nature Recovery Network (NRN) and Local Nature Recovery Strategies. For example, by: • joining the NRN Delivery Partnership • applying lessons and tools through projects such as Buglife's B-Lines, the Wildlife Trusts' Living Landscapes, BBCT's West Country Buzz, GWCT's Farmer clusters, Plantlife's Making Meadows and CFE's Pollinator Hub • highlighting the importance of trees (including hedgerow trees) to pollinators for food, nesting resources, breeding habitat and sheltered micro-climates • developing and implementing a programme of pollinator events on farms, supported by promotional and communication activities, including with farming Bees' Needs Champions and Bees' Needs website information • other incentives and support, such as the Green Recovery Challenge Fund	NE, Defra, Buglife, CFE, The Wildlife Trusts, BBCT, GWCT, Plantlife, NFFN and RBG Kew	Other NGOs and partners	Yes	Yes	Yes

Agri-environment schemes and other land management measures on farmland and other rural habitats	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Secure commitments from farmers and farm advisers to support management for pollinators and pollination services through workshops, advice provision and online resources, including through: • the Bees' Needs website and messaging • CFE Pollinator Hub • Soil Association's FAB Farmers, Field Labs, SA Exchange • Hedgelinks website • existing and future government land management schemes • consider the benefits of wider collaboration or coordination of engagement between farming groups to help secure commitments and monitor progress against them.	CFE and Natural England	CFE partners (for example, the NFU, CLA, TFA, AIC, GWCT, LEAF), Soil Association, Wildlife Trusts, BFA, BBCT, University of Reading, Defra and NFFN	Yes	Yes	Yes
Continue to offer discounted pollen and nectar mixes for farmers.	CFE	CFE partners	Yes	No	No

Table 9: Land management measures for other land managers and landowners, at different management scales and including urban locations

Land management measures for other land managers and landowners, at different management scales and including urban locations	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Continue to deliver a programme of improvements to protected sites, including management actions to support rare or threatened pollinator species and habitats supporting pollinators.	Defra and Natural England	None	Yes	Yes	Yes
Work with government departments and agencies to promote and deliver action for pollinators on the public estate, including through their Nature Recovery Plans in the 2021 to 2025 Greening Government Commitments.	Defra	Other government departments and bodies	Yes	Yes	Yes
Encourage and support other major landowners and managers, including county farm managers, public authorities outside central government, parliamentary groups and other bodies, to take action and agree plans and objectives for pollinators.	Defra, ALGE and the Royal Parks	Local and public authorities	Yes	Yes	Yes
Identify options for integrating action for pollinators in the planning process, for example through Planning Practice Guidance, other guidance on Local Nature Recovery Strategies, Biodiversity Net Gain and through the Green Infrastructure Framework, the Green Flag Awards and standards or certifications such as BREEAM.	Defra	DLUHC and ALGE	Yes	Yes	Yes

Land management measures for other land managers and landowners, at different management scales and including urban locations	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Provide guidance to landowners and managers, builders and planners on pollinator-relevant measures in urban green infrastructure approaches and standards, including on the value of trees, woodland or hedgerows, encouraging the use of, or ensuring availability of, high-quality native origin wildflower seeds or considering the impacts and usage of artificial light.	Defra and Natural England	DLUHC, ALGE, University of Reading, RBG Kew, Northumbria University and Butterfly Conservation	Yes	Yes	Yes
Encourage management and commitments for pollinators and biodiversity on road verge, railway infrastructure, brownfield and other amenity spaces, including supporting the adoption and promotion of 'best practice' guidelines (for example, Plantlife's 'Managing Grassland Road Verges', Butterfly Conservation's 'Building Sites for Butterflies').	Defra, Plantlife, Natural England, ALGE and Butterfly Conservation	Government departments, Highways England, Network Rail and Natural England	Yes	Yes	Yes
Encourage and support wider action for pollinators in urban areas (for example, on school grounds, as well as allotment holders and private landowners, including gardeners - see 'Engaging People' for further information and actions).	Defra and PASG	Learning through Landscapes	Yes	Yes	Yes

