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Business and nature working together: action by the agri-food and beverage sector to protect wild pollinators

Environment

Business and nature working together: **action by the agri-food and beverage sector to protect wild pollinators**

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Business and nature working together: **Action by the agri- food and beverage sector to protect wild pollinators**

Why is this guidance needed ?

This guidance document for businesses is part of the broader implementation of the EU Pollinators Initiative¹. The initiative was adopted by the European Commission (EC) on 1 June 2018, setting the framework for an integrated approach to address the decline of pollinators in Europe through three priorities:

1. Improving knowledge on the decline of pollinators, its causes and consequences;
2. Tackling the causes of such decline;
3. Raising awareness, engaging society and promoting collaboration.

One of the important actions of the initiative is to encourage and enable the business sector to take action for wild pollinators.

This document aims to provide such guidelines to the agri-food and beverage sector. Its scope includes both local actions (i.e. site-specific) and measures across the value chain that the sector can implement to contribute towards the conservation and restoration of wild pollinator populations. It also informs businesses on the risks that stem from the decline of wild pollinators, and opportunities that arise from taking action to reverse this negative trend. This document is further complemented by another technical guidance providing recommendations to farmers/land managers on the actions this sector can take to contribute to wild pollinator conservation².

¹ COM(2018) 395 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1528213737113&uri=CELEX:52018DC0395>

² Keenleyside, C. 2020. A guide to pollinator-friendly farming. Guidance prepared by the Institute for European Environmental Policy for the European Commission.

Summary:

Pollinators – such as bees, hoverflies, moths, butterflies and beetles – are declining dramatically around the world, and Europe is no exception. With pollinator populations being essential in underpinning the

stability of pollinator services over time, this decline of pollinators puts managed and natural ecosystems functioning at risk.

Why should your business care ?

More than three quarters of the leading types of global food crops rely to some extent on animal pollination for yield and/or quality. With businesses facing possible shortages of raw materials, a decline in crop quality and challenges with the security of supply, it's no overstatement that pollinator decline calls for urgent conservation action.


However, the agri-food and beverage sector can turn this problem into an opportunity. Restoring pollinator populations to healthy levels will help prevent economic losses, provide other environmental and social benefits and assist the company in building/maintaining a good rapport with the public.

What can your business do ?

The agri-food and beverage sector is well placed to contribute towards stopping the decline of wild pollinators. The sector can lead by example showing how food and raw materials are produced and which producing practices should be rewarded.

This guidance provides recommendations for action by this business sector to protect wild pollinators illustrated with examples of companies taking the lead in creating opportunities for both the sector and pollinators. The agri-food and beverage sector can:

- promote actions to maintain healthy pollinator populations within the value chain;
- convince its suppliers (incl. farmers) to take action directly on farmland, such as the creation of multifunctional field margins, installing patches of flower rich habitat, the reduction of pesticide use etc.;
- encourage its suppliers to take action by offering long-term contracts tied to commitments to deliver richer biodiversity on their land and greater diversity of habitats for pollinators;
- raise awareness of the role of pollinators to its stakeholders and encourage them to partake in actions that
- promote pollinator conservation;
- monitor and evaluate the impacts of actions on wild pollinators;
- partner up with NGOs, local nature authorities and/or academics when drafting, implementing and evaluating actions for pollinators, whether they focus on company's site or the supply chain.

A close-up photograph of several bright red flowers, likely dahlias, with yellow centers. Three orchard mason bees (Osmia lignaria) are visible, characterized by their blue and black striped abdomens and yellow thoraxes. One bee is perched on a flower, while two others are in flight. The background is a soft, out-of-focus mix of green and purple.

1. WHAT YOU AS A BUSINESS MANAGER SHOULD KNOW ABOUT POLLINATORS

Pollinator populations are essential to underpin the stability of pollination³ services in the short- and long-term. Indeed, without pollinators, a large majority of flowering plants will not be able to reproduce and eventually will decline, causing serious cascading effects across ecosystems and business value chains. Many fruits, nuts and vegetables will be lost from our diets, but also other important raw materials and products, such as vegetable oils, cotton and flax, plant-based pharmaceutical and cosmetic products. In essence, pollinators play a crucial role in maintaining terrestrial ecosystems healthy and resilient, which in turn deliver essential services to our businesses and society at large.

Pollinators – such as bees, hoverflies, moths, butterflies and beetles (Figure 1) – are declining dramatically around the world, and Europe is no exception [1, 2]. Many species are threatened with extinction creating a pollination deficit [3]. This puts managed and natural ecosystems functioning at risk, with businesses facing possible serious shortages of raw materials, a decline in crop quality and challenges with the security of the supply chain.

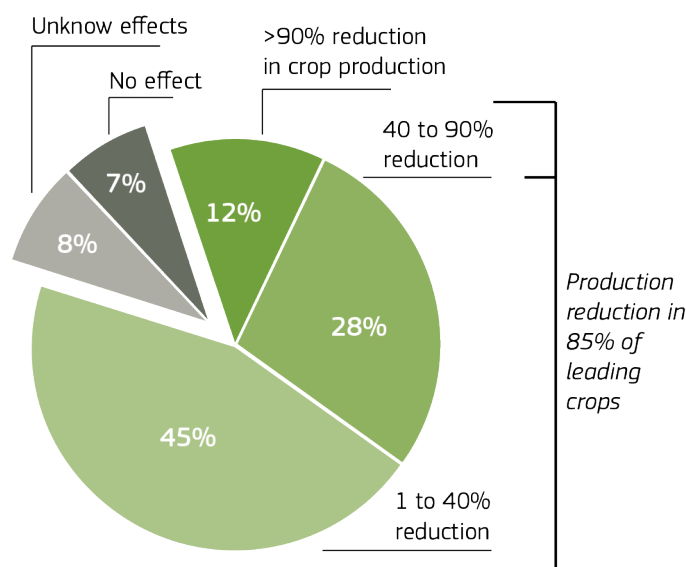


Figure 1. A snapshot of the diversity of wild pollinators

1.1. Importance of pollinators crop production

More than three quarters of the leading types of global food crops, occupying 33-35 per cent of all agricultural land, rely to some extent on animal pollination for yield and/or quality [4] (see Figure 2). Furthermore, it is expected that total pollinator loss would decrease crop production by more than 90% in 12% of the leading global crops [6].

