UNEP

CBD

Convention on Biological Diversity

Distr.
GENERAL

CBD/SBSTTA/22/INF/19
30 June 2018

ENGLISH ONLY

SUBSIDIARY BODY ON SCIENTIFIC,
TECHNICAL AND TECHNOLOGICAL ADVICE
Twenty-second meeting
Montreal, Canada, 2-7 July 2018
Item 11 of the provisional agenda*

RELEVANT INITIATIVES AND ACTIVITIES TO PROMOTE THE CONSERVATION AND SUSTAINABLE USE OF POLLINATORS

*Note by the Executive Secretary***

I. INTRODUCTION

1. The present report is presented in response to decision XIII/1,5 paragraph 11, in which the Conference of the Parties to the Convention on Biological Diversity invited Parties, other Governments and relevant organizations to provide the Executive Secretary with information on relevant national initiatives and activities to promote the conservation and sustainable use of pollinators and requested the Executive Secretary, subject to the availability of resources, to compile this information, including information in the national reports, for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting held prior to the fourteenth meeting of the Conference of the Parties.

2. Pursuant to this request, the Executive Secretary issued notifications No. 2017-030 and notification No. 2017-055, which extended the deadline of notification No. 2017-030, requesting information on relevant national initiatives and activities to promote the conservation and sustainable use of pollinators.

3. Submissions were received in response to this notification from Austria, Belgium, Brazil, Canada, Colombia, England, European Union, Finland, France, Germany, Ireland, Israel, Japan, Mexico, Northern Ireland, Norway, Philippines, Scotland, Singapore, Sweden, United Kingdom; other Governments; the Secretariat of the Basel, Rotterdam and Stockholm Conventions and the Food and Agriculture Organization of the United Nations.

4. Section II of this document presents a brief analysis of the latest national reports and national biodiversity strategies and action plans regarding the actions toward the pollinators and pollination services. Section III provides the actions and activities reported in response to the notifications mentioned above. Section IV describes some of the national and regional initiatives for the conservation and sustainable use of pollinators reported to the Secretariat of the Convention ob Biological Diversity.

II. NATIONAL REPORTS AND NATIONAL BIODIVERSITY STRATEGIES AND ACTION PLANS

5. An analysis of national biodiversity strategies and action plans shows that about 30 per cent of them include actions related to the sustainable use and conservation of pollinators. Submissions provided

* CBD/SBSTTA/22/1.

** Issued without editing.

by Parties and observers provide further information on relevant national initiatives and activities to promote the conservation and sustainable use of pollinators. However, only 17 per cent of national reports give information on the implementation of measures related to pollinators and pollination.1 Therefore, the analysis suggests that, even though several actions, including national plans of action on the pollinator initiative, have been implemented at the regional, national, subnational and local levels, they are underreported in many national reports.

III. ONGOING ACTIVITIES FOR THE CONSERVATION AND SUSTAINABLE USE OF POLLINATORS

6. A range of national initiatives concerning the conservation of pollinators are currently ongoing. Many of these initiatives took into consideration the recommendations by the International Initiative for the Conservation and Sustainable Use of Pollinators[2].

7. In a number of cases, measures to protect and promote the conservation and sustainable use of pollinators include activities initiated under both the ministries of environment and the ministries of agriculture.

8. Overall, it is well recognized in the strategies, reports, and submissions, that animal pollinators are an important element in supporting agriculture and food production sectors, and consequently, pollination service is key for economic development. The cost of replacing pollination services provided by biodiversity by artificial means (e.g. robots, human hand pollination or pollen dusting) can be substantially higher and areas beyond agriculture may not be covered.

9. It is also well recognized by Parties that pollinators play a key role in ecosystems more broadly. Wild pollinators support native flora, which provides food and shelter for wild animals, including many insects that are natural enemies of crop pests. Some species contribute to pollination of native plants; Butterfly orchids, for example, are only pollinated by night flying moths. Some submissions also highlighted the value of pollinators and their habitats in urban areas.

10. Pollinators play an essential role in supporting wild flora. Pollinators also provide an essential ecosystem service to the economy. 5-8 % of current global crop production, with an annual market value of $235 billion-$577 billion 3, is directly attributed to pollinators. In the EU an estimated €15 billion of annual agricultural output is directly attributed to pollinators 4. The continuing decline in populations of pollinators affects rural livelihoods, food security and nature conservation 5. In the EU, many insect pollinator populations are in decline. This can be caused by changing environmental conditions such as habitat loss, climate change, invasive species and pesticide use.

11. Additionally, a range of other measures undertaken by various stakeholders was reported, such as support to research, monitoring and assessment of pollinator species as well as pollinator-dependent plants; promotion of awards, guidelines, publications and best practices; development of legal and economic instruments to safeguard pollinators and vulnerable habitats; measures to integrate pollinators considerations across sectors (transportation, agriculture, environment, health, defence); review of pesticide regulations; review of wild bee management and transportation regulations; actions to protect endangered species; awareness-raising campaigns; investment in capacity-building and extension services; incentives and grant schemes for the agricultural sectors to benefit pollinators; and development of projects with farmers, beekeepers (including meliponiculture) and other stakeholders.

---

1 For the purpose of this analysis, the words “bee”, “pollination”, “pollinator” and “pesticide” were applied.

2 Decision V/5: The Conference of the Parties decided to establish an International Initiative for the Conservation and Sustainable Use of Pollinators

3 IPBES Thematic assessment of Pollinators, Pollination and Food Production http://www.ipbes.net/sites/default/files/downloads/pdf/SPM_Deliverable_3a_Pollination.pdf

4 N. Gallai et al. Economic valuation of the vulnerability of world agriculture confronted with pollinator decline. Ecol. Econ., 68 (2009)

5 FP7 project STEP (Status and Trends of European Pollinators)

12. The Basel, Rotterdam and Stockholm Conventions reported that the Rotterdam Convention had identified 34 pesticides of the 50 chemicals listed as hazardous. The Convention also promotes the use of less hazardous alternatives in order to protect human and the environment, including pollinators. The Stockholm Convention lists 28 chemicals as persistent pollutants, of which 17 have pesticide use. During the review of endosulfan, the Review Committee carefully examined the impact on pollinator management. It was concluded that bee toxicity should be considered when assessing the safety alternatives to endosulfan, which is currently listed in annex A to the Stockholm Convention, for elimination.[6]

13. FAO reported on the results of the Global Pollination Project (2009-2015) implemented by the Global Environment Facility, the United Nations Environment Programme and FAO. The project generated a framework of knowledge developed with seven countries (Brazil, Ghana, India, Kenya, Nepal, Pakistan and South Africa). A wide range of tools and guidance documents were prepared, such as economic valuation of pollination services; determining the risks that pesticides pose to wild bees; detecting and evaluating pollination deficits in crops; and the socioeconomic evaluation of pollinator-friendly practices and monitoring pollinator communities.[7]

14. FAO also supported a Latin American regional project entitled "Management Plan of the Environmental Pollination Service for the Sustainable Development of Production and Strengthening of Food Security" (October 2015–July 2017) with the objectives of collecting and disseminating information on the status and agricultural importance of pollinator populations and of promoting sustainable practices of preservation, restoration, mitigation and conservation at both the government and production levels. The Regional Platform on Pollination Service for Sustainable Agriculture was established, and FAO is facilitating its implementation.

15. Since 2010, FAO has hosted the TECA[8] Beekeeping Exchange Group, a thematic discussion group on beekeeping created in collaboration with the International Federation of Beekeepers' Associations (APIMONDIA) in response to increasing demand for a central and reliable collection point for validated beekeeping techniques and technologies. TECA holds over 100 practices and technologies that relate to and can benefit pollinatorsm such as integrated pest management, agroforestry, related pollinator-friendly practices, production of bees, and beekeeping.

16. Furthermore, at its 16th Regular Session, held in January 2017, the Commission on Genetic Resources for Food and Agriculture requested FAO to consider including domesticated honeybees, and potentially other pollinators, in the Domestic Animal Diversity Information System (DAD-IS).[9] In preparation for the necessary modifications to DAD-IS, FAO undertook a survey of member countries to gather information about pollinator species and their management, including routine monitoring of population sizes and genetic diversity. More than 250 responses were received from more than 90 countries. Apis mellifera was the most commonly reported honeybee species. A majority of responding countries routinely collect data on honeybee populations, but only a minority collect data on other pollinators. Honeybee population numbers were reported as increasing in most countries, whereas populations of other pollinators were generally believed to be declining. The Varroa destructor mite was cited as the most significant threat to honeybees, and landscape fragmentation was considered the most significant threat to other pollinators. Pesticide usage was the reported as the second most significant threat for both pollinator groups.

17. The actions reported by Parties and other stakeholders will be organized by the elements of the first Plan of Action for the International Initiative for the Conservation and Sustainable Use of pollinators,

---

6 The Conference of the Parties adopted decision SC-5/4 on the work programme on endosulfan, recognizing that suitable, cost-effective and safe alternatives need to be identified to facilitate the replacement of the use of endosulfan and noting the respective capabilities of developed and developing countries.

7 See also CBD/SBSTTA/20/9.

8 TECA - Technologies and Practices for small agricultural producers, is the FAO online platform for the exchange of agricultural knowledge and information for smallholder farmers. http://teca.fao.org/group/beekeeping-exchange-group

9 CGRFA-16/17/Report/Rev.1, para. 46.

as per Annex II of Decision VI/5. The following four elements are part of the Initiative: (i) assessment (provide a comprehensive analysis of status and trends of the world's pollinator diversity and of their underlying causes of its decline as well of local knowledge of its management), (ii) adaptive management (identify management practices, technologies and policies that promote the positive and mitigate the negative impacts of agriculture on pollinator diversity), (iii) capacity building (strengthen the capacities of farmers, indigenous and local communities, and their organizations and other stakeholders, to manage pollinator diversity so as to increase its benefits, and to promote awareness and responsible action), and (iv) mainstreaming (support the development of national plans or strategies for the conservation and sustainable use of pollinator diversity and to promote their mainstreaming and integration in sectoral and cross-sectoral plans and programmes). The national plans and strategies of the element mainstreaming will be presented in the session IV.