Table 10: Land management measures and species-specific actions

Land management measures and species-specific actions	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Identify and develop an approach to raise awareness and engage relevant actors to support pollinator species that are at risk of extinction.	Defra and Natural England	PASG	Yes	No	No
Continue to deliver action under the Shrill Carder Bee Conservation Strategy (England and Wales) 2020 to 2030 and inform PASG of any learning to apply to action for other relevant pollinator species.	BBCT	Natural England, BWARS, Buglife, RSPB and NRW	Yes	Yes	Yes
Develop locally relevant advice and action, supporting common and generalist, and rare and specialist species, including through broader seed mixes to benefit more species and encourage species diversity.	PASG		Yes	Yes	Yes

Table 11: Pesticides and Integrated Pest Management (IPM)

For research and monitoring actions, see 'Pesticides and Integrated Pest Management (IPM)' under 'Strengthening the Evidence Base'

Pesticides and Integrated Pest Management (IPM)	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Review and update current information on Integrated Pest Management (IPM), and ensure its effective distribution to farmers, growers, foresters and advisers to support them to implement IPM, for example: • on-farm demonstrations, farm walks and on-farm workshops • schemes such as BASIS, NRoSO and farm assurance schemes • the development of new environmental land management schemes and related guidance	Defra	NFU, CFE, other Voluntary Initiative partners, NFFN and Soil Association	Yes	Yes	Yes
Work with stakeholders, including local authorities, to: 1. support the development of guidance on the use of pesticides by amenity managers, including IPM and sustainable approaches for weed control which consider pollinators. 2. explore ways to maximise uptake of IPM by amenity users	Defra and HSE	Amenity Forum, ALGE and DLUHC	Yes	Yes	Yes
Work with stakeholders who represent or interact with amateur users to maximise the use of alternatives to pesticides or lower-risk products.	Defra	BBKA	Yes	Yes	Yes

Pesticides and Integrated Pest Management (IPM)	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Continue to support the existing prohibition on the outdoor use of 3 neonicotinoid pesticides (clothianidin, imidacloprid and thiamethoxam) whilst being able to consider applications for emergency authorisations in special circumstances on a case-by-case basis (in accordance with the relevant legislation). This will be scrutinised by the UK Expert Committee on Pesticides and taking full account of the scientific evidence and the need to avoid unacceptable risks to pollinators.	Defra	The UK Expert Committee on Pesticides (ECP) and HSE	Yes	Yes	Yes

Pollinator health

Pollinator health is a function of threats, such as pests, parasites, disease, and other anthropogenic stressors; and the availability, or not, of a pollinator's environmental requirements, such as appropriate nutrition across life-stages, nest-sites, hostplants, mating areas, and hibernation sites.

The health of managed honey bees and of wild pollinators is important. As the focus of the Healthy Bees Plan 2030 is on managing and supporting the health of managed honey bees, this section of the NPS considers overall pollinator health, including how honey bees contribute to this, and the key drivers of wild pollinator health.

Our commitments:

- we will continue to support action to sustain honey bee health through the implementation of the Healthy Bees Plan 2030, including to address pest and disease risks to managed bees whilst further improving beekeepers' husbandry and management practices to strengthen the resilience of managed bee colonies
- we will keep under active review any evidence of pest and disease risks associated with commercially produced pollinators for crop production
- we will work to improve the evidence of pests and diseases affecting wild pollinator species, and the extent to which pests and diseases are transmitted between managed and wild pollinators
- we will use this work to inform our 'Managing our land' actions, to support landscapes that supply the nutritional needs of pollinators, as well as nesting, mating, and over-wintering sites for wild pollinators

