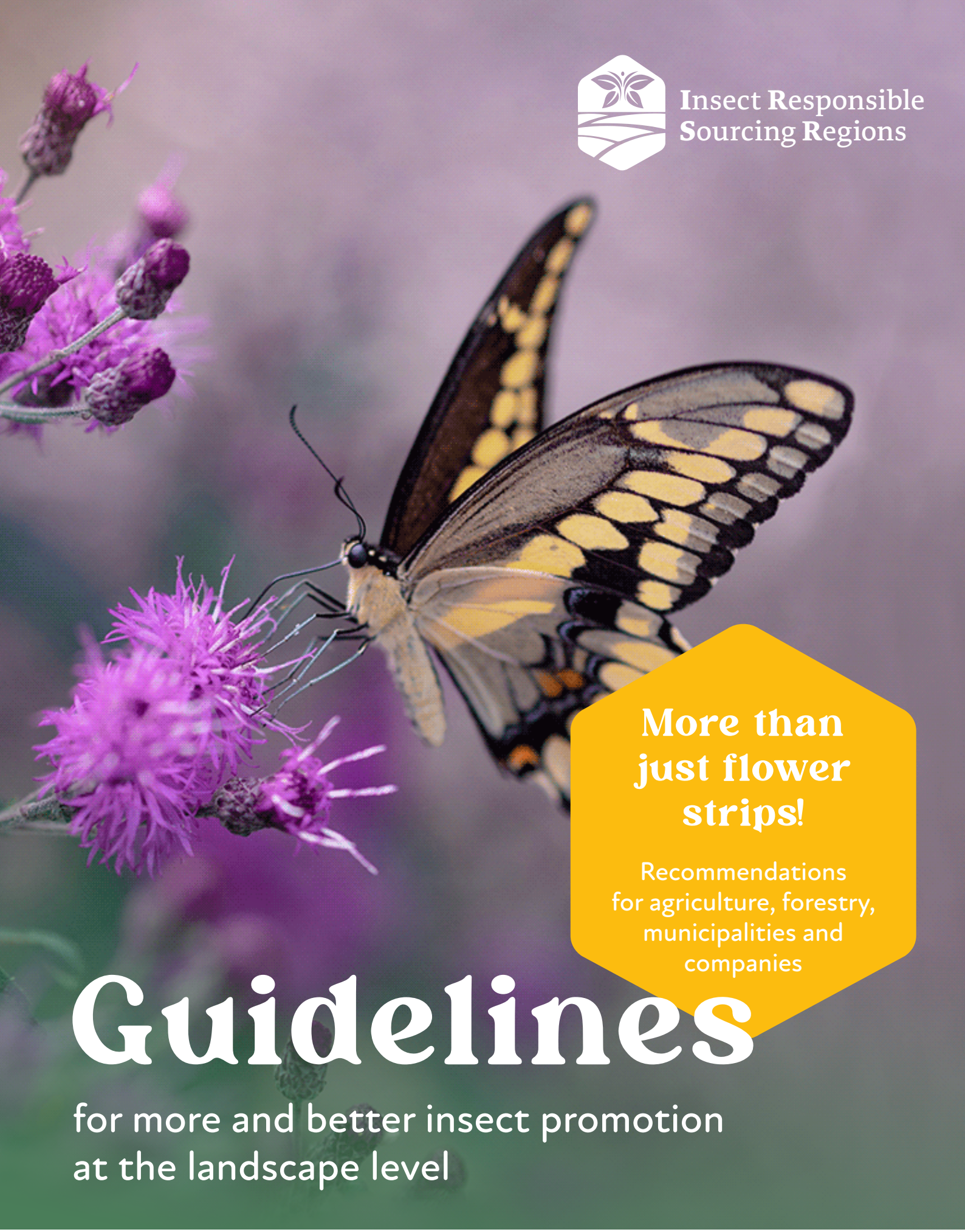

Insect Responsible Sourcing Regions

More than just flower strips!