3.1 Assessment

18. Singapore has addressed local and regional taxonomic impediment of pollinators by improving expertise in pollinator identification within Singapore and the region and determining key pollinator species for fruit crops and native wild plants. Conservation of important pollinator groups is also crucial in ensuring the reproductive success and population viability of threatened native wild plants – particularly those that are pollinator limited or pollinator specific. Research is thus being undertaken to determine such key pollinators in Singapore's rainforests and mangrove habitats.

19. The Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan has carried out recent research projects to: (i) evaluate wild insects contributing to pollination; (ii) develop technologies which help to improve harvest and crop quality thorough effective vegetation management near farms to attract/ retain pollinators; and (iii) develop technologies which enable the use of new pollinator species.

20. In Canada, a large amount of information was gathered under the umbrella of the Strategic Network Grant on Pollinators (NSERC-CANPOLIN) during its 5 year duration (2007-2013).[10] One particularly useful result is the e-book "Pollination Nation" by Dr. Sarah Bates. The conservation status of all Canadian bee species (more than 800) and other pollinators been assessed and published in Wild Species: The General Status of Species in Canada (2015)[11]. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the status of wild species, subspecies, varieties and other important units of biological diversity considered to be at risk in Canada.

21. Mexico reported the digitalisation of the entomologic collection of bees from the south border. CONABIO implemented two projects related to bees: "Computarización de abejas de la colección entomológica de la Frontera Sur", in which 12,188 samples of bees were collected between 2003 y 2006 and the information stored in a database[12]; and "Diversidad de abejas (Hymenoptera: Apoidea) de la Reserva de la Biosfera El Triunfo, Chiapas" in which the bees Hymenoptera: Apoidea from the Biosphere reserve of El Triunfo and the most common plants used in meliponiculture were catalogued.[13] Mexico has developed a list of endangered species "Lista de Especies en Riesgo" (NOM-059-SEMARNAT-2010) which includes about 61 native pollinators from distinc groups (birds, mamals and invertebrates). There are some relevant ongoing projects: (i) to evaluate the status of 16 native bees (distribution, genetic diversity and pathogens); (ii) to generate informacion about the management of native bees and their relationship with the landscape in Atzalan, Veracruz to support the meliponiculture and to promote conservation actitivies; (iii) to describe the diversity, distribution and local knowledge about the native bees and its management in Oaxaca.

22. Some examples of the European Commission assessment efforts:

10 The productivity of that interdisciplinary network is documented on www.uoguelph.ca/canpolin.

11 www.wildspecies.ca

12 http://www.conabio.gob.mx/institucion/proyectos/resultados/InfHA027.pdf

13 http://www.conabio.gob.mx/institucion/proyectos/resultados/InfBK063.pdf

- Assess the status of bees[14], published in spring 2015 as the European Red List of Bees[15]. This assessment of all bee species in Europe (almost 2,000) has shown that that 9.2% of them are threatened with extinction. However for more than half of the species (56.7%) there was not enough data to evaluate the risk of extinction. The report provides also an assessment of the main threats to bees as well as policy recommendations to strengthen the long-term conservation of European pollinators.
- In 2010 the European Red List of butterflies was published[16]. The Joint Research Centre of the European Commission JRC is also working on pollinators and pollination.
- EU wide assessment on wild pollinators such as bumblebees and solitary bees and crops pollination[17].
- EU wide bumblebee species distribution maps. Case studies on mapping pollinator habitats in cities.
- Expert contribution to a scientific opinion of the European Food Safety Agency on the health of honey bee colonies. The existing data is not sufficient to clearly understand reasons of the pollinator populations decline. This is why EU has been supporting various research projects on bee health, including research project on pollinators. The EU supports research on pollinators through its funding instruments, in particular the Framework Programme for Research and Innovation and LIFE, the EU's funding instrument for the environment and climate action. Projects supported thereunder look to contribute to better understanding of the status and threats of European pollinators, including in urban areas, as well as better understanding of pollination service they deliver. Examples of the recently ended projects: Status and Trends of European Pollinators (STEP)[18] ; Plant-Pollinator Integrated CONservation approach: a demonstrative proposal (PP-ICON)[19], URBANbees[20]; SUPER-B[21], This COST Action[22] provides a pan-European network on sustainable pollination in Europe - joint research on bees and other pollinators. It brings together scientific and societal communities involved in the conservation and sustainable management of ecosystem services mediated by pollinators. Specifically the action will (1) identify the role of insect pollination in agriculture and other ecosystems; (2) clarify best practices for mitigation of pollination loss, and (3) compare and contrast important drivers of pollinator loss (wild and managed species).

23. European Commision: Mapping and assessment of ecosystems and their services, including valuation of some services and integration into accounting systems: Pilot assessment of wild pollinators, of the habitats on which they depend and the pollination service they provide, including some pilot accounts are currently under development and will be available for the whole EU by the end of 2019. The Joint Research Centre is currently working on the monetary valuation of pollination as an ecosystem service (in the framework of KIP INCA, a project with ESTAT, ENV, RTD and the environment agency on developing natural capital accounts for Europe). Results will be available in the course of 2017.

14 http://ec.europa.eu/environment/nature/conservation/species/redlist/process/methods/bees.htm

15 http://ec.europa.eu/environment/nature/conservation/species/redlist/downloads/European_bees.pdf

16 More information http://ec.europa.eu/environment/nature/conservation/species/redlist/downloads/European_butterflies.pdf.

17 http://www.mdpi.com/2073-445X/2/3/472

18 http://www.step-project.net/

19 http://www.pp-icon.eu

20 http://www.urbanbees.eu/

21 More information http://www.superb-project.eu/

22 European cooperation in science and technology http://www.cost.eu/

24. Germany reported that to implement the objectives of the Coalition, the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) is going to carry out a comprehensive analysis of the status and trends of pollinators and their habitats in Germany. In the Federal Ministry of Food and Agriculture departmental research, the Julius Kühn Institute (Institute for Bee Protection) and the Friedrich Loeffler Institute also work on topics that relate to honey bees, wild bees, bumble bees and other pollinators on agricultural land. Compared with wild insects, honey bees comprise only a small percentage of the many insect species that are of relevance for the pollination of plants.

25. The German Country Report in response to the First State of the World Report on Biodiversity for Food and Agriculture states that honey bees (Apis mellifera), bumble bees (Bombus terrestris), wild bees and flies as actively managed species for pollination in Germany. Alongside the honey yield, honey bees and pollinators in breeding enterprises are being actively managed for horticulture and vegetable growing greenhouse systems.

26. In order to intensify research and better dovetail research with corresponding efforts of the Land bee institutes, the BMEL also set up a new Institute for Bee Protection last year at the Julius Kühn Institute. The institute's task is to focus, in the context of honey bees and the wild pollinators, on issues of bee nutrition and investigate the potential impact of plant protection measures and biodiversity. The focus is on the agricultural ecosystems. At federal level, the National Reference Laboratory for Bee Disease at the Friedrich Loeffler Institute (FLI) is another contact and also acts as the contact point for the occurrence of bee disease at international level. Another of the Friedrich-Loeffler-Institut activities is the cryo-conservation of bee semen for the German Gene Bank for Animal Genetic Resources.

27. France reported on the French Assessment of Ecosystems and Ecosystem Services (EFESE) and other research and knowledge initiatives that are contributing to raise awareness about the importance of pollinator protection.

28. The Austrian Ministry of Agriculture, Forestry, Environment and Water Management promotes and finances diverse projects which are concerned with the topics bees, bee health, bee pastures and breed. Examples: Investigations on the occurrence of bee losses in Austrian maize and rapeseed areas of cultivation and possible connections with bee diseases and the use of plant protection products (acronym: MELISSA)[23]; Monitoring program to verify the actual exposure of honeybees to the plant protection products Clothianidin, Thiamethoxam, Fipronil und Imidacloprid (acronym: CIFT-HOBIENEXPO)[24]; Investigations to identify a potential exposure of honeybees to the active substances Clothianidin, Thiamethoxam, Imidacloprid und Fipronil under field conditions (acronym: Bienexpo 13).[25]; Bee health and exposure monitoring 2014-2016 in cases of suspicions of poisoning (project Zukunft Biene)[26]; Implementation project aiming at preservation of Apis Mellifera Mellifera (dark bee) The specific project to preserve Apis Mellifera Mellifera in Austria started in 2015. Dark bees are very well adapted to local climate and ecosystem conditions. During past decades the percentage of dark bees has been reduced to an amount of 1000 bee hives which represents just 1% of total population in Austria. Those populations are mainly found in the provinces of Salzburg and Tyrol.

29. Finland reported on the fifth assessment of threatened species in Finland (the Red List of Finnish Species) will be ready and published in 2019. Follow-up activities of the Coalition and ongoing EU-level and national work is coordinated by and dealt with in the Finnish National Biodiversity Committee and its subgroup on international biodiversity matters as well as the national IPBES panel[27].

---

23 https://www.dafne.at/dafne_plus_homepage/download.php?t=ProjectReportAttachment&k=2661

24https://www.ages.at/download/0/0/2acb00e8e0f7c6477a511b052482ab4985d771fb/fileadmin/AGES2015/Themen/Umwelt_Bilder/Bienen/Monitoringprojekt_Bienen_Abschlussbericht_2012.pdf

25 https://www.ages.at/fileadmin/_migrated/content_uploads/v1-Abschlussbericht_Bienenexposition-Ueberwachungsprogramm_2013__Bienexpo_13_.pdf

26 https://www.dafne.at/dafne_plus_homepage/download.php?t=ProjectReportAttachment&k=3869

27 www.ym.fi/en-US/Nature/Biodiversity/Strategy_and_action_plan_for_biodiversity

30. UK reported that in 2016, the four countries (England, Wales, North Ireland and Scotland) came together with the Centre for Ecology & Hydrology and a range of voluntary sector organisations to form the UK monitoring and research partnership. The project will run for two and a half years and has two main aims: to implement a monitoring programme that can assess how pollinator populations are changing in the UK and to develop and support externally-funded research applications to improve Society's understanding of the relationship between pollinators and pollination services, to quantify threats to pollinators and identify effective interventions to conserve pollinators. Data on the status and trends in pollinating insects will be used to update our UK biodiversity indicators, which support our reporting of progress to the Convention on Biological Diversity in 2018.