Table 12: Pollinator health

Pollinator health	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Support the implementation of the Healthy Bees Plan 2030, in order to support both managed honey bee and wild pollinator health. Continuing to assist beekeepers and improve husbandry skills to identify, control and manage pest and disease risks and occurrence. This includes providing hive-side training and training courses, and through, the Disease Accreditation Scheme (DASH) for Honeybees operated by the National Bee Unit (NBU) and the BFA in partnership with the NBU and beekeeping associations.	NBU	Defra, BFA, BBKA, Beekeepers, other Bee Health Advisory Forum and academic partners	Yes	Yes	Yes
Act on lessons learned to improve capability to deal with future pest and disease outbreaks.	NBU and Defra	BFA and BBKA	Yes	Yes	Yes
Continue to monitor the evidence for, and any impacts of, pest and disease risks to wild pollinators from managed honey bees, for example through RHUL's Safeguard project, which will explicitly assess current risks of spillover from managed honey bees to wild pollinators.	Royal Holloway University London (RHUL)		Yes	Yes	Yes
Continue to monitor the evidence for, and any impacts of, pest and disease risks associated with the trade and management of bumblebees, (in particular *Bombus terrestris audax* and buff-tailed bumblebee) and other commercially produced pollinators and identify follow-up actions as required.	PASG		Yes	Yes	Yes

Pollinator health	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Provide guidance to growers and beekeepers on the science around required managed pollinator stocking rates for specific crops, how you might evaluate pollination need and deficit risk and the adverse impacts and risks associated with introducing managed pollinators.	University of Cambridge and UEA		Yes	Yes	Yes
Encourage beekeepers to evaluate the local density of hives and forage availability, and presence of threatened wild pollinators, to determine the suitability of hive location in order to maximise honey bee health and to reduce risks of disease transfer and competition with wild pollinators. For example, through the beekeeper, fruit grower and University of Reading collaboration to develop a tool to optimise hive numbers and locations and health monitoring.	NBU and Defra	RBG Kew, University of Reading and BBKA	Yes	Yes	Yes
Evaluate flowering plants for specific benefits to pollinators including pollen and nectar nutritional quality, nutrient landscape mapping and floral metabolites that mitigate impacts of microbial antagonists to inform landscape management, conservation, and the development of more effective interventions to support pollinator health and diversity.	RBG Kew	Royal Holloway, Oxford and Leeds Universities	Yes	Yes	Yes

Engaging people

Our commitments:

- we will develop, collate and disseminate targeted advice and good practice examples to a range of landowners, managers, gardeners, professional networks and the wider public as part of the Bees' Needs campaign
- we will improve the sharing of knowledge and evidence between scientists, conservation practitioners, NGOs and Bees' Needs Champions to ensure actions to support pollinators are based on up-to-date evidence
- we will encourage the public to take action in gardens, balconies, window boxes and allotments to make them pollinator-friendly; support community gardening and other projects; and volunteer on nature reserves

Table 13: Understanding audiences

Understanding audiences	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Explore options for, and agree actions on, conducting or collating existing behavioural science and audience analysis for Bees' Needs campaign and wider pollinator engagement, to increase the relevance and specificity of pollinator messaging.	Defra and PASG		Yes	Yes	Yes

Table 44: Engaging the public

For engaging farmers and landowners, see 'Agri-environment schemes and other land management measures on farmland and other rural habitats' under 'Manage our Land'

Engaging the public	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Develop and deliver an ambitious communications plan led by a sub-group of PASG and with input from relevant Defra policy and communications teams. The plan will coordinate targeted events and associated opportunities including during Bees' Needs Week, to promote positive steps that people and communities everywhere can take for pollinators year-round and identify opportunities to engage the public through wider pollinator-relevant policies.	Defra and PASG		Yes	Yes	Yes

