



Ideal Shaping of the EU Pollinator Initiative

Input from the European Beekeeping Sector

BeeLife European Beekeeping Coordination April 2018

This document aims to present the ideal objectives to be achieved in the future by European policy, as expected by the European beekeeping sector engaged with the protection of the environment and pollinators. With the goal of achieving the best possible Pollination Initiative, that takes into account beekeepers and scientist knowledge and needs, BeeLife is set to present some recommendations to be included in the initiative's objectives and results.

To better recognise the objectives, the following remarks, formed after the consultation publication, aim to help develop a better understanding of the initiative's possibilities.

LOSS OF BIO-DIVERSITY AND PLANT RESOURCES

Pollinators are essential components of our ecosystem, and they serve as bioindicators of environmental health and as providers of a variety of food production. They contribute to well-balanced diets, human health (many crops, mainly fruits and vegetables, depend on insect pollination), food availability for wildlife and supporting other economic, cultural and general well-being benefits. Not only beekeepers but civil society organisations, scientists, governments and multilateral international organisations have recognised the many threats to pollinators and the urgent need for protection.

Among thousands of other pollinators, bees serve as 'the canary in the coal mine', sounding the alarm that 'something is wrong' with the quality and health of our environment. Bees and pollinators are on the frontline of the struggle for environmental quality and are key in analysing invertebrates' health and the ecosystem's balance. Experts and interest groups in Europe have recognised this status and advocate for them to serve as standard bearers for the environment.

The recent UN Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) Report on Pollinators, Pollination and Food Production emphasised the importance of pollinators for crop pollination, food production, socio-economy and biodiversity. Bees create 35% of all our food by pollinating fruits, vegetables and arable crops, such as sunflower and oilseed rape[1]. According to the report, researchers can usually link threats to pollinators with intensive agricultural management, which comes along with "pesticide use, environmental pollution, invasive alien species, pathogens and climate change".

Pollinators are in decline worldwide. The problems of bee colony intoxication and death observed by European beekeepers in the nineties fostered national actions and their international collaboration in the 2000s. In most cases, these problems were linked and still are, to pesticide use (intoxications by the liberation of toxic dust during seed sowing, exposure to contaminated water, pesticide mobilisation by wild plants of flowering strips and cover crops, etc.).

European beekeepers have increasingly reported an increase in winter losses, needing to divide their colonies to ensure their maintenance (and even increase) of honeybee population. Humans manage not all insect pollinators, and unfortunately, those who are experience declines population [2]. not, in Furthermore, beekeepers have reported a decrease in honey production and even on bees' appeal to ordinarily melliferous crops. They have even reported a decrease in honey production from usually highly melliferous crops such as sunflower. The situation presents a twofold problem that provokes not only economic risks to professional beekeepers and farmers with crops that require pollination but also threatens the ecosystem's balance and biodiversity.

Biodiversity has been found to be significantly related to land use and intensity[3]. Its relation is not to be taken lightly since "biodiversity provides a basis for ecosystem functions and is therefore essential for ecosystem services that are useful for human society"[4]. As pollinators are a fundamental part of the ecosystem, their protection already includes protective measures to benefit the environment and human needs. With more than 75% of leading crop species worldwide needing or benefiting from pollination[5], their protection is in the best interest not only for environmental purposes but also economic ones. With the loss of pollination services, not just wild plants diversity is at risk but also crops diversity.

Besides the already well-recognised need for pollination services, which are to a certain extent valued and measured, there are less tangible services that institutions and civil society still need to take into account. For example, beekeepers, governments and other stakeholders are increasingly praising the cultural value of pollinators, but there are still no methodologies for their measurement.

PROTECTING POLLINATORS IS NOT A COST, IS AN INVESTMENT

Pollinators are a production factor indispensable for the fertility of plants and food production. It is essential to understand that the current situation linked to pollinator trends is a consequence of human action through the industrialisation of agriculture and urbanisation. The fact of considering a cost the point of bringing these natural fertilisers back into our modified environment demonstrates how implicit the working against nature is in our society. Science has now well shown that there is a systemic biodiversity destruction. Unsustainable agricultural practices and other human-made factors are the ones responsible for the current situation; thus, the call for action to change the circumstances that threaten the ecosystems is to be put in terms of investments.

HOLISTIC APPROACH IN THE LOGIC AND POLICY IMPLEMENTATION

To better assess risks and help create a pollinator-friendly environment, the Initiative must have an overall understanding of the different policies that affect pollinators and pollination. The following Services need to understand and clarify their role in problematic:

- The agricultural model (DG AGRI) is of course essential. Agricultural intensification cannot be isolated from its parts nor its parts among themselves.