31. England reported on the Insect Pollinators Initiative, a £10 million joint initiative supported by the Biotechnology & Biological Sciences Research Council (BBSRC), the Department for Environment, Food & Rural Affairs (Defra), NERC, the Wellcome Trust and the Scottish Government, under the Living With Environmental Change (LWEC) partnership. It supported projects aimed at researching the causes and consequences of threats to insect pollinators and to inform the development of appropriate mitigation strategies to reverse the declines. Between 2014 and 2016, Defra, Welsh and Scottish Governments funded and published independent research that developed and tested a range of potential methods, analytical techniques and sampling strategies to provide a framework for implementing long-term monitoring of insect populations[28]. The final research report 'Design and Testing of a National Pollinator and Pollination Monitoring Framework' was published in May 2016. Defra is part of the UK Pollinator Monitoring and Research Partnership.

3.2 Adaptive Management

32. Singapore has also worked on the conservation and connectivity of pollinator habitats. The Nature Ways programme implemented by National Parks Board of Singapore (NParks) provides ecological connectivity for pollinators (bees, non-bee insects, bats and birds) by creating pollinator corridors. NParks also has tested and evaluated the effectiveness of various targeted conservation methods for pollinators applied in Singapore by using research to guide evidence-based pollinator conservation.

33. Japan has reported a series of policies related to pollinators and pollination. (i) In May 2006, the Japanese government introduced a regulation to prohibit, in principle, the sale of foods containing a certain level of pesticides whose residue limits are not set under the Food Sanitation Law (the so-called "Positive List System"). MAFF has developed and promoted the use of technologies that reduce pesticide drift, as well as agricultural practices that reduce exposure to pesticides. (ii) In an effort to reduce damage on honey bee colonies, MAFF issues an administrative guidance to prefectural governments every year to promote information-sharing between beekeepers and farmers who use pesticides and mitigation measures. On applying for registration of a new pesticide, manufacturers are obliged to print directions of its use on the label, formulated from the testing of impacts of the chemical on honey bees. (iii) In 2006, Bombus terrestris, which has been widely used in Japan for pollinating tomato plants, was designated as an "Invasive Alien Species" under the Invasive Alien Species Act. Since then, local farmers, in principle, have been prohibited from using Bombus terrestris for new pollination efforts, necessitating a conversion of pollinators from that species to native bumblebees. Since 2015, MAFF has been supporting demonstration of pollination technology that employs native bumblebees, in its apiculture revitalization program. The total number of native and alien bumblebees used for pollination in the Japanese agricultural sector has increased to 90,000 colonies in 2015 from 70,000 colonies in 2006. (iv) MAFF is carrying out its project focusing on developing the technology base for using wild insect pollinators in sustainable agriculture.[29] (v) MAFF established the "Integrated Pest Management (IPM) Practice Guidelines" in 2005 to avoid relying solely on chemical pesticides with the use of agrochemicals that

28 Design and Testing of a National Pollinator and Pollination Monitoring Framework.

29 The National Institute for Agro-Environmental Sciences, in its February 2016 paper "*Valuating Pollination Services for Agriculture in Japan*", reported that wild insect pollinators contribute to a large portion of pollination services in Japanese agriculture.

have minimal impact on insect pollinators, and the adoption/extension of an IPM system which incorporates either biopesticides (microbial/predatory pesticides) or cultural pest control.

34. Canada is actively working with key stakeholders as well as provincial agriculture and environment ministries to ensure agricultural practices across the country protect pollinators. Also, Canada is collaborating with other pesticide regulators internationally to refine pesticide risk assessment methods and data requirements so that the potential effects on bees are better understood and risks can be mitigated.

35. Brazil sent a list of policies toward the conservation and sustainable use of pollinators:

(a) Review of CONAMA Resolution n. 346/2004[30] (instituted to discipline the use of native wild bees). CONAMA is the abbreviation for National Council for the Environment, which deliberates on a subject, by stablishing rules and standards to be followed and complemented by Brazilian states. This means that daily fines may be applied to those who fail to comply with the CONAMA resolutions. In 2016, the dialogue with stakeholders involved in the use of native bees was initiated in order to improve existing regulatory requirements to better reconcile protection/conservation interests with those of use. Both productive sector and academics sent to MMA amendment proposals to the cited Resolution.

(b) Ministerial Order n. 444/2014[31] protects 1,173 threatened species. Among them, there are 85 bird species (potentially frugivorous, nectarivorous and omnivorous), 63 lepidopteran species, 29 beetle species, seven bat species and four bee species that can be considered pollinators.

(c) In 2012 the National Policy on Agroecology and Organic Production was established by the Federal Decree n. 7794. One of the instruments of this policy is the National Plan of Agroecology and Organic Production (PLANAPO). In the framework of PLANAPO, the replacement of conventional pesticides by low toxicity and biological inputs was proposed by the National Program for Reduction of Pesticide Use (PRONARA).

(d) Environment Reevaluation for Neonicotinoid Pesticides: The applications of pesticides containing imidacloprid, thiamethoxam, clothianidin or fipronil, regardless of the technology used, during the flowering season, have been prohibited, with some flexibilizations, since 201232. IBAMA prohibited, as a precautionary national measure[33], the aerial spraying[34] of pesticides containing the active ingredients imidacloprid, thiamethoxam, clothianidin or fipronil, separately or mixed with other active ingredients. Companies holding pesticide register also had a deadline to attach to the packages of the products additional leaflet or label with the following warning phrase: "This product is toxic to bees. The aerial spraying IS NOT ALLOWED. Do not apply this product during flowering season, neither immediately before the flourishing or when pollinators are visiting the crop. The non-compliance of these determinations constitutes an environmental crime, subject to penalties."

(e) In 2017 the Normative Instruction IBAMA n. 2 was published. It establishes guidelines, requirements and procedures for pesticide risk assessment for pollinator insects, using bees as indicator-organisms. The preparation of a manual to guide the application of the rule and the performance of training courses to explain the details for the stakeholders are also envisaged. These initial steps represent an important paradigm shift in the regulation of pesticide use in Brazil.

36. Israel reported on the (i) Financial support by the Ministry of Agriculture and Rural Development for cover crops introducing wild flowering species to vineyards and orchards; (ii) Financial support by the Ministry of Agriculture and Rural Development for regional Agro-Environmental projects

30 Federal Official Gazette n. 158, of 17th August 2014, section 1, page 70 – CONAMA Resolution n. 346, of 16th August 2004.

31 Federal Official Gazette n. 25, of 5th February 2014, section 1, pages 53-54 – MMA Order n. 43, of 31st January 2014.

32 Federal Official Gazette, of 4th January 2013, section 1, page 10 – MAPA Joint Normative Instruction n. 1;
Federal Official Gazette, of 5th December 2013, section 1, page 7 – MAPA Joint Normative Instruction n. 30;
Federal Official Gazette, of 10th April 2014, section 3, page 129 – IBAMA Statement n. 1.

33 Federal Official Gazette, of 19th July 2012, section 3, page 112 – IBAMA Statement.

34 'aerial spraying' means any application of pesticides by aircraft or helicopter.

bringing residents, farmers and local government to round table discussion focusing on specific problem solving. The projects target agro-environmental issues and relevant stakeholders regarding the main conflicts of the region; in many cases biodiversity is one of them. The 4-year long projects approved in 2012 included pesticides use reduction, sowing of local wild flowers species in citrus orchards – both between tree rows and on the margins, and restoration of nature remnants in the agricultural matrix. (iii) Med Fly Project – a major IPM project aimed at reducing pesticide use in citrus orchards[35]. (iv) A joint project of growing, planting and distributing nectariferous tree seedlings, between ARO (Agricultural Research Organization), KKL-JNF (Jewish National Fund) and Israel's Beekeepers Association.

37. Philipines reported on the Republic Act No. 9147 of 2001 (Conservation and protection of wildlife resources and their habitats, appropriating funds therefore and for other purposes) – this law is the fundamental legal framework of Philipines for the conservation, protection and sustainable use of all wildlife species, including pollinators. The implemenation of this law is being sperheaded by three agencies, namely: the Department of Environment and Natural Resources (for terrestrial species); the Departiment of Agriculture (for aquatic and marine resources); and the Palawan Council for Sustaimabnle Development (for all species found in the province of Palawan).

38. Also, the Republic Act No. 10068 (Organic Agriculture, 2010) – this law espuses the promotinm firther development and implementation of organic agriculture practices in the country aimed at enriching the fertility of the soil, increasing farm productivity, reducing pollution and destruction of the environment primaly by curbing pesticide use, and preventing the depletion of natural resources. The department of Agriculture is the primary agency responsible for the implementation of the Act. This includes responsabilities in the certification of organic farms, production of organic seeds; regulation on the use of biological control agents against pest infestation; capacity building and information dissemination initiatives.

39. Aditionally, the prohibition on the exportation of wild-caught specimens – this policy is published as CITES Notification No. 2010/038 at CITES website. DENR Administrative Order No. 2002-19 (Guidelines on the Trade and Captive-bred Butterfly Specimens) – Promotion of butterfly farming as a measure for sustainable use of butterfly species. Philipines has more than 24 butterfly breeders (as 2016) that allo the propagation of various indigenous/native species of butterflies on the country and the use of 90% of their captive-bred specimens for commercial trade purposes. The remaining 10% of their production are returned to the natural habitat. This system has been in place since 2002.