Engaging the public	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Disseminate regular, up-to-date advice through a Bees' Needs website, to encourage action across the country. This includes the promotion of: • the '5 Simple Actions' for everyone to take, alongside advice on planting a range of flowers and other plants in gardens, balconies or window boxes to provide nectar, pollen, shelter and nest sites and other specific advice and guidance • citizen science initiatives (for example, PoMS) • case studies of exemplary action from Bees' Needs Champions and other projects • partners' and other local best practice and engagement expertise • regular content from recent research findings, with clear summaries of what this means for UK pollinators, practitioners and the public • spatially prioritised advice to landowners	Defra	PASG	Yes	Yes	Yes
Promote the new PoMS website and app to encourage participation in FIT counts.	UKCEH and PoMS partners	PASG and Learning through Landscapes	Yes	Yes	Yes

Engaging the public	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Improve the targeting of communications specific to audiences, to reach people, communities, institutions and all land managers through the Bees' Needs website and a wider range of channels. Such channels could include traditional and social media, non-governmental organisations, retailers, government and agencies, planners, seed producers, landscape architects, and agronomists, from those wanting to act but feeling uncertain, to those already leading on best practice.	Defra	PASG	Yes	Yes	Yes
Increase local and locally relevant outreach work with communities to support pollinators through events, online communications, Bees' Needs Champions networks of best practice and other approaches.	Defra and PASG	Green Flag, DLUHC, DCMS	Yes	Yes	Yes
Increase public engagement on pollinators and pollination services through, or linked to, other policy areas and themes, for example: • health, wellbeing, education and outdoor learning as part of Defra's approach under the 25 Year Environment Plan • the Nature Recovery Network and Local Nature Recovery Strategies • new environmental land management schemes • other government engagement	Defra	PASG, DLUHC and DCMS	Yes	Yes	Yes
Widen the diversity of audiences engaging in Bees' Needs messaging or other public campaigns. Take steps to engage with less well represented groups (such as, socio-economic, race, age).	Defra and PASG	Learning through Landscapes	Yes	Yes	Yes

Engaging the public	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Measure numbers and demographics of people and organisations accessing and acting on Bees' Needs website content and campaigns (for example, through analysis of social media or by use of a pledge system) to help ensure that engagement increases and diversifies year on year. This would also ensure that nationwide action is documented from schools, local authorities, community groups and other organisations, from every county.	Defra and PASG		Yes	Yes	Yes
Provide clear messaging for growers, beekeepers and the public, on differences between managed bees and wild pollinators (including potential for conflict).	Defra and PASG		Yes	Yes	Yes
Use and coordinate the PASG's expertise and experience to provide advice and guidance to wider organisations and industry and consider approaching other advocates and audiences to spread consistent messages.	Defra and PASG		Yes	Yes	Yes
Work with growers and retailers to raise awareness, trust and to maximise the use of alternatives to pesticides (for example, via 'pollinator-friendly' plant labelling such as RHS Plants for Pollinators, by regularly reviewing pollinator plant lists to ensure they are of benefit to pollinators).	Defra and RHS		Yes	Yes	Yes

Table 5 Celebrating success and promoting good practice

Celebrating success and promoting good practice	Lead	Partners	2021 to 2022	2022 to 2023	2023 to 2024
Deliver an annual programme of Bees' Needs Champions Awards to celebrate pollinator-friendly practices by a wide range of landowners and managers (including farmers, forestry or woodland owners, local authorities, developers, businesses, community groups, schools and gardeners), partnering with initiatives and award programmes in wider sectors.	Defra	Green Flag Awards, CFE, NFFN and PASG	Yes	Yes	Yes
Promote and support wider, ambitious action across sectors by working with the Bees' Needs Champions award winners as a networks of best practice, (for example, local authorities, community groups, schools, universities, farmers, beekeepers and bee farmers), using, for example: • online and social media messaging, advice, case studies and newsletters • facilitation and training events during Bees' Needs Week, and other PASG member events • online knowledge exchange and promotion of best practice by the Bees' Needs Champions	Defra and PASG	Green Flag Awards, CFE, NFFN and education bodies or programmes	Yes	Yes	Yes