Recommendations for agriculture, forestry, municipalities and companies

Guidelines

for more and better insect promotion at the landscape level

Life

Bodensee Stiftung
Lake Constance Foundation

Global Nature Fund

netzwerk blühende landschaft

BÄUERLICHE ERZEUGERGEMEINSCHAFT SCHWÄBISCH HALL

Nestlé
Good Food, Good Life

Project partners and funding

Project partners

Bodensee Stiftung
Lake Constance Foundation

BÄUERLICHE ERZEUGERGEMEINSCHAFT SCHWÄBISCH HALL

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Funding

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Life

DBU
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BODENSEEKREIS

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Sparkasse Bodensee

Stöckmann-Stiftung
Förderung von Umwelt- und Naturschutz

Cooperation partners

Kaufland

REWE GROUP

ORIGINAL Wagner

Contents

The path to an insect-friendly landscape

More and better support for insects at landscape level means creating a dense network of areas with habitats and food sources for insects in both rural and urban areas. Effective and efficient protection of insects and biodiversity as a whole requires a high density of point, linear and extensive habitat and feeding opportunities and their interconnection across agricultural and urban landscapes. Insect diversity needs more space!

More than five years of intensive project work in a total of seven „insect-responsible sourcing regions“ within the LIFE project „Insect-Responsible Sourcing Regions“ have resulted in five key success factors for a lasting and noticeable improvement in insect diversity and biodiversity in our cultivated landscapes.

1 PIONEERS

Innovative actors with intrinsic motivation. More and better insect promotion at landscape level starts with land use stakeholders who have intrinsic motivation for the protection and promotion of insects and biodiversity as a whole. These stakeholders serve as key starting points and hubs for enhancing nature conservation in rural areas. Innovative pioneers are needed.

2 DIVERSITY OF ACTIVITIES

Activation and coordinated interaction of land use actors. As many areas as possible in a landscape should provide food and habitat for insects. Therefore, as many land use stakeholders as possible must be motivated to cooperate and become active. Insect diversity needs a broad, active social basis!

3 COORDINATION

Coordination of stakeholders, measures and communication. A coordinating body is needed as a „caretaker“ to enable stakeholders to achieve the best possible results across multiple areas. Its main task is to organize the regular exchange of experience, the planning of measures, communication and skills development.

4 COMPETENCE

Insect expertise is the key to high-quality implementation. Measures to promote insects must be well selected, well planned and well implemented. This requires knowledge and expertise - both about insects and their needs as well as about suitable protection and support measures and their competent implementation. Because good intentions alone are not enough.

5 FINANCING

More biodiversity requires significantly more money than before. Effective stake-holder coordination requires stable and reliable funding. Land use stakeholders, espe-cially farmers, need financially attractive incentives to implement measures to pro-mote insects. Ideally, public funding should be complemented by financial contribu-tions from the food industry.

1 Insects determine our livelihoods

The loss of biodiversity is one of the major environmental crises of our time.

Biodiversity supports essential ecosystem services such as pollination, soil fertility, and pest control and is crucial for maintaining ecological balance. Insects form the foundation of the food chain, providing species-specific, essential services while also serving as a vital food source for many other animal species. For example, 80 % of wild plants and 75 % of the most important crops depend on insect pollination (Schade, 2018). Insects contribute to 35 % of global food production yields. In Germany, the economic benefit of pollination is estimated at around 3.8 billion euros per year (Lippert et al., 2021).

However, for decades, human activities have contributed to biodiversity loss through interventions such as intensive agriculture, chemical pollution, and land sealing, thereby endangering their own livelihoods. Studies like the „Krefeld Study“ by Hallmann et al. (2017) and the meta-analysis „Worldwide decline of the entomofauna: A review of its drivers“ by Sánchez-Bayo and Wyckhuys (2019) reveal alarming long-term declines in the biomass of flying insects. These findings highlight the urgent need for a collaborative approach to mitigate negative impacts that could further threaten insect populations.