40. Colombia reported that the Ministry of Agriculture and Rural Development has implemented the "Cadena Productiva de las Abejas y la Apicultura en Colombia (CPAAC)[36]" as part of the law 811 of 2003 with the objective of having consultative bodies for the development of policies oriented towards the development of the competitiveness of the different agricultural sectors. CPAA is formed by distinct stakeholders (such as associations, organizations, cooperatives, public institutions, private sector) which activities are part of the supply chain of bee's products. The main objectives of the chain are: i) create, legalize and consolidate the organization of the CPAA according to the current regulations (Law 811 of 2003, Decree 3800 of 2006 and Resolution 000186 of June 2008); ii) formulate the baseline for the competitiveness of the CPAA, considering the items of productivity, financing and employment; iii) build the Strategic Plan of Action of the CPAA based on the nine aspects contemplated by Law 811 of 2003:

- Improvement of productivity and competitiveness
- Development of the market of goods and factors of the chain
- Decrease in transaction costs between the different agents in the chain
- Development of strategic alliances of different types

35 http://www.plants.org.il/uploadimages/The%20Mediterranean%20Fruit%20Fly%20-%20English%20version.pdf

36 Cadena Productiva de las Abejas y la Apicultura en Colombia (CPAAC) https://sites.google.com/site/cpaaabejascolombia/project-definition

- Improvement of information among the agents of the chain
- Linking small producers and entrepreneurs to the chain
- Management of natural resources and the environment
- Training of human resources
- Research and technological development

41. In 2016 Denmark launched the Beekeeping strategy (2016-2019). The strategy intends to help future-proof Danish beekeeping and pollination. Although the strategy's main focus aims at honey bees, the strategy recognizes that improved food bases for bees will benefit wild pollinators as well. The main headings of the strategy are initiatives which will ensure future protection of Danish beekeeping and pollination, education of the bee industry and beekeepers, communication and research. In addition the beekeeping strategy has laid the framework for the EU-supported national beekeeping program, which was published recently. Additionally, a project has been initiated with the purpose of developing a pollination portal to improve communication between stakeholders.

42. Denmark has implement 26 projects as part of the Nature Package specifically focusing on the improvement of habitats and the food base of wild pollinators. The projects were launched in 2016 with the purpose – of among other things – to plant wild herbs aiming at ensuring food for bees during the critical spring time, and the recreation of marshlands (Otterup mose) with the intention of landscaping for the benefits of flora and thus pollinators.

43. Denmark has a nationally funded grant scheme, which promotes the food base for pollinator has been established for landowners. The scheme set up a number of requirements such as 25% flowering plants and bushes, rules for flowering crops, wild stripes etc. when farmers found hedges and nature stripes. A national funded grand scheme, which provides grants for the conversion of agricultural land to organic production, and for maintaining the organic farming area. In Denmark organic production does not use synthetic pesticides, which leads to increased biodiversity on the cultivation surface and adjacent edge biotopes. Flower-pollinating insects like bees particularly benefit from the organic mode of operation without pesticides.

44. Denmark has an advisory board under Ministry of the Environment and Food provides advice to the minister on issues relating to the law, regulations and implementation of EU rules and other international obligations related to beekeeping. In addition the board provides advice on bee management, beekeeping and potential developments. The minister of Environment and Food appoints the chair of the board on the basis of nominations received from beekeeping organization, research institutions and from agricultural and environmental organization.

45. European Union has two general policy frameworks relevant for the conservation and sustainable use of pollinators: the EU Biodiversity Strategy to 2020[37] and the EU Nature Legislation, notably the EU Habitat Directive[38]. A number of wild pollinators are protected under the latter.

46. The EU also reported on the contribution of sectoral policies and mitigating threats to pollinators: The Life programme (the Financial Instrument for the Environment) can be used for benefits of wild bees. The reformed EU Common Agricultural Policy (CAP)[39] for the 2014-2020 period offers significant opportunities for supporting pollinators in agricultural landscapes. It is up to EU Member States to seize these and promote important habitats for pollinators, whether through obligatory greening measures like Ecological Focus Areas under Pillar I (direct aid an market measures) or programmable measures like agri-environment measures under Pillar 2 (rural development). Those have a potential to conserve species-rich grasslands and provide a mosaic of qualitative semi-natural areas in agricultural landscapes that would be able to support high pollinator diversity.

37 http://ec.europa.eu/environment/nature/biodiversity/strategy/index_en.htm

38 http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

39 https://ec.europa.eu/agriculture/cap-overview_en

47. Pesticides impact on bees: The EU has one of the strictest regulatory systems in the world concerning the approval of pesticides. The criteria for the approval of active substances include specific elements in relation to honeybees. In 2013 on the basis of an EFSA opinion and several scientific papers showing damage to bees and other natural pollinators, the EU laid down new data requirements for pesticide dossiers which further strengthen the authorisation process for plant protection products as regards bees. In 2013 the EU also restricted the use of 3 pesticides belonging to the neonicotinoids family (clothianidin, imidacloprid and thiametoxam) and fipronil for a period of 2 years. The ban is currently under review. The EU is also working on developing a guidance document with a view to enhance the risk assessment of plant protection products on bees.[40] JRC survey on changes in pest management strategies: In 2016 the JRC undertook a study to look at how farmers adapted to the restrictions through a survey of more than 800 farmers in 8 EU regions. This is in line with the Commission's earlier commitment to review the neonicotinoids ban only based on an eventual update of scientific information from EFSA on the toxicity of neonicotinoids. The JRC survey focused on documenting the pest management strategies of farmers before and after the ban (mainly documenting changes in pesticides used), and also in farmers perception of the economic impacts of the ban for their operations. The survey does not provide data on the environmental impacts of these behavioural changes. As such, it provided a snapshot of behavioural changes in the wake of the ban that may or may not be used as a basis for further research on economic and/or environmental impacts by other researchers. The survey results showed that farmers responded to the ban by changing to other pesticides and changing non-chemical aspects of their pest management strategies. The key survey results were presented on 11 January 2017.

48. In addition, there are a number of EU initiatives which target honey bees, which provide relevant information for wild pollinators as well: EPILOBEE(2012-2014) The EU commissioned a pan-European epidemiological study on honey bee colony losses (EPILOBEE 2012-2014). The objective of the two-year programme was to get a state of play of honey bee colony losses on a harmonised basis in 17 EU Member States, and some knowledge on the health of colonies.[41] ; MUST-B[42]This multi-annual project aims to develop a holistic approach to the risk assessment of multiple stressors in honeybees (MUST-B), with the ultimate goal of developing a software tool that can assess the combined threat posed to bee colonies in their natural environment by parasites, infectious agents, pesticides and other stressors.

49. The EU and its Member States welcomed the assessment on pollinators, pollination and food production prepared by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and to contribute to the better protection of pollinators and maintenance of their ecosystems, some of the European Member States (Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, Netherlands, Slovakia, Slovenia, Spain, United Kingdom) signed a Coalition of the Willing on Pollinators:[43]. This Coalition is accepted as a Cancun Commitment for enhanced implementation at CBD COP 13. A Secretariat is established coordinating the actions of the Coalition. There will be a meeting for members once a year and the coalition, as one of the Cancun commitments, plans to report back on the activities to the CBD. The coalition hopes to grow larger in the near future, and hopes to gain new partners on all continents and in all UN regions. Potential partners are actively being contacted

50. Germany reported that the Federal Ministry of Food and Agriculture (BMEL) has developed the "Strategy on Conservation and Sustainable Use of Biodiversity for Nutrition, Agriculture, Forestry and Fisheries"[44] aims to stop the decline in the diversity of pollinators.

---

40 More information https://ec.europa.eu/food/animals/live_animals/bees/pesticides_en

41 The study results are available at https://ec.europa.eu/food/animals/live_animals/bees/study_on_mortality_en

42 More information http://efsa4bees.efsa.europa.eu/must-b ;
More information https://ec.europa.eu/food/animals/live_animals/bees/health_en

43 More information can be found at www.promotepollinators.org.

44 https://genres.de/3/agrobiodiversity/regulatory-framework/

51. Also, the Federal Ministry of Food and Agriculture has taken the initiative to draw attention to the importance of bees and to improving their living conditions. Measures include our successful bee app, which aims to awaken people's interest in bees and to help any amateur gardener to create bee-friendly surroundings. The "German Bee Monitoring" project, which was launched in cooperation with the Laender in 2004, has furthermore provided important scientific groundwork, especially regarding the causes of recurrent bee losses during the winter season. This bee-monitoring project has in the meantime served as an example for the introduction of a corresponding pan-European monitoring system by the EU Commission.

52. Germany banned the treatment of seeds with neonicotinoids and the import of seeds treated with them. Since the treatment of seeds with neonicotinoids is allowed in other EU Member States, the BMEL organised an EU workshop in 2015 to provide information on, and discuss, the effect of neonicotinoids on bees. The BMEL also aims to promote the cultivation of bee-friendly plants in agriculture and believes that there are efficient measures available to achieve this worthwhile goal. The BMEL has, for example, developed a bee app for smartphones which provides comprehensive information on bee-keeping issues for interested members of the public. To flank this, the BMEL also launched the "Feed bees now" initiative in 2014. The initiative has drawn up a list of particularly bee-friendly plants. Hobby gardeners and plant-lovers receive tips on how they can enhance where they live and work and at the same time do something to keep bees healthy. The list of plants is available at no charge as a brochure and as an app with a lot of facts and figures on our bees.[45]

53. The effect of the "Feed bees now" initiative has been strengthened enormously by enlisting the help of important partners in cooperation with the Association of German Garden Centres (VDG), the Trade Association for DIY, Home Improvement and Gardening (BHB) and the Garden Industry Association, many garden centres and DIY stores have set up information desks for people who want to support bees. These partners provide information to customers at the point of sale. The joint statement is: "Everyone can and should help feed bees by buying and growing bee-friendly plants on their balconies and in their gardens!", as this helps make these pollinators robust and fit and reduces their susceptibility to infection with the varroa mite, which then also assists in significantly reducing the loss of bee colonies during the winter.