³ **Pollination** is the transfer of grains of pollen between flowers which enables the reproduction of flowering plants (both wild and domesticated). Without animal pollinators, many plants cannot set seed and reproduce. When humans benefit directly from this function, pollinators thereby deliver a free pollination service.



Copyright © 2016, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Figure 2. Percentage dependence on animal-mediated pollination of leading global crops that are directly consumed by humans and traded on the global market [6].

For a large proportion of primary producers, reduced crop production due to the disappearance of pollinators would put businesses at great risk. This will particularly affect those dependent on monoculture, pollinator-dependent crops. In addition, pollinator decline influences the nutritional and economic value of our food. It is estimated that pollinators make an annual contribution of around €142⁴ billion to the global economy (a service that is predominantly provided for free) [7].

In addressing the challenge of wild pollinator decline, it is important to note that **quick fixes such as pollination by single managed species (a honey bee or a bumblebee) are risky band-aid solutions that do not provide a long-term sustainable alternative to a diverse community of wild pollinator species.** Species richness and abundance of wild pollinators underpin effective and stable crop pollination over time and space, thereby safeguarding the quantity and quality of crop yields. Maintaining a diverse wild pollinator community ensures that plants will be pollinated even in cases where certain species fail to perform. It will also provide resilience to dynamic agricultural environments and acts as a buffer against extreme future environmental and climatic fluctuations, such as those expected to occur in the context of climate change. While measures promoting pollination by managed pollinator species can play a role in specific cases in the short-term (for example in biodiversity-deprived areas), they are costly and do not present a sustainable solution in the longer-term. Evidence shows that investing in the conservation and creation of pollinator habitats around pollinator-dependant crops is a much more worthwhile and preferred investment [7], especially because it enables the rendering of (wild) pollination services for free [8] and in a more effective and efficient manner than single managed species.

Difference between wild bees and honey bees

Honey bees and wild bees are often both included when bee conservation and campaigns are conducted. Obviously, the two have much in common, however, there are key differences. Conversely, there are around 2,000 bee species in Europe, and the honey bee is just one of them. Although some feral honey bee colonies can be found, most honey bee colonies are bred by beekeepers (managed honey bees) for the production of honey and other products. Therefore, honey bee occurrence and density depend on the locations of bee hives, which is determined by beekeepers, with individuals feeding on the many different types of flowers available around the beehive.

⁴ €130 billion according to Stathers (2014)

Wild bees, on the other hand, can be as generalists as honeybees, feeding on many different types of flowers, whilst others are specialists and exclusively feed from one or a small number flowering plant species. In addition, wild bees usually occur in lower densities, but because they are more diverse they have a much more diverse ecological role, feeding and making their nests in many different habitats. In fact, high honey bee density can negatively impact wild pollinators including pollinator-plant networks [9].

While some crops and wild flowers can be pollinated by honey bees and wild bees, several crops and flowers (such as legumes) can only be pollinated by specific wild bees. In general, wild bees are more effective and efficient pollinators than honey bees [10, 11]. Also, unlike honeybees, wild bees provide this service for free. Even though honey bees certainly have a role to play, maintaining a species-rich wild pollinator community is the key to securing a long-term sustainable pollination service.



- Honeybees can be wild, but they are often farmed artificially for human purposes such as honey production - they are the only bees that produce honey.
- Honeybees live in large colonies with thousands of other bees in their family. Some wild bees such as bumblebees live in small colonies (of 50-200 bees) but most are solitary animals without a colony.
- There is only one species of honey bee in Europe but there are nearly 2000 species of wild bees.



In addition to the impact on farmers' crops, the loss of wild pollinators will also lead to severe blockages in the provision of societal benefits by our already fragile ecosystems. The reduced growth of specific pollinator-dependent vegetation on a mountain slope, for example, could lead to an increased erosion effect. In order to maintain our ecosystems and landscapes healthy, wild pollinators are crucial allies. Species-rich grasslands for instance, deliver many ecosystem services⁵ such as water supply and flow regulation, carbon storage, erosion control, climate mitigation and cultural ecosystem services, and their health depends on pollinators. There are no feasible alternatives to species-rich pollinator communities that can work on a large spatial and temporal scale. Thus, both businesses and society need to step up efforts to protect them.

⁵ Ecosystem services: the benefits to humans derived from nature, with pollination being the free service provided by wild pollinators.

1.2. Site and value chain impacts

Today, the term ‘supply chain’ or ‘value chain’ is central, not just to a company’s business performance, but also to its environmental performance, reputation and risk profile . For many types of business sectors, including the agri-food and beverage industries, most environmental and social impacts occur in the value chain, as opposed to their direct operations (such as their associated offices and stores). The link between the key drivers of biodiversity loss and the value chain is shown in Figure 2.