The main arable crops in Europe include cereals, which do not provide a significant benefit on food resources for pollinators and however bring along many stressors such as pesticides and fertilisers. A large surface in Europe is used for these kinds of crops, with over 57 million hectares of the total 107 million of arable land in Europe[6]. The primacy of these crops restricts pollinator-friendly measures since they do not provide any particular benefits for pollinators.

Fertilisers, pesticides and monocultures are part of the whole in the agrarian system, and the initiative must collect all of these factors to assess and mitigate risks for pollinators. The tools used in Agriculture, including those that enable it, are competent of other services like DG SANTE, for biotechnology, nanotechnology, pesticides, biocides, plant-breeding, official controls or veterinary products.

- DG RESEARCH, to foster sustainable future innovation;

- DG EDUCATION, for promoting into European educational programmes information about ecology, environmental medicine or veterinary, etc.; and others);

- DG TRADE and DG ENTERPRISE for the issues linked to the market of beekeeping products and beekeeping as a business;

- Other related European services.

Integration of other levels of decision making in national, regional and local policies, so that any decision which institutions take in land management take into consideration the needs of pollinators and other living beings required for maintaining a balance in nature (incl. urban and natural areas).

INVASIVE SPECIES CONTROL

BeeLife requests to reconsider the approach towards invasive species and how we combat them in Europe. With the climate incidence of change and globalisation, it is likely that Europe will increasingly receive invasive species in its territory. Eradication is currently the approach to combat them. In the past, the eradication approach has proven to be ineffective against invasive insect species, especially those affecting Apis mellifera, while creating a significant burden for the beekeeping sector.

Eradication has proven to be innefective. calling for new methods to be taken into account

From BeeLife we would like to request to reconsider the official approach to deal with invasive species on a case by case basis, adopting control measures for its implementation. Furthermore, we would like to remind that in many occasions, invasive species are not a "problem of beekeepers", as is the case for Vespa velutina or Aethina tumida. These are environmental threats that can as well affect other parts of nature. As a result, the responsibility of the control is in the hands of administrations managing the environment and not just in the hands of private individuals like beekeepers.

Diseases and parasites may pose a greater or lesser risk for pollinators' health, but there is no data to reckon them as a generalised problem or a significant cause for the pollinators health crisis. Ideally, the Initiative should consider a case by case analysis in which it recognises the diversity of contexts and environmental conditions that affect pollinators. According to the Epilobee project report, parasites and pathogens do not pose a generalised problem for pollinators in Europe[1]. Analysts still need to take diseases into

account for the measurement of stress factors, but they should not magnify the risk they pose nor generalise them without justification. Instead, they should prioritise data collection and strategy definition that takes into account the diversity of contexts. The control of diseases (plausible as opposed to their elimination) brings about an exciting action point for beekeepers.

TOOLS TO VERIFY POLICY **EFFICACY**

The initiative needs to review not only legislation to check whether different laws have a potential impact on pollinators but also actions to achieve more efficient operations to evaluate these impacts. There is a distinction between policy definition implementation and policy and enforcement. Such difference is often not Improvement mentioned and is vital for ensuring better conditions for pollinators in Europe. For of policy example, guaranteeing harmful agricultural implementation practices to pollinators are avoided both at and EU and national level. In many cases, we enforcement have in Europe legislation that enables pollinator protection, but it is poorly communicated or understood by the administrative levels different and insufficiently or wrongly enforced. BeeLife would like to see that every legislation in Europe is provided by indicators to evaluate the quality of its enforcement and measurable objectives are set up to trigger correction actions. Some examples could be:

-Indicator: bee-collected pollen contamination with pesticides;

-Measurable goal: pollen collected by bees along the season does not contain any detectable residues of pesticides.

CONCEPT OF INNOVATION

As BeeLife we consider that there are many aspects of innovation which are to be helpful to pollinators, despite the fact that innovation is not necessarily a synonym of sustainability. Ranging from technical to cultural, BeeLife stands for promoting innovative practices that benefit pollinators in the long run. A possibility could be an improved exchange, consulting experts on pollinators regarding the sustainability of the proposed innovation.