54. One of the BMEL's and the Federal Office for Agriculture and Food's (BLE) important tools for the conservation and sustainable use of pollinators, particularly honey bees, is the funding of R&D projects. To date, the BMEL and BLE have funded 22 R&D projects for pollinators (including the German bee monitoring project) with a total of approximately 15 million €. Payments for beekeepers in Germany under Reg. (EC) No. 1366/2015 amount to 1.65 million € in the current 3-year programme. To improve beekeepers' knowledge and training, the BMEL provides a range of information to professional and hobby beekeepers.

55. And last but not least, the BMEL also strives to mobilise more fellow campaigners at home and abroad in order to breathe life into the watchword of "Many actors - a single goal". To this end, three national bee conferences were held last year - in cooperation with the German Beekeepers Association (DIB) - to which stakeholders from politics, administration, agriculture, science, industry and of course the beekeeping sector were invited.

56. Furthermore, in late March 2017 - also in cooperation with the DIB - an international bee conference was held in Berlin. Approximately 500 participants from across the world took part, including national and international representatives of administrations, research, bee-keeping and agriculture - but also from international institutions such as the FAO, OIE and the EU Commission. Members of parliament from the German Bundestag were also involved in this event. Based on a joint analysis of the existing problems in the bee-keeping sector, particularly the pan-European problems, proposals for solutions and measures that were supported by all represented sectors were drawn up and recommended for implementation.

45 http://www.bmel.de/DE/Tier/Nutztierhaltung/Bienen/_texte/BienenApp.html

57. Germany is currently working, in respect of the post-2020 Common Agricultural Policy of the European Union, on developing our support instruments within the Joint Task for the Improvement of Agricultural Structures and Coastal Protection (GAK) in order, in respect of the measures aimed at making agriculture more ecologically sound that are being carried out under the GAK, to sharpen the focus of these measures on the protection of pollinators.

58. France launched in 2012 the project « agro-écologique pour la France et ses différents plans » to integrate the preservation of the environment and biodiversity into agriculture by reconciling economic performance and environmental performance made up of 10 national plans. In particular :

• The sustainable development plan for beekeeping, launched in February 2013 and extended in January 2016, aims to meet the multiple challenges of setting up a sustainable French beekeeping. Regarding honey bees, it aims in particular to reduce mortalities by attacking their chemical and microbiological causes, to fight the Asian hornet, to maintain and develop floral resources. It also includes economic measures (organization and support of the beekeeping industry, training);

• The Ecophyto Plan: the first version of the Ecophyto Plan was launched in 2008. It aimed to gradually reduce the use of plant protection products in France while maintaining an economically efficient agriculture. Its new version, launched in 2015, reaffirms a target of reducing the use of phytosanitary products by 50% according to a two-stage trajectory: a reduction of 25% by 2020 based on the optimization of production systems and a reduction of an additional 25% by 2025 that will be achieved through deeper mutations;

• The Agroforestry Development Plan aims to develop all production systems associating the tree with agriculture (hedgerow, meadow orchards, alignments of intrapartell trees, silvo-pastoralism ...) thus allowing pollinators to in times of scarcity between two crops, for example between rapeseed and sunflower bloom;

• The "ambition bio" plan aims to promote the development of organic farming, again favoring the presence of pollinators;

• The "Teaching to Produce Alternative" Plan allows agricultural education to integrate all the concepts of agro-ecology, to enable the farmers of tomorrow to respect and make greater use of all components of the environment, such as pollinators.

59. France has developed the policy “Agricole Commune” - the allocation of aid to farmers is in part conditioned by good management and good agricultural practices, such as the maintenance of at least 5% of arable land as areas of ecological interest. Other measures directly promote the consideration of biodiversity and pollinators, including "agri-environmental and climatic measures, measures for the conversion and maintenance of organic farming or support for agroforestry.

60. France reported on other environmental policies such as a national label « Terre saine, commune sans pesticides » launched in 2014, the ban on the aerial application of pesticides since 1 January 2016, the ban on the use of pesticides in green spaces managed by communities since 1 January 2017, and the ban on neonicotinoids from 1 September 2018 before a total ban from July 1, 2020 (law for the recovery of biodiversity, nature and landscapes of August 8, 2016).

61. France also has reported on bilateral development aid to combate the erosion of biodiversity, among the objectives and priorities set out in the law of 7 July 2014 on orientation and programming relating to development and solidarity policy international. The French Global Environment Facility (FFEM) is a reference financial instrument on this topic, as well as the French Development Agency (AFD), which also contributes to financing the protection of biodiversity in third countries. In 2015, French public development aid for biodiversity was € 270.88 million. The FFEM is committed to applying a "landscape / territorial" approach as a principle of intervention, to which agroecology responds, in order to promote integrated strategies for the conservation and management of natural resources. The FFEM also finances sustainable consumption and production projects. In 2015, a project for sustainable agricultural sectors in Uruguay's natural grasslands was financed in Uruguay.

62. Ireland has invested in pollinator's taxonomy and trends. The status and trends of more than half of Ireland's bee species have undergone substantial declines in their numbers since 1980, with 30% of species considered threatened with extinction from Ireland[46]. They also established in 2011 the Bumblebee Monitoring Scheme.

63. Norwegian Agriculture Agency and the Norwegian Environment Agency are developing a national strategy for securing the diversity of wild bees and other pollinating insects. The strategy will define targets and strategies for sectoral and cross-sectoral measures.

64. Austria has launched some a**pproaches to enhance pollinators:**

- **National Legislation and national subsidies -** Nature protection laws of the federal states protect and promote the maintenance of species rich agricultural areas and set up specific management requirements to achieve nature conservation aims; Designation of areas with special protection status (like national parks, nature conservation areas) fosters the maintenance of natural heritage and ensures an adequate management of these areas;
- **CAP – Pillar 1: Greening -** Farmers have to fulfil special Greening-requirements to be eligible for payments from the first pillar of the CAP.
- **Apiculture sector -** The Regulation (EU) No 1308/2013 offers payments for different measures in the apiculture sector. The Austrian Apiculture Programme consists of the following measures: technical assistance to beekeepers and beekeepers' organisations (e.g. education and training for beekeepers); combating beehive invaders and diseases, particularly varroasis; rationalisation of transhumance; measures to support laboratories for the analysis of apiculture products; measures to support the restocking of hives; implementation of applied research programmes. On the basis of the Austrian Apiculture Programme payments of 1.6 m euros are granted annually.
- **CAP – Pillar 2:**Agri-environmental measures offer payments for the compensation of additional costs and income foregone resulting from the provision of environmental services in the fields of biodiversity, water, climate and soil. In 2016, more than 92,000 agricultural holdings participated in the Austrian Agri-environmental programme ÖPUL 2015, which accounts for approx. 80% of the farms recorded in the IACS (Integrated Administration and Control System). The total area of land for which ÖPUL support was granted in 2016 was 1.8 m hectares (without alpine areas), which equals a share of around 80% of agriculturally used areas (without alpine pastures). With this high level of participation in the Agri-environmental Programme, Austria has positioned itself as one of the leading EU Member States.

65. Austria also reported on the project for preservation of Apis Mellifera Mellifera "ARCHE AUSTRIA"[47] with support of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. The main aims of the project are: preservation and extension of dark bees; secure pollination activities; education of bee keepers; awareness raising; preservation and provision of traditional knowledge.

66. Sweden reported on the project "Biodiversity in open landscapes" executed from 2010 to 2014. The project was financed by the advisory service measure in Rural Development Program (RDP). Now, a follow up project is ongoing. In the former RDP (2007-2013) there was AEM and non-productive investments that farmers could apply for if implementing more costly measures, for example cultivation of mixed crops for birds and pollinators instead of crops for harvest. However, those measures were unfortunately not prioritized in the ongoing program (2014-2020). This makes it more important to try to find win-win to protect and maintain biodiversity and ecosystem services. The aim of the project was to stimulate farmers in intensively farmed areas to apply a number of measures that are easy and cheap to implement to enhance biodiversity in the agricultural landscape. The project found and promoted win-win situations, measures that are positive for ecosystem services and at the same time increase yield, for

46 FitzPatrick Ú., Murray T.E., Byrne A., Paxton R.J., Brown M.J.F. (2006) Regional Red List of Irish Bees, Publ. Rep. to National Parks and Wildlife Service (Ireland) and Environment and Heritage Service (N. Ireland)

47 http://www.arche-austria.at/index.php?id=73

example by increasing the number of pollinators and predatory insects. The project focused on measures for favouring the following kind of groups: ***Pollinators*** such as wild bees and bumblebees, ***birds*** that are depending on agricultural landscapes, ***predatory insects*** such as ladybugs, beetles and spiders and ***game*** such as deer, hare and elk.[48] The project has produced several information tools, both traditional on paper such as leaflets and brochures but also films and applications for telephone. The application has photos, short information, sound (if bird) and examples of biotopes that the species prefer. The information material were produced to inspire farmers to take measures enhancing biodiversity and hence their own productivity. This material is only available in Swedish.

67. Sweden has invested in mobile friendly information with different applications to not only to inspire farmers but also the public. There is app[49] one on species contributing beneficial to the production and yield (i.e. pollinators and natural enemies). There is one on butterflies and one on birds.

68. England has reported on the the Healthy Bees Plan was published in 2009 by Defra and the Welsh Government following consultation with beekeepers and the main Beekeeping Associations. It sets out a plan for Government, beekeepers and other stakeholders to work together to respond effectively to pest and disease threats and to put in place programmes to ensure a sustainable and productive future for beekeeping In England and Wales. The National Bee Unit (NBU) delivers the Bee Health Programmes on behalf of Department for Environment Food and Rural Affairs (Defra) and Welsh Government (WG) in England & Wales. It has been involved in the management and control of bee pests and diseases, along with training and dissemination of information to beekeepers for over 60 years. The current team of 80 people comprises laboratory diagnostics, programme support, research personnel and 60 home-based Bee Inspectors (covering England and Wales) who are managed by the National Bee Inspector (NBI); the head of field inspection services. The NBU provides an apiary inspection programme, diagnostic, consultancy and research services and extensive training and advice to Defra, Welsh Government, Scottish Government, commercial enterprises and beekeepers.