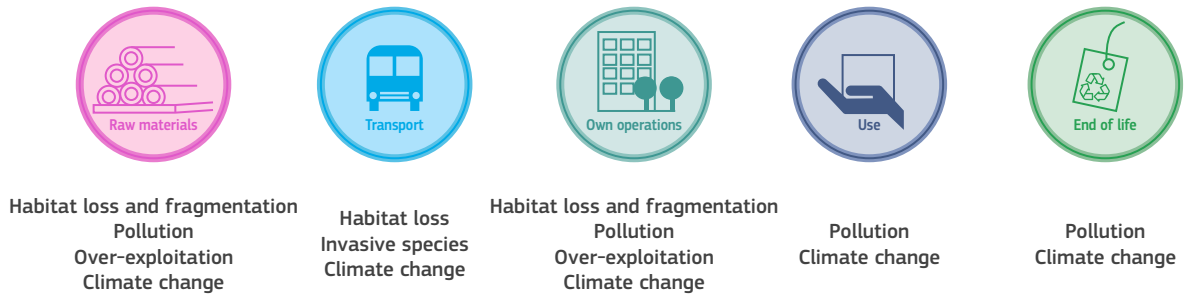


Figure 3. Value chain link with key drivers of biodiversity loss © Arcadis Belgium

As companies are being pressed to account for those impacts, they are turning to their supply chain to disclose information in order to monitor and reduce impacts. This includes keeping track of where materials come from, under what conditions they are mined or manufactured, where and how things are made, how products are packaged, transported, used and disposed of. This information is subject to scrutiny by stakeholders, investors and regulators alike [12]. Understanding the full environmental footprint of products has become a critical challenge for the private sector and associated players such as manufacturers and retailers. Advances in accounting and reporting methodologies will enable companies to identify suppliers that perform best in relation to reducing resource dependence, social and environmental impacts. This will, in turn, allow companies to encourage suppliers to cost-effectively manage risk and opportunity in their own supply chains and product development [12].

Depending on the sector, the ratio of environmental costs due to direct emissions versus their supply chain impacts varies. As shown in Figure 3, the highest supply-chain environmental impacts occur in the food and beverage industry (92%), with retail (83%) and tourism (travel and leisure – 70%) following just behind.

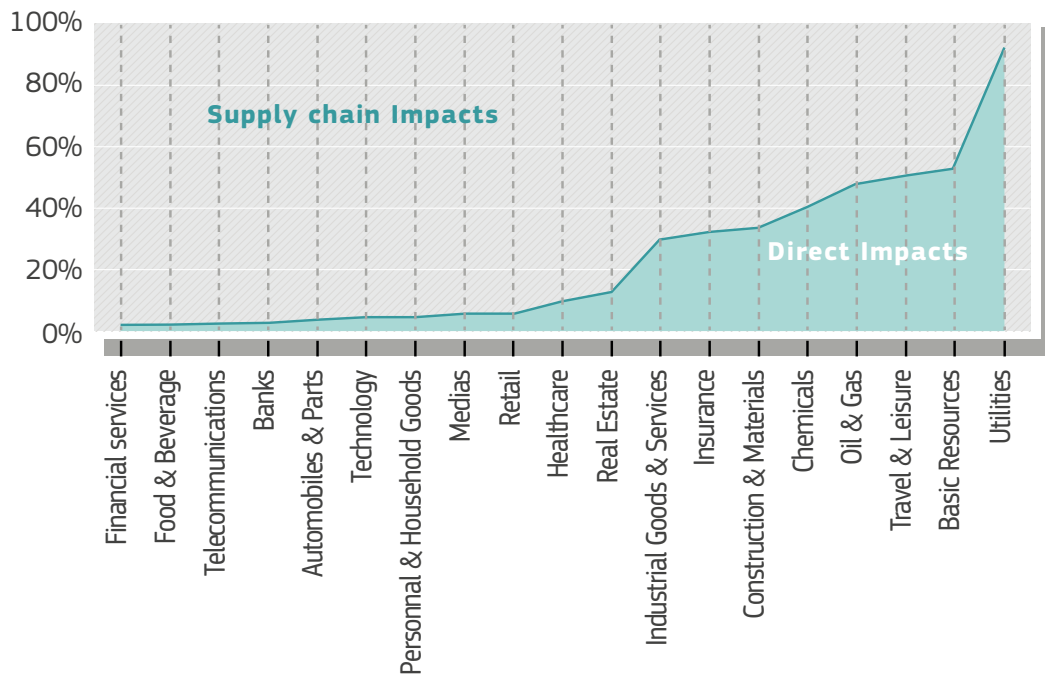


Figure 4. Percentage of site vs. supply chain impacts by sector. Reprinted from GreenBiz, by Bernick, L., 2015, Retrieved from <https://www.greenbiz.com/article/5-ways-apply-natural-capital-valuation-your-business> © 2015 GreenBiz



2. WHY DO POLLINATORS MATTER TO YOUR BUSINESS ?

Managing a business at any value chain level and the ecosystem services involved implies evaluating risks and opportunities at various levels: operational, regulatory and legislation, marketing and reputation, financial and societal. Table 1 shows the risks and opportunities related to wild pollinator protection that are relevant for the agri-food and beverage sector.

For the agri-food and beverage business, its products are to a large extent based on pollinator-dependent biomass, making it only logical to invest in a sustainable supply. Therefore, it is paramount for this business sector to work towards restoring pollinator populations to healthy levels, thereby creating gains through increased yields [13] and higher quality crops. This assures the supply of the business' products, by preserving the integrity of raw materials, and helps prevent economic losses. Restoring pollinator habitats will also provide other environmental and social benefits and assist the company in building/maintaining a good rapport with the public. The latter can also translate into direct benefits, such as hiring and maintaining highly-skilled workforce.

Most importantly, the sector is well placed to act positively and effectively for wild pollinator populations, as companies in agri-food and beverage businesses have the potential of becoming game-changers in turning the reversal of pollinator decline into a broad range of opportunities.