PLANT BREEDING

It is of utmost importance that the plant breeding and selection made in Europe and the plant varieties used in our territory respects the natural traits of plants. We observe in the field melliferous and polliniferous varieties (varieties naturally providing nectar and pollen, e.g. oilseed rape[1], sunflower, etc.) that have lost their capacity to produce nectar and pollen. As a result, flowers are not any more flowers from their functional point of view and bees lose a vital source of food. As BeeLife we would like to bring to the attention of the authorities this problem, and we propose:

Plant breeding and varieties used in Europe to respect the natural traits of plants

In Europe to
respect the- Further public research on the this
problematic, research that is coherent and
coordinated in Europe and to which
beekeepers have access to (flowers capacity
to produce nectar or pollen provides the
nutrition of their livestock).

- The favouring of the introduction of "bee-traits" in the selection criteria of varieties traditionally producing nectar and pollen: i.e. nectar yield, flowering length, and bee-friendly practices such as no seed treatment with insecticides.

-The CAP can only support the cropping of varieties that maintain their natural traits, i.e. a sunflower field that produces Og of nectar cannot be backed by public money because it provides no public goods.

- Innovate and communicate about agronomic practices (e.g. density of seeds and seedings). In line with agroecological principles, organic or Integrated Pest Management approaches.

- Reconsider different agronomic choices that can cause stress to crops, and determine a decrease or prevent secretion of nectar or pollen (such as plant density of oil crops, crop succession, fertiliser inputs, etc.).

PESTICIDES

It seems obvious to remind that the authorities should never approve the use of bee-harming pesticides in any application that can lead to their release in the environment. As BeeLife, we would like to highlight that the only way to properly evaluate the harm of a pesticide for bees is with adequate and scientifically-grounded methodologies and tools. The EFSA Guidance document for the risk assessment of pesticides on bees is the most up-to-date methodology available, and it has to become the reference for running risk assessment at all administrative levels. the responsible entities for Ideally. methodologies should check for their pertinence every five years, to verify if new methods are available and the approach requires an update.

Furthermore, we require a change in the logic of regulation, adding to it the context in which authorities provide pesticides authorisations. Authorisations should be done at a landscape level, setting up maximum levels of application of pesticide according to the landscape composition, pesticide mixture already in use in the landscape and the characteristics of the molecules authorised.

Adequate and scientifically -grounded risk assessment methods

VETERINARY PRODUCTS AND BIOCIDES

BeeLife calls for real consideration to be given to the risks associated with the toxicity of veterinary and biocidal products used in animal husbandry on pollinating insects. Ecotoxicity issues pollinating insects need to be better integrated into environmental risk assessment before obtaining marketing authorisation for veterinary drugs and biocidal products as is the case for plant protection products. Besides, the marketing authorisation dossier submitted by manufacturers should include methods for the detection of insecticide substances in the matrices associated with bees (wax, honey, bees, bee bread) similar to the dossiers for plant protection products. It would facilitate the detection of these substances in cases of suspected poisoning of bee colonies.

methods for detection of insecticide substances in bee-related matrices prior to marketing authorisations

Inclusion of

It is essential to increase the current knowledge of the exposure factors of bees to insecticide products used in animal husbandry through field studies. Such requires increase also better а understanding of bee water collection on potentially contaminated sources. epidemiological Furthermore, studies should be conducted to estimate the extent of damage to bee colonies when these present insecticides are in their environment.

Concerning vector control, BeeLife calls for the revision of Directive 2000/75/EC, which imposes systematic treatments on farms, insofar as they have proved ineffective and present an ecotoxic risk to non-target organisms. This directive has been drawn up intending to eradicate bluetongue, without considering any other collateral consequences of this eradication. It is also essential to ensure better public knowledge of the veterinary pest control and insecticidal biocidal products markets. Considering the pollution that these products cause, especially in watercourses, this problem is as much a public health imperative as an environmental risk. For the same reason, it does not seem appropriate that farmers should be exempted biocide certification from because their use of biocidal products "uninformed would not expose the risks populations". Given of contamination associated with specific treatment devices, such as insecticidal baths, authorities should consider setting better precautions for the use of veterinary antiparasitic drugs. They may even measures combine the with more continuous monitoring of the proper implementation of these conditions of use.

These measures should be accompanied by higher awareness among veterinary practitioners of environmental the consequences of the treatments they prescribe, particularly during their training. Veterinarians must, in fact, relay the problems of ecotoxicity to farmers. Such awareness-raising could have as a pillar the good practices recommended by working groups dealing with environment, parasitology and beekeeping, which should be widely respected.

Following the example of the approaches promoted in crop production, the development of alternatives to the most toxic insecticides in veterinary pest control must be encouraged.

FUTURE CAP

The position paper of the European beekeeping sector on the CAP post-2020 can be found at: http://bit.ly/PositionPaperCAP.