Protecting insect diversity and promoting their habitats is fundamental to addressing the biodiversity crisis and taking responsibility for our environment.

2 LIFE Insect-Responsible Sourcing Regions

The goal: to create insect-friendly growing regions

The EU LIFE project Insect-Responsible Sourcing Regions (IRSR) aimed not only to further disseminate proven measures to promote pollinating insects in agriculture, but also to resolutely break new ground. In insect-responsible sourcing regions, a positive ecological effect is no longer limited to the individual farm. Landscapes benefit holistically and the concept is transferable to many growing regions in Germany and the EU.

Our regions: From Wendland to Vinschgau

Seven pilot regions took part in the project: Allgäu (Ravensburg, Allgäu districts), Bliesgau (Saarpfalz, Neunkirchen), Bodensee (Constance, Lake Constance district, Ravensburg), Hohenlohe (Schwäbisch Hall, Hohenlohe, Rems-Murr district, Main-Tauber district), Northern Upper Rhine (Karlsruhe, Rhine-Neckar district), Wendland (Lüchow-Dannenberg) and Vinschgau.

The LIFE IRSR project partners worked closely with farmers, the food sector, regional managers, and NGO representatives to develop tailored biodiversity action plans. These plans aim to create habitats and promote the best agricultural practices that sustainably minimize negative impacts on insects.

Our package of measures: A regional boost for insect protection

From the end of 2020 to 2024, the partners implemented a specific concept and a package of measures in each region:

Together with farmers in the pilot regions, the project partners developed practical biodiversity action plans and created **700 hectares of insect-friendly farmland**. This means less fertilizer, higher soil fertility and more biodiversity.

- In addition, **100 hectares of new insect-friendly habitats** were created.
- To increase insect protection expertise, farmers, advisors and certifiers were trained so that they can better assess the quality of the measures implemented.
- Experts documented the impact of the measures through annual monitoring. Citizens and farmers could participate in observing the insect population via citizen science.

3 Success factors for more and better insect promotion at landscape level

3.1 How does insect promotion work at regional level?

There is no single formula for creating a successful insect responsible sourcing region. However, based on several years of experience in Insect-Responsible Sourcing Regions in Germany and Italy, this guide offers recommendations on how to enhance insect conservation at the landscape level. Ideally, this will lead to a region that sustainably provides diverse food sources and habitats for insects in the long term.

An insect responsible sourcing region cannot simply be decided upon and then implemented. Rather, the objective is for more and more stakeholders to get involved in promoting insects and to start implementing measures with a professional foundation. In an insect responsible sourcing region, various land use stakeholders are active in the implementation of selective and area-effective measures to promote insects. Minimum sizes or proportions for insect-promoting measures and regions do not make sense. However, it can be helpful to use existing structures or administrative units (e.g. farm communities, municipalities, districts, biospheres, nature parks or similar).

In an insect-responsible sourcing region, a broad range of measures is implemented to support insect populations. The goal is to significantly and permanently improve conditions for insects and biodiversity as a whole.

The core ecological objectives of an insect-responsible sourcing region are:

- **More and better habitats for insects:** Preserve and improve existing habitats while creating new ones.
- **More and better food sources for insects:** Provide a greater, more diverse, and well-distributed food supply throughout the year.
- **Reducing chemical stress on insects:** Minimize the use of pesticides that are harmful to insects or their food sources whenever possible.

Biodiversity-friendly agriculture is a key pillar of a diverse and insect-rich cultural landscape. The way farmers manage their land has a decisive impact on the availability and quality of habitats, the food supply, and the level of chemical exposure. However, many other stakeholders can also contribute to protecting and supporting insect populations. Only through their collective efforts can a landscape's full potential for insect conservation be realized and gradually developed.

In an insect responsible sourcing region, the scope and quality of conservation and promotion measures will expand over time, in parallel with growing expertise. To enhance insect protection effectively and efficiently, measures must be carefully planned and tailored to the species present in the region and their specific habitat needs. Additionally, stakeholders and their activities must be well-coordinated. By adopting a landscape-level approach, synergies can be leveraged, and overall effectiveness can be increased.