Mondelez International's Harmony Wheat programme is based on partnerships with local farmers who commit to a Charter of good agricultural practices that are beneficial for wild pollinators. In return, the company pays premium prices per ton of wheat that is grown in compliance with this Charter.

Interested in what other front-runners are doing? See Chapter 4

Spadel, partnering with BeeOdiversity, used bees as samplers to monitor the quality of the environment and biodiversity on its water catchment areas. Being able to demonstrate the quality of both water and biodiversity, Spa got in the position for marketing on great purity and preservation of its water.

Interested in what other front-runners are doing? See Chapter 4

Schwartauer Werke distributed 500,000 sachets of bee-friendly seed mixture for gardens to the public.

Interested in what your business can do? See Chapter 3



	Risks	Opportunities
Operational Regular business activities, expenditures, and processes	<ul style="list-style-type: none"> Disruption of pollinator-dependent biomass supply chain, impacting the business sourcing and procurement process. Alternatives to wild insect pollination entail high costs and are less effective and efficient, if at all feasible. 	<ul style="list-style-type: none"> Assure the sustainable supply of pollinator-dependent crops. Provision of other ecosystem services and associated benefits (for instance, by linking water and carbon management with pollinator-friendly actions).
Legal and regulatory Laws, public policies, and regulations that affect business performance	<ul style="list-style-type: none"> New pollinator strategies⁷, including legislative elements Increased compliance costs (for example, due to future ban on the use of certain pesticides). 	Reduce compliance costs and/or other costs by: <ul style="list-style-type: none"> anticipating negative impacts, for example, the use of pesticides; being proactive on compensation measures; embedding pollinator risk identification within the supply chain management and certification schemes (for instance, ISO14001).
Financing Costs of and access to capital including debt and equity	Increased financing costs (higher interest rates or harsher conditions), due to increased interest of the finance sector in how businesses in which they invest are dependent on ecosystems services such as pollination.	<ul style="list-style-type: none"> Gain or maintain investor interest and confidence, which can improve access to finance and/or reduce financing costs. New “green funds” may become available. New environmental markets might emerge (for instance, carbon offsets, habitat credits etc.).
Reputational and marketing Company trust and relationships with direct business stakeholders	<ul style="list-style-type: none"> Changing customer values or preferences may lead to reduced market share. Public campaigns, for example, negative publicity on companies developing or using pesticides. Increased staff turnover which in turn leads to higher recruitment and retention costs. Reduced loyalty of key suppliers or business service providers. 	<ul style="list-style-type: none"> Maintain a good relationship with direct business stakeholders, such as customers, suppliers and employees. Improve physical and mental wellbeing of employees. Improve ability to attract and retain employees. Emerging environmental markets and products may offer new revenue streams (e.g. carbon offsets, habitat banking etc.). Growing demand for credibly certified products (for example, eco-labels, pollinator-friendly production labels, etc.), which a bee-friendly production process could qualify for. Differentiating the business to key customers who demand strong sustainability commitments in an increasingly competitive market.
Societal Relationships with the wider society	Local communities may hold the agri-food and beverage sector responsible for the decline of wild pollinators and the loss of benefits they provide to the society.	Local communities may benefit from other improved ecosystem services that come along with the implementation of pollinator-friendly measures, e.g. through improved recreational access to green areas, cleaner air and improved regulation of water flows.

Table 1. WHY pollinating insects matter to your business and WHAT to do (risks & opportunities for the agri-food and beverage sector that are of key importance and sector-specific are highlighted in green.

⁵ Promote Pollinators, Coalition of the Willing on pollinators (<https://promotepollinators.org/>)



3. WHAT CAN YOUR BUSINESS DO ?

3.1. Value chain actions

The agri-food and beverage sector is well placed to contribute towards reversing the decline of wild pollinators. Specifically, the sector can play a big role in convincing its suppliers and farmers to take action directly in the fields⁸, for example through the creation of multifunctional field margins and patches of flower-rich habitat, as well as the reduction of pesticide use. The sector can also increase awareness of stakeholders (for example, customers, financiers, regulators) that are relevant for the supply chain (See example of Mondelez International in Chapter 4). As such, the sector can lead by example by showing how the food and raw materials it relies on are produced and which production practices are rewarded.

Locate critical issues across the entire value chain

A first step for the company is to get good insight into the stakeholders that are part of the supply chain of its products. It must be acknowledged that it may take some effort for the company to know exactly where its products are coming from and how natural resources are used at every step of the production process. Furthermore, harvesting this information from farmers could potentially increase purchasing costs. However, in the end, knowing this will reduce several of the risks that were highlighted in Table 1. For example, it may work by introducing a label or a certificate that justifies a higher price for consumers. In addition, taking actions to protect wild pollinators can be employed as a marketing strategy with biodiversity-friendly products being a way of differentiating the business from its competitors.

Sometimes it may be very challenging to know the origin of resources. In those instances it may be beneficial to build alliances with peers and competitors (for example, the Consumer Goods Forum) to add legitimacy when acquiring this information from the supply chain. Several organizations, including NGOs, have organised frameworks and instruments that can help your company to evaluate the environmental risks associated with their supply chains⁹. Some examples include:

- **World Wildlife Fund (WWF)** offers more than 50 performance indicators for measuring the supply-chain risks associated with the production of a range of commodities, as well as the probability and severity of those risks¹⁰.
- **The Sustainability Accounting Standards Board** has developed standards that help public companies across ten sectors, including consumer goods, to give investors material information about corporate sustainability performance along the value chain¹¹.
- **CDP** and the **Global Reporting Initiative** have created standards and metrics for comparing different types of sustainability impact¹².