69. England also has a new agri-environment scheme, 'Countryside Stewardship' Scheme includes a Wild Pollinator and Farm Wildlife Package which has attracted significant interest from farmers. It provides payments for year round habitat provision for pollinators on farms. For farms not signed up to Countryside Stewardship, the Industry-led 'Campaign for Farmed Environment' (CFE) promotes voluntary action and has run farmer events across England focussing on pollinators and providing guidance. There are a number of additional habitat creation initiatives in both the urban and farmed environment, that are led by Non-Governmental Organisations in England. There include Urban Buzz, operated by Buglife and Making a Buzz for the Coast, operated by the Bumblebee Conservation Trust.

70. The Great Britain Invasive Non-native Species Strategy was published in 2015. It is a framework for action on England, Scotland and Wales. The strategy sets out key aims and actions for addressing the threats posed by invasive non-native species. It aims to get people to work better together, including the government, stakeholders, land managers and the general public; and to improve co-ordination and co-operation on issues at a European and international level. The invasive Asian hornet was identified in the Tetbury area of Gloucestershire in 2016 – the first time the hornet has been discovered in the UK. A nest

48 Find out more about the demo-farms:
http://www.jordbruksverket.se/amnesomraden/miljoklimat/ettriktodlingslandskap/mangfaldpaslatten/pollinering/gardsexempel.4.5d7f124b1529bb0218e65ba2.html

49 Link to app on beneficial organism in the agricultural landscape:
http://www.jordbruksverket.se/amnesomraden/miljoklimat/ettriktodlingslandskap/mangfaldpaslatten/nyttodjurenapptilldinmobil.4.7c4ce2e813deda4d30780007492.html
Link to app on butterflies in the agricultural landscape:
http://www.jordbruksverket.se/amnesomraden/miljoklimat/ettriktodlingslandskap/mangfaldpaslatten/fjarilariodlingslandskapet/fjarilarenapptilldinmobil.4.37e9ac46144f41921cd1fce3.html
Link to app on farmland birds in the agricultural landscape:
http://www.jordbruksverket.se/amnesomraden/miljoklimat/ettriktodlingslandskap/mangfaldpaslatten/faglariodlingslandskapetlarkvitter/larkvitterenapptilldinmobil.4.e01569712f24e2ca09800017916.html

was destroyed, and surveillance is ongoing. A new smartphone app has been developed to help the public identify the species and report sightings. Further incursions this year can not be ruled out and continued vigilance is still required. To this end the budget for Seasonal Bee Inspectors has been extended to enable them to work a further two weeks at the end of the 2017 season.

71. The health of Welsh honey bee colonies was a priority area of the Action Plan for Pollinators in Wales and the Welsh Government remains committed in supporting the National Bee Unit in the implementation of the Bee Health Programme in Wales. This supports the objectives of the Healthy Bees Plan, the overall aim of which is to achieve a sustainable and healthy population of honey bees for pollination and honey production in the UK. Support will continue for the seasonal bee inspectorate (an important aspect of surveillance for notifiable pests and diseases of bees), statutory bee health inspections and diagnostic work. In addition, the inspectorate carry out an educational role, also funded as part of the Healthy Bees Plan.

72. Welsh Government is also working in close contact with the Animal and Plant Health Agency (APHA) in ensuring bee colonies in Wales are healthy and free from disease. This includes keeping in regular contact with beekeepers in Wales to ensure continued vigilance in reporting the potential spread of the Asian Hornet. The EU Apiculture Programme for 2017-2019 has been agreed and budgets set. In Wales this translates as a continuation of the current programme i.e. services of the Bee Inspectorate including inspections and education, access to Beebase etc. Along with Asian hornet, Small hive beetle continues to be a significant threat to our bee health. There is currently an outbreak in the Calabria region of Italy. First identified in 2014, it had mainly remained in one valley (other than 2 cases relating to movements of hives), however this year the beetle appears to have spread to the east out of the valley. We continue to do all we can to protect our bees from this dangerous pest, including increasing bee inspector checks on imports.

73. Wales has reported on the Glastir Small Grants agri-environment scheme[50], a 'Landscape and Pollinators' window has been opened. A suite of capital works options have been made available for landowners to restore landscape features and to provide habitat for pollinator species.

74. Welsh Government will continue to work with other UK Devolved Administrations, supported by the Non-Native Species Secretariat to help coordinate the approach to invasive non-native species in Great Britain (GB). GB Coordination involves the GB Non-native Species Coordinating Mechanism, which consists of a Programme Board (made up of UK admins and key agencies to deliver strategy and policy), Secretariat, Risk Analysis Panel (risk assessment process to determine high impacts INNS), Stakeholder Forum (annual event to communicate with stakeholders) Working Groups (e.g strategy working group, media and comms). The Programme Board and key stakeholders interact via working groups and the annual stakeholder forum; this is facilitated by the Secretariat and its website. Meets a minimum of 2 times a year. Welsh Government will continue to work with other UK Devolved Administrations, supported by the Non-Native Species Secretariat to help coordinate the approach to invasive non-native species in Great Britain. A Wales Invasive Non-Native Species (INNS) Group is established as a forum to discuss and tackle INNS issues in Wales. This meets three times a year.

75. The Welsh Government's policy on pesticides is that the effects of its use on people, wildlife, plants and the environment is reduced to the lowest possible level while making sure pests, diseases and weeds are effectively controlled. Policy in Wales is delivered in the context of the EU Sustainable Use Directive and the UK National Action Plan for Pesticides. Encouraging those who use pesticides to understand and adopt best practice measures to help minimise the risk of pollution.

76. Welsh Government has supported the production of literature to promote best practice including 'Bees as Friends to Farmers' through Farming Connect giving advice on the spraying of pesticides and

50 Welsh Government | Glastir Small Grants: Landscape and pollinators: http://gov.wales/topics/environmentcountryside/farmingandcountryside/farming/schemes/glastir/glastir-small-grants/landscape-and-pollinators/?lang=en

herbicides.[51] In addition, the Bee Friendly scheme (referred to above) includes a 'Freedom from Pesticides and herbicides' theme as one of the four goals of the scheme.

77. The Welsh Government plays a central role in the UK Pollinator Monitoring Programme which is part-funded by Welsh Government with the overall lead role taken by Defra. Welsh Government is represented on the Project Steering Group, which meet 2-3 times a year. The three-year funding programme runs from 2016 until 2019. The UK Pollinator Monitoring programme will implement long-term monitoring of pollinator populations. The development of a monitoring approach will allow us to report on trends in pollinator populations in Wales in a way which is joined up and consistent with similar monitoring across the UK.

78. In Northern Ireland bee health is the responsibility of the Plant Health Directorate of the Department of Agriculture, Environment and Rural Affairs (DAERA). A Honey Bee Health and Pollinator Strategy for a sustainable and healthy population of bees and pollinators in Northern Ireland has been drafted by DAERA and will be consulted on shortly, although not yet published. This strategy seeks to address the current challenges facing beekeepers and provides a plan of action aimed at sustaining the health of bees and beekeeping in Northern Ireland for the next decade.

79. In Northen Ireland, agri-environment schemes are an important mechanism to maintain, improve and create pollinator friendly habitats on farmland. The Environmental Farming Scheme (EFS) was launched in early 2017 and offers have been issued farmers. EFS(H) is targeted at maintaining and improving the condition of designated sites and priority habitats and EFS(W) contains measures to create pollinator friendly habitats on more intensively farmed land. A number of projects funded by the EU (e.g. INTERREG and LIFE), government (e.g. NIEA Environment Fund) and other funding (e.g. Heritage Lottery Fund) maintain, enhance and create pollinator friendly habitats. These include Saving our Magnificient Meadows (SOMM) and Don't Mow Let it Grow which are both HLF funded projects.

80. Action to address the pressure of invasive species in Northern Ireland continues. Information on progress on the implementation on an invasive species strategy was published in January 2017[52] and a draft Implementation Plan is currently being drafted.

81. The Scottish Government has published a Bee Health Strategy for Scotland[53]. Scottish Government will continue to work with other UK Devolved Administrations, supported by the Non-Native Species Secretariat to help coordinate the approach to invasive non-native species in Great Britain. The Scottish Rural Development Programme is a main vehicle for addressing habitat loss and fragmentation at the landscape scale. There is no specific measure targeting pollinators but there are generic measures under the Agri-Environment Climate Scheme (AECS) that encourage habitats suitable for foraging, nesting and hibernation. Two vulnerable species – the great yellow bumblebee and marsh fritillary – are also prioritised under this scheme.

82. Scottish Government continues to support the European Commission restrictions on the use of neonicotinoid insecticide products containing clothianidin, imidacloprid and thiamethoxam. Scottish Government actively promote the expectation that farmers in Scotland adopt Integrated Pest Management as routine practice and actively encourage the completion of an IPM plan to demonstrate their protection of the environment, including native pollinators.

83. Norway has reported on instruments and measures related to pollinators conservation from distinc sectoris, including the environmental sector (example: Protected areas; Invasive Alien Species; The Nature Diversity Act 2009; agricultural sector (The environmental programmes and grant schemes, habitat types, cultural landscapes), transport sector (Norwegian Public Roads Administration actions and Avinor), defence sector, public and private land (municipalities, transmission line routes).

3.3 Capacity building and Awareness Raising:

51 https://cms.menterabusnes.co.uk/resources/939.pdf.

52 https://www.daera-ni.gov.uk/publications/progress-report-implementation-invasive-alien-species-strategy-northern-ireland

53 http://www.gov.scot/Topics/farmingrural/Agriculture/animal-welfare/bee

84. Singapore: Despite being major pollinators of terrestrial ecosystems in Southeast Asian, bees and bats are commonly perceived by the general public as creatures of nuisance and there is a misconception that bee species pose a threat to public safety. NParks has therefore begun various outreach and education projects to improve the appreciation of pollinators within Singapore. The Community in Nature (CIN) initiative has several citizen science programmes featuring pollinating insect groups (e.g. Butterfly Watch, BioBlitz) as part of the NParks CIN Biodiversity Watch. Additionally, the Greening Schools for Biodiversity programme involves students in greening their campuses to create conducive habitats for wildlife, including pollinating birds and insects. Guided walks focusing on bees are also conducted for the public to learn about native bee pollinators in their local parks.