3 Success factors for more and better insect promotion at landscape level

3.2 Pioneers – Leading by example

In the start-up phase of regional initiatives to promote insects, motivated and innovative land use stakeholders can play a crucial role. Through their commitment, existing implementation experience, and openness to new approaches, they lay the foundation for the development of a broad regional alliance. These stakeholders are often already engaged in biodiversity-promoting measures for insects or are willing to test innovative strategies on their land. Intrinsically motivated pioneers are typically highly persuasive, able to inspire and activate others through their dedication. They serve as essential starting points and hubs for advancing nature conservation in rural areas.

A key function of these actors is their ability to set an example. By maintaining or managing areas that promote insects, they offer tangible, locally experienced examples of success. Additionally, they often contribute valuable expertise and practical experience, which they can share with other interested parties. This creates a multiplier effect, where more and more people are motivated and convinced to actively contribute to insect and biodiversity protection.

Pioneers with strong intrinsic motivation can be found across various land use sectors, primarily in agriculture but also in municipalities, forestry, trade, and industry. Each of these sectors holds specific potential for innovative approaches and concepts that can promote food sources and habitats for insects, as well as biodiversity in general.

3.3 Diversity of stakeholders – Achieving more together

The protection and promotion of insects and biodiversity as a whole is not the responsibility of individual land use stakeholders, but a shared task. As many areas as possible in a landscape must provide food and habitat for insects to support them sustainably. Therefore, as many land use stakeholders as possible should be motivated and activated to collaborate. Insect diversity requires a broad, active social foundation!

The broader the social base, the more stable and effective a regional alliance for insect promotion can become. A high level of stakeholder diversity is crucial for creating connected habitats and fostering more resilient landscapes. Different stakeholders, such as farmers, foresters, municipalities, businesses, and nature conservation organizations, contribute diverse perspectives, generate synergies, and enhance the effectiveness of conservation measures.

Diversity of measures and habitats

Each stakeholder interacts with and shapes the landscape in different ways, contributing to the creation of diverse habitats. For example, farmers cultivate agricultural land, municipalities maintain fallow land and roadsides, and nature conservation organizations manage protected areas. This variety promotes structural diversity in the landscape, which is vital for many insect species that require different habitats, food sources, and refuge areas.

Spatial connectivity and networking

Many insect species rely on interconnected habitats to maintain their populations. A wide range of stakeholders enables the creation of these connected habitats, as different actors work on different areas. For example, farmers can reduce landscape fragmentation through field margins, while nature conservation organizations can promote biotope networking measures, enhancing the mobility and genetic diversity of insects.

Diversity of management objectives and intensities

Different stakeholders pursue various management goals and intensities, which results in a diversified landscape. While more intensive land use may benefit certain species, extensively managed or fallow areas offer refuge for less competitive species. This gradient of land use contributes to the stability and resilience of ecosystems.

Social acceptance and participation

Involving a wide range of stakeholders increases social acceptance of biodiversity measures, as each stakeholder has a role in the decision-making process. This promotes long-term commitment and ensures that measures are embedded in landscape management. A broad stakeholder base also helps ensure a fair distribution of the costs and benefits of implementing measures

Flexibility and innovation

Diversity among actors fosters innovative approaches and flexible solutions tailored to local conditions. Different perspectives and experimental efforts lead to new ideas on how to better support insects and biodiversity.

3 Success factors for more and better insect promotion at landscape level

3.4 Coordination – More than the sum of its parts

A coordinating body is needed as a „caretaker“ to ensure that various stakeholders achieve the best possible results across many areas. It is not enough for individual measures to be implemented in isolation; rather, stakeholders such as farmers, municipalities, nature conservation organizations, and local authorities must collaborate to ensure the efficient and sustainable protection of insects and biodiversity.