Understanding and knowing your supply chain in detail, will allow your business to deploy effective and well-targeted actions for the conservation of wild pollinators. This will also enable the assessment of the dependency of the business on pollinators. Thus, it is fundamental to acquire this information if the business aims to take the path towards sustainability. Surprisingly, a study by UNEP-WCMC [14] showed that less than half of the companies involved in the study knew which of their raw materials are dependent on pollinators. Moreover, there was a lack of awareness about which crops were at risk due to pollinator decline.

In order to help resolve this issue, UNEP-WCMC [14] developed a five-step roadmap (Figure 4) to enable sustainable pollinator management within supply chains. This allows businesses to consider the risk that the supply of their priority crops will decrease and/or production prices will rise.

⁸ See also 'A guide to pollinator-friendly farming' by Keenleyside (2020), guidance prepared by the Institute for European Environmental Policy (IEEP) for the European Commission.

⁹ <https://www.mckinsey.com/business-functions/sustainability/our-insights/starting-at-the-source-sustainability-in-supply-chains>

¹⁰ https://www.wwf.sg/business/supply_chain_risk_analysis_cfm & <https://supplyrisk.org/our-analysis>

¹¹ <https://www.sasb.org/standards-overview/>

¹² <https://www.globalreporting.org/>



Figure 5. Roadmap towards sustainable pollinator management in the private sector. Reprinted from 'The pollination deficit: Towards supply chain resilience in the face of pollinator decline', 2017, retrieved from <https://www.cisl.cam.ac.uk/resources/publication-pdfs/the-pollination-deficit.pdf> (c) 2017 by Cambridge Institute for Sustainability Leadership, Fauna & Flora International, University of East Anglia, & UNEP-WCMC [14]

Assist suppliers in managing their agricultural landscape to support rich biodiversity

An agri-food and beverage company can audit suppliers to determine if they are taking appropriate measures for maintaining or restoring wild pollinator populations while assisting them with managing their impacts.

The sector can take steps to convince farmers to diversify their agricultural landscape and increase habitat heterogeneity, for example by rewarding them with long-term contracts or funding. Measures taken in the supply chain, such as funding the implementation of multifunctional field margins between agricultural fields and ensuring sustainable management of existing farmland habitats (for example, flower-rich semi-natural permanent grasslands), can support wild pollinators (especially in landscapes dominated by intensive agriculture¹³). By investing in ecological infrastructure, direct economic advantages can often be obtained¹⁴. In order to achieve this, the business sector can:

- **prioritize species-rich pollinator communities for the delivery of pollination services.**
- **work with farmers and draw attention to the benefits of agroecological practices¹⁵, which nurture rich agrobiodiversity, for example by supporting farmer field schools.**
- **influence the supply chain to decrease the use of pesticides, by adopting integrated pest management (IPM) practices [15] and direct them to take pollinator-friendly actions, for instance through introduction of environmental policies that include measures to protect wild pollinators;**
- **consider to develop software aimed at collecting data on whether farmers adopt sustainable practices in their supply chain and advising them on steps they can take towards more environmentally-friendly production.**

To reinforce efforts like these, companies should monitor suppliers' sustainability performance and hold them accountable for it. Once companies know where their supply-chain issues are, they can set goals for lessening their impacts. Ultimately, consumer-based companies can only achieve ambitious sustainability goals if they set high standards for their suppliers' performance and stop doing business with suppliers that fall short.

¹³ Countries and farmers with pollinator-dependent monoculture are the most vulnerable in terms of the pollination deficit

¹⁴ By investing in natural infrastructure or services provided by ecosystems as an alternative to grey infrastructure, businesses harvest the strengths and benefits of nature, diversify their risk management strategies and improve their company's capacity to adapt to climate change. Above all, natural infrastructure brings direct economic advantages, from capital cost savings, reduced operational and maintenance costs, to innovation. (Source: <https://www.naturalinfrastructureforbusiness.org/about/>)

¹⁵ Oberč, B.P. & Arroyo Schnell, A. (2020). Approaches to sustainable agriculture. Exploring the pathways towards the future of farming. Brussels, Belgium: IUCN EURO

Other possibilities to enhance the implementation of pollinator-friendly measures down the supply chain are to reward suppliers for good practices, for example by offering suppliers long-term contracts tied to commitments related to delivering rich biodiversity on their land and providing diverse habitats for pollinators. Long-term contracts enable the suppliers to invest in long-term measures which is crucial to reverse the negative trends of pollinator populations.

The sector could also invest in research:

1. to improve the efficacy of pest management in pesticide-free and farming systems, as well as
2. to investigate avenues to effectively deploy agroecological principles and practices, including ecological infrastructure, in order to sustain beneficial biodiversity while assuring farm profitability and yields, and
3. to quantify the indirect (and sub-lethal) effects of genetically modified crops on pollinators [15].

Specifically for the beverage sector, there are substantial opportunities to enhance biodiversity and ecosystem services in their water catchment areas. By implementing adequate measures to improve water infiltration and to ensure high water quality (for example, by avoiding pesticides), the company can reduce the risk of limited water supplies and high-water treatment costs in the future. Further, companies can utilise pollinators – good indicators of pollution – to measure the presence of contaminants in the environment and use this information to help improve the quality of their water resources.

In order to contribute to improving the state of pollinators, cooperation with NGOs and/or academics is strongly recommended. It is considered a best practice to involve these expert stakeholders when drafting and implementing actions for pollinators, whether they focus on a company's site or the supply chain. See example of Spa Monopole in Chapter 4 as an example of cooperation with local NGOs.

Monitor and evaluate the impacts of your actions on wild pollinators

In order to assess the impacts of any taken action to protect wild pollinators, it is fundamental that businesses ensure systematic monitoring of the impacts of such measures. This will allow the companies to track the extent to which their goals were achieved, while gaining invaluable insight on how to improve future actions. Monitoring can be also a valuable management tool for project managers to track progress towards achieving outputs: planned activities and set milestones across a value chain.