85. Japan is linking people and pollinators through collaborative and cross-sectoral approaches. In 2006 Bombus terrestris was listed as Invasive Alien Species, and it became necessary to widely inform the ways to use native bumblebees instead. Since 2015, MAFF has prompted conversion of pollinators from Bombus terrestris to native bumblebees through its apiculture revitalization programs.

86. Some examples of education and stakeholder initiatives in Canada: (i) pollinator identification courses offered through universities, museums and citizen science organizations in Canada facilitate monitoring pollinator populations. One example is courses offered through the Royal Saskatchewan Museum. (ii) the “Bees of Canada” website (www.beesofcanada.com) will soon be launched. It will allow users to create species list for each province/territory or ecozone and find biological information, host plants, taxonomy, etc. (iii) The Biological Survey of Canada is currently launching a series in Biodiversity Data Journal that will cover species checklists for Canada, and bees are one of the groups for which progress has been made. (iv) The University of Guelph holds an Annual Pollinator Symposium.

87. Brazil: (i) The National Biodiversity Award, established by the Ministerial Order n. 188, of 22nd May 2014, has the purpose of recognizing the merit of initiatives, activities and projects that stand out for seeking the improvement of the conservation state of Brazilian biodiversity species, contributing to the achievement of the National Biodiversity Targets. The award ceremony is celebrated on 22nd May, the International Biodiversity Day. In the 2017 edition of the award, 17 initiatives were selected as finalists and among the finalists, there was one initiative direct related to pollinators "Implementation of the pesticide risk assessment for pollinators and aquatic organisms”; (ii) Since 2004, the Ministry of Science, Technology, Innovation and Communication (MCTIC) has been promoting the National Science and Technology Week (SNCT). This event is held with the purpose of bringing science and technology closer to the population, by organizing events with broad participation of society and in 2016, SNCT emphasized the importance of bees and their impact on food production.

88. Israel reported on the capacity building programme for framers by the Agricultural Extension Service, of the Israeli Ministry of Agriculture and Rural Development, regarding pollination, beekeeping and pesticides use reduction. The main specie of honey bee in Israel is Apis Mellifera. In addition, farmers also use Bombus terrestris as a pollinator in greenhouses operated mainly by the private sector. The methodology consists on direct and personal agricultural training; interaction between field crops growers and beekeepers; lecturing in conventions and producing educational tours open to the public, mainly for beekeepers and crop growers; development and distribution of booklets.

89. Philipines was one of the four countries that hosted the global launch of the Task Force on Systemic Pesticides (TFSP) Report on the Worldwide Integrated Assessment (WIA) of pesticide use in 2014. In 2017, the publication “Systemic Pesticides: a Worldwide Assessment”was developed. The Task Force composed by across 15 countries serves as an Advisory Group to two IUCN Comissions.

90. Colombia: Programme "CuidAgro Cámara Procultivos de la Asociación Nacional de Industriales de Colombia" was established in 2015 to develop actions to build capacity of beekeepers through the strategy “Alianza de la apicultura y la agricultura a través de buenas prácticas” , which aims to recognize farmers and beekeepers as agricultural producers and promote common ecosystems where they share theur life cycles and together prevent risks to the environment such as the dammage of chemicals and pesticides on the apiaries near to crops. Contents: i) Mapping the common territory of farmers and beekeepers; ii) Benefits for both agriculture and apiculture for increasing their productivity (pollination

and food production); iii) Analysis of interactions (habits, cultivation cycles); iv) Problems of farmers and beekeepers such as stress factors, pests; v) Risks vi) Solutions: beekeeping and agricultural good practices; vii) MIP in flowering; viii) Tags; ix) Plan of Action for cooperation and synergies of the two sectors (different scenarios)

91. The "Collective for the Defense of Pollinators and Bees in Colombia"[54] is a broad group of people and organizations interested in the defense of bees and other pollinators in Colombia, officially born on February 4, 2017 to present to Colombians and to the world the problems related to the death of bees and pollinators as a consequence of the indiscriminate handling of pesticides. The initiative arose from the concern of a group of citizens dedicated to beekeeping, due to the death by massive poisoning of bees in different regions of the country. Considering that on May 20, 2017 is celebrated the "World Day of the Bees", the "Collective for the Defense of Pollinators and Bees in Colombia" has been advancing a national campaign (under the Hashtag #PolinizandoFuturo) to raise public awareness about the importance of bees and other pollinators, For this purpose, 13 committees have been set up to carry out activities at the regional level. It also has about 250 records of people and organizations, which include associations of beekeepers, NGOs, research groups and companies among others, and that cover more than 4,000 people from 22 departments of the country, seeking to join forces and consolidate inter-institutional networks and cross-cutting issues around the conservation of pollinators.

92. Belgium: in 2017 the National Focal Point Biodiversity, in collaboration with federal and regional authorities and may other partners, organized a colloquium “inspiration day on bees”[55] to showcase and promote actions, projects and campaigns in favour of the conservation of bees; share information on initiatives and their results as a source of inspiration for new projects and synergies; stimulate collaboration by bringing together actors who strive to conserve bees; Identify and tackle gaps. A new federal bees plan 2017-2019 was launched. In addition to actions to support of beekeepers and to tackle threats the plan invests in excess of 1 million euro in research on the causes of the decline in bees, and identification of new measures. Of particular importance are initiatives by local authorities. The oral contributions were concluded with a presentation of an international initiative that generally shares the goals of the inspiration day: the “Coalition of the Willing on Pollinators”, which was launched in December 2016 during the 13th meeting of the Conference of the Parties to the Convention on Biological Diversity, and of which Belgium is a founding member. The fifth but certainly not the least important part of the day consisted of 15 stands and 40 posters by which diverse organisations presented relevant initiatives and inspired participants.

93. In 2016 the new Flemish apiculture programme was initiated. It focusses unabatedly on the problematics of bee mortality, amongst others by concentrating on beekeeping techniques and selection. The Brussels Capital Region announced that it will develop a specific action plan for the conservation of wild and honeybees, in complement and reinforcement of the already existing Nature plan, program to reduce the use of pesticides, and Good Food-strategy. This plan will amongst others be aimed at promoting the coexistence of wild bees and honey bees, the latter being kept ever increasingly. Minister René Collin presented an overview of initiatives by Wallonia, in particular the Mayaplan, launched in 2011, in support of the conservation of bees and other pollinators. This plan as well as others intend to mobilize all stakeholders and is based on existing Walloon policy instruments in support of the conservation of nature and the reduction of the use of pesticides.

Wales reported on the project ‘Caru Gwenyn/Bee Friendly,[56] in which schools, community groups, businesses, third sector organisations, town and community councils have had support in creating habitats across Wales including meadow-rich grasslands, pollinator-friendly urban spaces and invertebrate hibernacula. Support has included providing advice and guidance on planting for pollinators and awareness-raising of solitary wasps, bees and other pollinating insects. Successful organisations receive a certificate and logo for use on promotional material and are encouraged to share activities on social

54 Colectivo Abejas Vivas http://www.abejasvivas.org/
55 www.levedebijen.be – www.vivelesabeilles.be
56 http://biodiversitywales.org.uk/Wales-Action-Plan-for-Pollinators

media.

94. Natural Buzz[57] was a pollinator initiative run by Keep Wales Tidy in partnership with the Horticultural Trade Association and Green Space Wales and was funded by the Welsh Government's Nature Fund. The project used the profile of bees and wildflowers and the associated pollination services, to raise the awareness and understanding of the value of nature to people.

95. Austria reported on the education and training-measures are broadly effective approaches to enhance and foster knowledge and awareness about the importance and necessity of agrobiodiversity including beneficial animals like pollinators. The attendance in according trainings is mandatory for participants in the relevant ÖPUL measures "Organic farming" and "Environmentally sound and biodiversity-promoting management".

96. In the frame of the Austrian Rural development programme diverse projects aiming at conservation, restoration, development and sustainable use of agro-biodiversity are implemented: project-based nature conservation measures support investments to establish or restore environmental structures, such as landscape elements (e.g. orchards) or species rich agricultural habitats (e.g. on marginal sites), which are important habitats and refuges to pollinators; education and cooperation projects often aim at raising awareness among farmers about biodiversity to get them a basic understanding for the importance of extensively managed farmland e.g. to pollinators.[58]

97. Norway: Important target groups are garden owners, but also schoolchildren, children in kindergarten and others. Some examples of communication initiatives in Norway are: (i) "Buzzing gardens" (summende hager): a campaign led by the Norwegian garden association (det norske hageselskap) and supported by the Norwegian Environment Agency. The campaign was ongoing from 2012 until 2016. It has received much attention from the public as well as a European Excellence Award. The campaign has focused on spreading information about the role of pollinators, especially bumblebees. It informs about measures everyone can take to improve the conditions for the pollinators, including the planting of bumblebee friendly flowers and the creation of wildflower meadows. The campaign mainly used Facebook as a mean for spreading information. (ii) "Blomstermeny.no" (flowermenu): is a webpage developed in cooperation between nine different organizations and institutions. The webpage gives an overview of favourable flower species that may be planted to facilitate for pollinators throughout the year. (iii) "The pollinator passage" (Pollinatorpassasjen)[59] aims at increasing the number of green corridors suitable for pollinators in Oslo. (iv) "Let the bumblebee fly" (La humla suse): is an association established in 2013 in order to improve the conditions for bumblebees in Norway. The association organizes walks, courses for farmers, municipalities and teachers, and courses in the construction of pollinator houses. They also organize monitoring of bumblebees and give advice to the management authorities. (v) "The bee effect" (Bieffekten) is a company engaging in different measures to increase the knowledge about honeybees, especially in cities. They offer talks and they teach about pollinators and give companies the opportunity to sponsor an urban beehive or a flower box. (vi) "The bumblebee bus" (Humlebuss): is a project for schools initiated by the NTNU University museum and implemented in cooperation with a number of other institutions. It consists of a bus that visits schools to inform about pollinators. (vii) "Bee flower" (BieBlomst): is initiated by the company Nordic Garden and share information about bee friendly flowers and more on Facebook and in an app. (viii) "The bumble bee school": (Humleskolen): is a webpage containing information about bumblebees, their habitats, news, etc.