The coordination of these stakeholders requires a central office that maintains an overview and organizes cooperation. This coordinating body should be a permanent fixture in the region to ensure that insect conservation is deeply integrated and continuously advanced. The focus should be on the needs of insects and biodiversity, with targeted measures derived from these needs. These measures must be implemented collaboratively. The main tasks of the coordinating body are to organize regular exchanges of experience, plan measures, facilitate communication, and support skills development.

Key steps for coordinating stakeholders:

1. Using existing structures and networks

Existing structures such as landscape conservation associations, public administrations involved in nature conservation, biodiversity strategies, biodiversity consultants, LEADER programs, or Bee-Deals should be leveraged to ensure efficient cooperation. These networks provide a solid foundation for collaboration and should be incorporated into the process.

2. Regional identification and networking

It is essential that the coordinating body employs individuals who are familiar with the region and its local conditions. This knowledge allows for the planning of measures that are tailored to the specific needs of the region.

3. Provide sufficient capacity

The coordination and responsibility of a region should not rest on the shoulders of a single individual. It is advisable for at least two people to work together, contributing their different areas of expertise in terms of cooperation with various stakeholders.

4. Goal-oriented organization

The coordinating body must ensure that all relevant stakeholders work together and are kept regularly informed. A clear resolution or concept should be made publicly accessible, so new stakeholders can easily understand how to get involved. Through regular networking events, stakeholders can receive information and learn who to contact with specific concerns. These exchanges should occur at least once a year. In addition to organizing cooperation, the coordinating body should actively drive the implementation of measures. This includes coordinating the various stakeholders and defining concrete goals and time frames.

3.5 Competence – Knowledge creates impact

Protecting insects requires more than just well-intentioned measures – it's essential to have in-depth knowledge of their needs, habitats, and the most effective protection strategies. Without this knowledge, there is a risk that measures may not achieve the desired outcomes or, in some cases, may even harm the insect world. It is therefore crucial to rely on a solid understanding of insect ecology and the appropriate conservation methods.

Strengthening insect competence

To successfully protect insects, it is necessary to expand and apply knowledge about insects in practical ways. This can be achieved through several approaches:

- **Interdisciplinary research and knowledge transfer:** Close cooperation between science, practice, and educational institutions is vital to combine scientific research with practical experience. This helps to optimize biodiversity and insect protection measures in a way that balances productivity, profitability, and conservation benefits.
- **Practice-oriented demonstration projects:** Projects that are already successfully implementing insect protection and promotion measures offer concrete examples that can inspire other stakeholders to adopt similar actions.
- **Educational initiatives:** Regular training sessions and workshops for various stakeholders – such as farmers, landscape architects, and garden owners – provide specific knowledge about the needs of insects and the appropriate protective measures.
- **Digital platforms and apps:** Platforms like iNaturalist, or apps for identifying and mapping species, can help expand knowledge about insects and encourage active participation in insect protection efforts.

Development of a regional biodiversity action plan (BAP)

In order to effectively protect and promote biodiversity in a region, a clear **management plan** is required. Such a plan helps to take a targeted and structured approach to preserving existing habitats, creating new ones and reducing negative influences. It ensures that all measures are coordinated with each other and that the region can achieve its objectives to promote biodiversity. It is not a scientific study, but a practice-oriented strategy with concrete, measurable goals and actionable steps.

Such a plan for biodiversity is called a **Biodiversity Action Plan (BAP)**.
You can find a template for the BAP at https://insect-responsible.org/leitfaden

3 Success factors for more and better insect promotion at landscape level

More impact through exchange and knowledge transfer

Successful insect protection requires cooperation among various stakeholders, each contributing specific knowledge and resources:

- **Farmers:** Farmers can make a decisive contribution by adopting adapted management practices, such as reducing mowing frequency or minimizing pesticide use.
- **Local authorities:** Municipalities can design public green spaces and roadsides to be more insect-friendly, thus creating important habitats.
- **Nature conservation organizations:** These organizations provide expertise to specifically promote endangered insect species.
- **Private landowners:** Private landowners can help biodiversity through small but targeted actions, such as installing nesting aids.