In order for business' efforts to be recognized, local partners (such as NGOs, research institutions) could be crucial to assist with the monitoring of the efforts on the ground and with the evaluation of action plans. They can also help with the design of conservation measures and strategies if no in-house knowledge is available.

Encourage the entire value chain to act

In order to make a value chain green, a company needs to consider all activities within the value chain namely design, supply, production, assembly, packaging, logistics, distribution, marketing, after-sales and appropriate product disposal.

Improving the value chain performance with environmental solutions will result in the reduction of energy consumption, environmental accidents, air emission, waste, etc. Companies should ensure that their products and operations cause the least damage to the environment during the whole product's life cycle via green purchasing, green design, internal environmental management, green production, environmentally-friendly packaging and transportation. Reverse logistics activities such as reuse, remanufacture and recycle that are used at the end of product's life cycle contribute to the sustainability of products. [16]

Green value chain solutions can help companies to improve corporate image, employee satisfaction, customer loyalty/satisfaction and better relations with stakeholders, while positively impacting overall biodiversity and ecosystem services.

3.2. Site/local level actions

While the previous chapter focused on sector-specific actions, this last chapter gives an overview of measures that can be applied to all business sectors, since they target individual business locations (for example, the premises of a business' headquarters or an industrial facility), as well as the company's properties that have not yet been developed for business purposes.

Action within companies' grounds

Businesses can draw up a long-term action plan, alongside a management plan, that identifies and protects the areas on the company's premises that are already providing food (for example, patches of wildflowers, weeds or flowering hedgerows) and shelter (like bare soil, long grass and dry-stone walls) for wild pollinators. In order to ensure pollinator-friendly management, the following actions are key:

- **Reduce mowing frequency to create species-rich grasslands. Natural habitats can be further supplemented by artificial ones (for instance, bee hotels).**
- **When planting for pollinators, use native species (like seed mixes, clovers, bulbs, trees and shrubs). Ensure that wild pollinators have foraging resources during the whole vegetation season.**
- **Ensure connectivity with surrounding areas of green infrastructure and nature importance by creating grasslands and other types of vegetation that support rich biodiversity.**
- **Avoid and control the spread of invasive alien species¹⁶, both plants and animals.**
- **Consider the construction of green roofs and walls¹⁷, as they can provide considerable feeding ground for wild pollinators.**
- **Reduce light pollution, as artificial light can negatively affect insect populations.**
- **Adopt a pollinator-friendly management protocol and do not use pesticides (insecticides, fungicides and herbicides), as these can be harmful to wild pollinators.**
- **Ensure contractors that manage the company's land are aware of the company's intentions to enhance wild pollinators and how this should be realised.**

It is recommended that businesses partner with local NGOs/authorities or experts to include biodiversity and ecosystem services at the design stage of the company's site. They can also help with development of key performance indicators (KPIs) and, as it was already mentioned, with monitoring, reporting and evaluation of outcomes. The company could, for example, monitor the presence and diversity of local pollinator species at the company's site and the wider environment either through local partnerships or by engaging in local citizen science programmes¹⁸.

These actions within the companies' grounds can benefit wild pollinators and overall biodiversity most when they are applied early in the design stage of the company's site when the landscaping and infrastructure features are still open for creativity. **When securing habitats for wild pollinators, the main guiding principle is to let nature regenerate on its own.** This can be complemented by additional planting of native flowers seed mixes, if/when needed.

¹⁶ See also 'Managing invasive alien species to protect wild pollinators', technical guidance prepared by IUCN (2019) for the European Commission.

¹⁷ See also 'A guide for pollinator-friendly cities: How can spatial planners and land-use managers create favourable urban environments for pollinators?' by Wil et al. (2019), guidance prepared by ICLEI Europe for the European Commission.

¹⁸ Reference to Citizens for pollinator conservation guidance

Generic actions which do not require any land holding

It is recommended for businesses to embed pollinator-friendly actions into the company's strategy and daily operations:

- **Integrate pollinator-sensitive practices into the company's environmental management system and/or other certification schemes or standards.**
- **Introduce internal biodiversity policy commitments that include measures to improve pollination. For example, by implementing a biodiversity- or pollinator-friendly purchasing policy, the business can direct its suppliers to reduce the negative impacts on pollinators.**
- **Link the business' strategy to national and international biodiversity policy (including the EU Pollinators Initiative) and to the SDGs¹⁹ (namely SDG 15 "Life on Land", SDG 2 "Zero hunger" and SDG 12 "Responsible consumption and production").**

In addition, the company can invest in projects to restore, create and connect pollinator habitats to reduce the environmental footprint of their buildings and operations and obtain general environmental benefits (reduced solid waste and wastewater, less pollution, energy efficiency etc.) and implement green procurement. Overall, these improvements will benefit nature and wild pollinators alike.

Also, the company can take efforts to **raise awareness** of:

- **the local community:** sponsor creation/restoration of pollinator habitats or arrange an expert to give a training/lecture on the conservation of wild pollinators;
- **the business' workplace:**
 - » organise pollinator awareness training sessions or workshops for employees (for example, on how to ensure their own gardens are pollinator-friendly, or how to observe and record wild pollinators in order to help monitoring efforts);
 - » include environmental considerations at each stage of the procurement process of goods, services and works (i.e. green procurement);
- **the business sector:** share your experiences regarding the implementation of pollinator-friendly measures with the EU Business @ Biodiversity Platform²⁰ at relevant conferences or seminars, and/or through social media using the #EUPollinators.