As BeeLife we consider that there is a much better understanding needed of the problematic of pollinators and the dependence of food production on pollination. Again we propose clear indicators for the validation of the quality of enforcement of legislation:

Higher awareness of the environmental consequences of veterinary treatments -Amount of honey bee colonies per km2 on the region is an indicator of the melliferous richness of a specific surface along the year and if the weather was good for honey production (should nutritional resources be available).

-Wild bees abundance and richness indicates the quality of the landscape for the maintenance of the diversity of wild pollinator species and pollination potential.

-Pollen pellets' botanical origin is an indicator of the plant diversity in the surroundings of the apiary, with a specific focus on plants of interest for bees.

-The rate of Winter Honeybee colony losses indicates the quality of the landscape for the maintenance of healthy bee colonies and pollination potential.

PUBLIC AVAILABILITY OF DATA

There is a vast amount of data produced automatically and systematically in Europe by the regions or Member States which have environmental relevance. The databases are as follows:

disclosure of data in a harmonised · Water contamination monitoring (under the Water Framework Directive)

The public

Way. · Land Parcel Occupation (Under the CAP)

· Cover/Catch crops (under the CAP)

· The pesticide use in the agricultural production (under the Sustainable Use Directive)

· Availability of the soil humidity

· Other projects of citizen sciences

We hereby request the public disclosure of these datasets in a harmonised way with enabled geo-localisation.

PRIORITIES AND OPPORTUNITIES IN THE SHORT TERM

Two priorities would ideally shape the Initiative in the short term. Pesticide regulation and the Common Agricultural Policy. Both are currently under discussion and provide an excellent opportunity for the initiative to have an essential impact on pollinators health.

> Two priorities would ideally shape the initiative in the short term: Pesticide regulation and the CAP

Additional Comments to the questionnaire on the Initiative:

Question 7.1.2: An increase in areas of permanent grassland, grazed or not, being mowed before the flowers have withered are beneficial for pollinators. Cultivated meadows scythed before flowering is, on the other hand, contributing to the decline in pollinators.

Question 7.1.3: Indirect effect on pollinators: Artificial fertilisers are modifying the soil organisms in a way that decrease the fertility of the soil, which in turn leads to more pest and pesticide use on the one hand, and less biodiversity on the other. Less biodiversity and more pesticides contribute to pollinator decline.

7.2 Farmland abandonment: The effect on pollinators depends entirely on what use is replacing the farmland cultivation, and also if the farmland was small-scale organic or not.

7.3 Urbanization: Not too dense urban areas, like residential areas, avenues and parks, are good havens for pollinators, far better than monoculture farmland.

7.5 Invasive species: Vespa velutina and the Small Hive Beetle is a severe problem as regards the honey bee.

7.7 Climate change: With changes in times for awakening of pollinators and flowering of plants or area of populations this can have huge impacts, especially concerning pollinators specialised in one or very few flowers. These changes might be of different extent for the plants and pollinators, and mismatching in time can be as detrimental to these plants as for the pollinators. The same applies to geographical displacements due to climate change.

7.8 Other: Prematurely mowing grasslands and verges before flowering and ripening of seeds is finished, and excessive cleaning and tidying of gardens and parks.

13.3 Innovation in methods of landscape management for promoting biodiversity, information to the public and similar is welcomed; innovation in the form of new pesticides or other ways of twisting natural processes will not be a solution to this decline in pollinators.

13.7 Assessing the risks is not an action that will mitigate the decline in pollinators. It should be "Abolish pesticide use", see http://bit.ly/OHCRdoc which we find very important.

In all decisions about pesticides, agricultural methods or similar processes which influence the circumstances for our pollinators, consideration must be given to preserving robust ecosystems on all levels, as this is a prerequisite for sustainability in the long run, in the economy as well as in nature preservation.

13.8 We support integrated pest management as long as it includes pesticides as the very latest option to be used in crop protection.

13.10 The idea is above all to prevent climate change, not primarily mitigate the effects of it.

13.12 Here it is essential that import and export of

pollinators are well controlled so that diseases and parasites are not being spread. Also, it is imperative that bee varieties that can handle pests and diseases are being promoted; usually this is best achieved with the original local breed/stock.

References:

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[2] Nieto, A, et al. "European red list of bees." Luxembourg: Publication Office of the European Union 98 (2014).

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[4] Plutzar, C, et al. "Of Birds and Bees: Biodiversity and the Colonization of Ecosystems." Social Ecology. Springer, Cham, 2016. 375-388

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