By collaborating, these actors not only optimize their individual measures but also learn from one another. Farmers can benefit from municipalities‘ experience in implementing insect-friendly designs on large areas, while nature conservation organizations can leverage the practical experience farmers have in managing land and their knowledge of local conditions. This mutual exchange fosters the effective and sustainable advancement of insect conservation. Demonstration projects and field days are excellent formats for sharing good examples with other stakeholders or target groups.

3.6 Financing – More value for nature

Without sufficient financial support for insect and biodiversity conservation measures, the loss of biodiversity will continue unabated. Nature conservation is not feasible without reliable financial backing. For example, when farmers create ecological value, this must also be reflected in economic value. The provision of public goods could potentially evolve into a profitable component for farms in the future.

Current funding opportunities are insufficient to bring about the necessary changes in agriculture and other sectors. A significantly higher investment of both public funds and market-oriented incentives is required to ensure sustainable insect promotion and implement the urgently needed conservation measures. Additionally, flexibility in terms of time and the option to withdraw from a measure would help increase willingness to participate in support programs, thus reducing the quality and yield risk for agricultural businesses.

Market-oriented approaches for insect promotion

Market-oriented concepts are essential for making better use of biodiversity services along the supply chain. Companies and farms need the necessary support and recognition for their efforts to protect insects. This is only achievable through targeted programs and initiatives that financially reward the ecological value created. It is particularly important that, in the future, it should be legally possible to combine public subsidies for compensation with financial incentives (e.g., from the food industry) for providing biodiversity services. This could make the price premium on the end product manageable.

Other strategies for the financial promotion of biodiversity services may include:

- **Targeted information and advice for farms:** Farmers should be thoroughly informed about available support programs so they can make the best use of them to integrate insect protection into their operations.
- **Development of regional support programs:** To enhance existing programs, regional support initiatives should be developed that are specifically tailored to insect conservation and offer additional incentives.
- **Collaboration with regional quality and origin brands:** Close cooperation with regional brands provides an opportunity to highlight insect-friendly products and create ecological value through communication efforts.
- **Collaboration with the food industry:** The food industry can partner with farmers to promote insect-friendly products and create an economic incentive through the value chain.

3 Success factors for more and better insect promotion at landscape level

3.7 Monitoring – Measurable success

To assess the long-term success of insect protection and biodiversity promotion measures, it is important to regularly document changes. This allows for tracking whether the set goals are being achieved and helps identify any necessary adjustments to enhance the effectiveness of the measures. Such documentation is essential not only for the ongoing development of a project but also for transparent communication with the public and stakeholders.

This process of continuous observation and documentation is known as **monitoring**. It provides a valuable foundation for evaluating the impact of the implemented measures and making progress visible. Although monitoring does not necessarily need to be an extensive scientific study, it remains a useful tool for collecting relevant data that supports decision-making based on concrete results. A basic distinction can be made between two types of monitoring:

- **Implementation monitoring** with the aim of documenting the extent to which specific protection and promotion measures are implemented (e.g. recording of flower strips, fallow land, field margins)
- **Impact monitoring** with the aim of measuring the effects of measures on biodiversity (e.g. determination of species diversity, biomass, population development).

Implementation monitoring serves as the foundation for ensuring that agreed-upon measures are carried out and, as such, describes the potential for biodiversity within a landscape. Impact monitoring, on the other hand, helps determine whether and how well the biodiversity potential offered by the measures leads to an actual improvement in biodiversity.