¹⁹ <https://sdgs.un.org/goals>

²⁰ https://www.iucn.org/sites/dev/files/styles/850x500_no_menu_article/public/import/img/logo_bb.jpg?itok=dab29yRb



4. WHAT ARE FRONT-RUNNERS ALREADY DOING ?

This section presents a limited, non-exhaustive set of examples of businesses taking action for pollinators, to illustrate the diversity of potential actions that could be uptaken by the agri-food and beverage sector. The list has been generated by consulting the members of the EU Business and Biodiversity Platform²¹, and through literature review.

MONDELEZ INTERNATIONAL

Company: Mondelez International is one of the largest snack companies in the world, operating in more than 80 countries. The company makes and sells primarily snacks (sweet biscuits, crackers and salted snacks), chocolate, gum and candy, as well as various cheese, grocery and powdered beverage products. They are the largest biscuit producer in Europe with brands such as LU, belVita, Fontaneda, Oro, Prince, Barni, Belin, Tuc, LiGA and Opavia.

Action:

- Mondelez International is working to build a thriving ingredient supply chain to ensure sustainable supplies of high-quality cocoa, wheat and other raw materials to create its snacks. To achieve this, they have developed the 'Harmony Wheat' programme in 2008, aiming to generate a positive impact on the farms, communities and environments where the company's main raw materials are grown by improving local conditions and farming systems. The program today involves nearly 1,600 farmers across Europe, who grow wheat according to the Harmony charter to supply the biscuit factories of Mondelez International.
 - » Harmony is based on partnerships with local farmers who commit to a Charter of good agricultural practices that is beneficial for biodiversity, water, soil and other natural resources. The Harmony Charter includes: the establishment of melliferous crops (3% of each plot), allowing pollinating insects to feed throughout the year; the planting of new hedges or completing of existing hedges; at least one territorial action, such as the implementation of nesting boxes for wild bees or field counting of butterflies.
 - » The company pays premium prices per ton of wheat that rewards the efforts required to comply with these Harmony specifications. In 2018, Harmony farmers in Europe sowed 1,028 hectares of flowers around Harmony fields to the benefit of wild pollinators. Mondelez organizes bee and butterfly counts on a protocol developed in partnership with the French NGO Noé and OAB (French biodiversity organization).
- The company is part of the Agribusiness and Agroecological Transition club (AGATA), a think tank co-piloted by CDC Biodiversity (Caisse des Dépôts subsidiary) and Noé, with the objective to co-build tools, methods or experimental projects with the contribution of specific expertise related to biodiversity and the direct involvement of the food industry.

Benefits for Mondelez International:

In France, the communication around the program enabled Mondelez International to grow sales value of biscuits brands. The company also observed that instore communication produced an increase on the purchase intent between consumers who know the Harmony program and those who don't. The company also observed that consumers who know the Harmony program have a better perception of the brand (i.e. made with high-quality ingredients, in an eco-friendlier manner, caring about the environment etc.). According to Mondelez International, the integrated supply chain pays off economically for them. As such the company differentiated its business to key customers who require strong sustainability commitments in an increasingly competitive market.



©Mondelez International

²¹ https://ec.europa.eu/environment/biodiversity/business/index_en.htm

Advise for other companies:

- Develop biodiversity programs with the entire sector: farmers, cooperatives and mills. This makes it possible to make all actors commit to feasible and effective practices.
- Support the agronomic services of cooperatives, to allow farmers to be advised on the right seed mixes or to help them obtain European aid in the implementation of agroecological measures.
- Surround yourself with NGOs, technical and institutional partners and be part of a think tank. You can learn from each other.

More info:

Email correspondence with Mondelez International

<https://www.harmony.info>

<https://ir.mondelezinternational.com/news-releases/news-release-details/mondelez-international-expands-its-sustainable-wheat-program>

<https://www.mondelezinternational.com/News/Harmony-Wheat>

https://ec.europa.eu/environment/biodiversity/business/news-and-events/news/news-84_en.htm

SPA MONOPOLE (SPADEL)

Company: Mondelez International is one of the largest snack companies in the world, operating in more than 80 countries. The company makes and sells primarily snacks (sweet biscuits, crackers and salted snacks), chocolate, gum and candy, as well as various cheese, grocery and powdered beverage products. They are the largest biscuit producer in Europe with brands such as LU, belVita, Fontaneda, Oro, Prince, Barni, Belin, Tuc, LiGA and Opavia.

Action:

- For 130 years, the company has been running an extensive programme to protect the environment and the water resources of Spa that consists in stopping all agriculture, farming and industry in the water catchment area. For Spa Monopole it was instrumental to demonstrate the positive impact of the measures taken for biodiversity and the environment in general. Spadel's business's operations depend directly on the groundwater purity which in turn relies on the quality of the environment at the water capture zones. One element of the programme was the evaluation of the level of atmospheric pollutants such as heavy metals and pesticides. Putting a monitoring system in place (involving much manual labour), however, has proved to be challenging.
- In the search for a solution, Spa Monopole has been working with the local societal company BeeOdiversity since 2014 and launched the BeeSpa project. This project aims at improving the quality of environment and biodiversity, the wellness of wild pollinators and honey bees, as well as monitoring the success of the measures implemented. As part of the project, eight colonies of honey bees in beehives were placed along the natural mineral water protection area of Spa. The bees became the samplers to monitor the quality of the area through the pollen they collect. In addition, 5,000 hectares benefited from ca. 400,000 pollinator-friendly plants.