98. Ireland has reported on the All-Ireland Bee Red List published in 2006. To support the All-Ireland Pollinator Plan 2015-2020, two accompanying series of documents were published: Guidelines for different sectors and How-to-Guides for key pollinator friendly actions.[60]

57 https://www.keepwalestidy.cymru/naturalbuzz

58 Example: Biodiversity monitoring – „we care…! farmers watching plants and animals in Austrian grasslands" http://www.biodiversitaetsmonitoring.at/

59 Webpage in English: www.pollinatorpassasjen.no

60 http://www.biodiversityireland.ie/projects/irish-pollinator-initiative/all-ireland-pollinator-plan/resources/

IV. INTERNATIONAL INITIATIVE ON THE CONSERVATION AND SUSTAINABLE USE OF POLLINATORS

99. A range of regional and national initiatives concerning the conservation and sustainable use of pollinators have been launched worldwide, and many others are under development. A considerable number of these initiatives took into consideration the actions proposed in the International Initiative for the Conservation and Sustainable Use of Pollinators, and some of them were developed in the context of the FAO Global Action on the International Pollinator Initiative and Global Environment Facility projects. The global project "Conservation and Management of Pollinators for Sustainable Agriculture through the Ecosystem Approach" coordinated by GEF, UNEP and FAO (also known by "GEF Pollinators project") started in 2010 and concluded in 2015, was implemented in seven countries: South Africa, Brazil, Gana, India, Nepal, Pakistan and Kenya.

100. In Brazil, for example, the project supported the formation of research networks, generation and dissemination of knowledge, as well as the review of public policies. This project focused on pollination of seven agricultural crops: cotton, cashew, Brazil nut, apple, melon and tomato. Approximately 80 researchers, 20 technicians, 150 scholarship holders and 60 collaborators, from 40 research institutions in 17 Brazilian states, were involved in these activities. More than 200 people, including farmers and agricultural technicians, were trained to apply good practices for conservation of pollinators. During this period, more than 16 thousand specimens of bees were collected for increasing knowledge on wild pollinators and monitoring purposes. These efforts yielded, in total, more than 60 publications, among scientific articles and educational materials for students, rural producers, technicians and extension services. 61 The studies showed that a higher presence of pollinators in the sampled areas improves the productivity of the crops, in terms of weight, number of fruits and seeds, and quality of fruits. The studies showed that cotton presented 114 species, cashew 55 species, canola 214 species, Brazil nut 79 species, apple 305 species, melon 52 species and tomato 79 species, with several species being observed in more than one crop.

101. During the preparation of this document, the following national and regional initiatives were reported: the African Pollinator Initiative; Oceania Pollinator Initiative; European Pollinator Initiative; North American Pollinator Protection Campaign; Brazilian Pollinators Initiative; Iniciativa Colombiana de Polinizadores; Pollinator Partnership Action Plan (United States of America); Canadian Pollination Initiative; English National Pollinator Strategy; All-Ireland Pollinator Plan; Plan national d'actions «France, Terre de pollinisateurs» pour la préservation des abeilles et des insectes pollinisateurs sauvages; Dutch Pollinator Strategy, and the Swiss National Action Plan for Bee Health.

102. In Germany, the National Action Plan on Sustainable Use of Plant Protection Products (NAP) focuses on reducing risks to humans, animals and the environment, including honey bees, that may arise due to the use of approved plant protection products.[62]

103. France reported on the Le Plan national d'action « France, Terre de pollinisateurs »[63] launched in 2016. The plan is an accompanying measure to the law on the recovery of biodiversity, nature and landscapes of August 8, 2016. It includes 20 actions, 6 of which provide for a consolidation of knowledge of these species of insects, essential to the implementation of operational measures in their favor, 6 are aimed at raising awareness among a wide audience, and 7 are encouraging different space managers (agricultural and forest plots, road and railway rights-of-way, protected areas) to implement good practices to improve the living conditions of pollinators.

61 Available on http://www.mma.gov.br/publicacoes/biodiversidade/category/57-polinizadores; access on 8th May 2017.

62 https://www.nap-pflanzenschutz.de/en/

63 http://www.insectes.org/opie/pdf/3993_pagesdynadocs570e1d6156925.pdf

104. Finland reported that the national work and pollinators strategy as outlined in the Coalition of the Willing on Pollinators is in a planning phase and relates also to the ongoing work on the threatened species in Finland.[64]

105. The National Pollinator Strategy (NPS) for England[65] was launched by the Department for Environment, Food and Rural Affairs (Defra) in November 2014. The strategy sets out a 10 year plan to help pollinating insects survive and thrive. It is a shared plan between Government and stakeholders and sets out a framework for working together. It supports creation of habitats for pollinators such as bees and other pollinating insects across our towns, cities and countryside. The NPS implementation plan sets out how we will achieve the actions in the National Pollinator Strategy. It details what we will do and how we will monitor progress. A progress report on implementation will be published shortly.

106. The Action Plan for Pollinators in Wales (APP) was launched in July 2013 with the aims of reducing and reversing the decline in pollinators which are an essential part of our environment. Wales was the first country in the UK to develop an Action Plan for Pollinators. The Action Plan for Pollinators Task Force works to deliver the Action Plan in a way that delivers social, economic and environmental outcomes. Actions are taken forward by different stakeholders. Whilst the overall aims of the APP[66] remain relevant, Welsh Government feel there is a need to review the APP to reflect the following: progress of The Bee Friendly initiative, launched by the Task Force in September 2016 at the Welsh Biodiversity Conference; the current UK National Pollinator Monitoring Scheme; the current focus on the risk of an outbreak of the Asian Hornet; ongoing and new work by APP Task Force members; to report how the APP delivers against the new legislative agenda set by the Well-being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016.

107. Northern Ireland has signed up to the All-Ireland Pollinator Plan 2015-2020[67]. This plan contains a number of practical actions across government, public bodies and NGOs to increase the range of pollinators throughout Ireland.

108. Scottish Government launched the Pollinator Strategy for Scotland 2017-2017 on 26 July 2017. It was the final plan and completed coverage of strategies for pollinator action across the UK. The strategy is a joint publication between Scottish Government and Scottish Natural Heritage (SNH). SNH led on preparation of the content in collaboration with a range of organsiations, including the Bee Farmer's Association, Buglife, the Bumblebee Conservation Trust, Centre for Ecology and Hydrology, Scottish Environment LINK, National Farmer's Union of Scotland and Scottish Land and Estates. All of these organisations are supportive of the published document. The strategy has five key aims: (i) to make Scotland more pollinator-friendly, halting and reversing the decline in native pollinator populations; (ii) to improve our understanding of pollinators and their pollination service; (iii) to manage the commercial use of pollinators to benefit native pollinators; (iv) to raise awareness and encourage action across sectors; (v) to monitor and evaluate whether pollinators are thriving. It also has seven intended outcomes: Action to support pollinators will be firmly embedded in relevant strategies, policies and practices across Government and the public sector; Our understanding of pollinator ecology, status and trends is improved to allow policies and practices to be informed by the best evidence; Regulation of honey bee and bumble bee importation will minimise the risks of introducing new pests and diseases; Local bee-based industries will be better supported; We will have a wide understanding of the value of Scotland's pollinating insects and strong public support to restore populations and habitats, monitor populations and research pollinator biodiversity; There will be a strong network of good-quality pollinator

64 www.ym.fi/en-US/Nature/Biodiversity/Protection_of_species

65 https://www.gov.uk/government/publications/national-pollinator-strategy-for-bees-and-other-pollinators-in-england

66 A series of infographics have been produced outlining the work and some of the achievements to-date of the APP:
http://www.biodiversitywales.org.uk/File/688/en-GB
http://www.biodiversitywales.org.uk/File/689/en-GB
http://www.biodiversitywales.org.uk/File/690/en-GB

67 http://www.biodiversityireland.ie/projects/irish-pollinator-initiative/all-ireland-pollinator-plan/

habitats in place; It can be demonstrated that Scotland's pollinators are thriving. A cross-sectoral working group will be established to oversee delivery of the Implementation Plan.

109. Scottish Government is collaborating with the Defra-led development of the National Pollinator Monitoring Scheme, contributing funding. The outputs of this will be implemented in Scotland to better understand trends and status changes in key pollinator species. SNH have produced two reports on habitats which support action for pollinators. These are *The management of roadside verges for biodiversity* (SNH commissiond research report 551) and *The extent and condition of non-designated species-rich lowland grasslands in Scotland*. (SNH commissioned research report 571). The Scottish Government and SNH are contributing to the UK Pollinator Monitoring and Research Partnership.

110. There are a range of initiatives to promote better monitoring of wild pollinators outlined in the All-Ireland Pollinator Plan 2015-2020[68]. In Northern Ireland the development and improved recording and monitoring of pollinators through the all-Ireland Bumble Monitoring Scheme, UK Butterfly Monitoring Scheme and the National Moth Recording Scheme has been of particular significance.

———

68 http://www.biodiversityireland.ie/wordpress/wp-content/uploads/All-Ireland%20Pollinator%20Plan%202015-2020.pdf

Sectoral guidelines and how to guides: http://www.biodiversityireland.ie/projects/irish-pollinator-initiative/all-ireland-pollinator-plan/resources/

Year one review http://www.biodiversityireland.ie/wordpress/wp-content/uploads/All-Ireland-Pollinator-Plan_progress-report-year-1_Dec-2016.pdf and summary infographic http://www.biodiversityireland.ie/wordpress/wp-content/uploads/Infographic_Year1_updated.pdf