Benefits for Spa Monopole:

- By analysing the pollen brought back by the bees to the beehives, the presence of any contaminants (including pesticides) could be monitored, making it possible for Spa to design and implement risk management plans to improve the quality of water. As an additional benefit, based on the results, Spa could be advised by its partnering NGO BeeOdiversity on measures to take to further improve the state of the environment and, more specifically, improve the habitats that are important for pollinators.
- Being able to demonstrate the quality of both water and the natural value of the area, Spa was able to market great purity and preservation of its water. For example, a short video²² was made to promote the BeeSpa project and its good results. It is also a great tool for raising awareness internally and externally (stakeholders) about environmental, biodiversity and water preservation.

²² <https://www.youtube.com/watch?v=CwqF7eBXzrk>

In summary, this project provided four main benefits for the company:

1. A quick and easy way to monitor and manage the risk in the catchment area of their natural mineral waters.
2. A communication, dialogue and awareness raising tool for their staff and stakeholders (authorities, citizens, scientists, media, NGOs etc.).
3. Alignment between their sustainable commitments and strategy.
4. A marketing tool to further strengthen the reputation of the Spa brand.

**More info:**

Email correspondence with Spadel

<https://beeodiversity.com/en/project/spadel-2/>

<http://www.spadel.com/le-developpement-durable>

http://www.spadel.com/userfiles/pdf/609_BeeSpa%20persbericht_biodiversiteit.pdf

SCHWARTAUER WERKE

Company: Schwartauer Werke is a German food company that produces fruit products, baby food, muesli and fruit bars.

Action:

In 2014, understanding how the decline of pollinators could affect the company's supply chain, Schwartauer Werke launched a "bee careful" initiative. The aim of the initiative is to raise awareness of employees and wider society to the importance of bees and to contribute to the protection of bee health.

Since launching the initiative, several actions were taken :

- The Schwartau-Samt-Kampagne (2017): 500,000 sachets of bee-friendly seed mixture for gardens or balconies were distributed along with comprehensive information on bee-friendly plants and a plant guide on the initiative's website;
- Construction of 16 wild bee hotels at selected German fresh fruit suppliers;
- Training of employees to become Schwartau beekeepers, as a gateway for the employees to take an interest in biodiversity;
- Organisation of a "Bee day" in Bad Schwartau to raise awareness within the local community and to help educate people on the importance of bees;
- Training of talented young beekeepers in the context of the "Summer Bee" school project, to support schools in environmental education.

More info:

https://www.schwartau.de/home/sites/de.schwartauer-werke/files/SW_Nachhaltigkeitsbericht_2017_6.pdf

<https://www.schwartau.de/home/bee-careful>



5. FURTHER READING

EU Pollinators Initiative:

- <https://ec.europa.eu/environment/nature/conservation/species/pollinators>
- EU Pollinator Information Hive: <https://wikis.ec.europa.eu/display/EUPKH/EU+Pollinator+Information+Hive>
- https://ec.europa.eu/environment/biodiversity/business/news-and-events/news/news-84_en.htm

IPBES reports:

- <https://ipbes.net/global-assessment-report-biodiversity-ecosystem-services>
- <https://ipbes.net/assessment-reports/pollinators>

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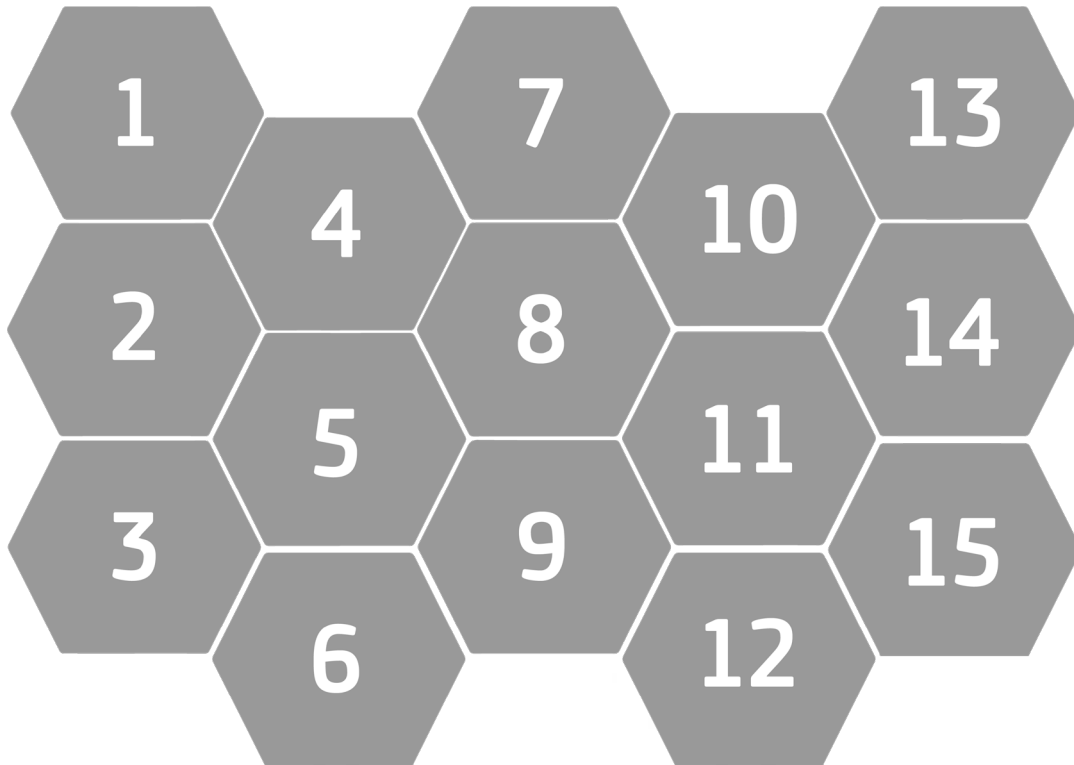
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Annex I



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