Further advantages of systematic monitoring:

- **Data provision for agricultural subsidies and reporting obligations:** Monitoring data can provide land managers with data for agricultural subsidies, for participation in certification processes or for reporting obligations, e.g. as part of the Corporate Sustainability Reporting Directive (CSRD).
- **Linking citizen science:** Monitoring can be combined very well with citizen science initiatives in which citizens and land managers actively contribute to data collection.
- **Promoting public awareness:** Regular monitoring helps to raise awareness of biodiversity and demonstrates the region‘s commitment to insect conservation. It provides a transparent source for communicating the progress of measures and increasing knowledge about biodiversity among the population.

A large part of agricultural depends on healthy soil and insect pollination. At the same time, agriculture has a profound impact on ecosystems, flora, fauna, and, consequently, on the insect world. In recent decades, this influence has often been negative, primarily due to the extensive use of pesticides and mineral fertilizers, short crop rotations, increased cultivation intensity, and habitat loss.

On the one hand, the European goal is to manage 10 % of agricultural production land in a way that promotes biodiversity and preserves semi-natural habitats by 2030 (European Commission, 2021). On the other hand, in 2023/24, the recently adopted commitment to at least 4 % non-productive, biodiversity-promoting land per farm was withdrawn. The potential for more biodiversity in agriculture must be further strengthened through conservation measures!

4 The role of agriculture and the food industry

4 The role of agriculture and the food industry

4.1 Agriculture

Farmers are entrepreneurs who operate according to economic criteria. Agriculture is largely dependent on pollination by insects and healthy soil life. This is another reason why a future-oriented corporate philosophy must not ignore biodiversity and environmental protection. In order to sustainably promote biodiversity, a holistic view of the farm and the surrounding landscape are required.

Instruments for insect-friendly management

At farm level, a wide range of measures can be implemented, either directly on the agricultural land (in-crop measures) or in the immediate vicinity (off-crop measures).

- When selecting measures, each farm must be considered individually in order to determine which measures are particularly effective and practicable.
- The selection of areas on which biodiversity-promoting measures are implemented depends on various factors. Areas with a network character are preferable to less productive sites. Possible target species in nature conservation should also be taken into account.
- Catalogues of measures compile tried and tested measures. You can find a selection in the **Linkbox**.

Linkbox

Here you will find a selection of relevant links to catalogues of measures:

LIFE Insektenfördernde Regionen

Stiftung Rheinische Kulturlandschaft

Bundesamt für Naturschutz – Brandenburg

Naturland Leitfaden Biodiversität

F.R.A.N.Z.-Projekt

ILN Südwest

Good examples from practice

Buchhaldehof

At first glance, there is nothing to be gained from this: the crops grown are not dependent on insect pollination. But the farm manager wants to help preserve the diversity of insects. That is why he is experimenting with maize undersowing. He wants to prevent the soil from remaining uncovered. He also wants to build up humus for subsequent crops and provide additional food and habitat for insects. Maize fields in particular are insurmountable obstacles for insects. Undersown crops could create stepping stone effects and also provide a variety of benefits for soil biodiversity. Nutrients are conserved, a moist microclimate is created, the soil is protected from erosion and is easier to drive on. The emergence of undesirable weeds is made more difficult.

Good examples from practice

Structural elements Meersburg State Winery

In addition to the sowing of flowering tramlines, several structural elements such as deadwood and stone piles were created on the Meersburg state vineyard. These elements serve as a habitat and refuge for various animals such as insects and lizards. The rarely mown flowering tramlines can give the vineyard and also the machines more support.

Advantages of insect-friendly cultivation

Biodiversity-friendly land management can have a positive impact on the farm for various reasons.

- Increasing resilience: A greater diversity of plants and animals can help make agricultural systems more resilient to pests, diseases and extreme weather conditions. Monocultures are more susceptible to pests and diseases, while diverse systems can better mitigate these risks.
- Improving soil quality: Various plant species contribute to maintaining and improving soil structure and fertility. Deep-rooted plants loosen the soil and prevent erosion, while legumes bind nitrogen and enrich the soil.
- Promoting pollination: Greater plant diversity supports a variety of pollinators such as bees, butterflies and other insects that are essential for the fruit production of many crops.
- Reducing the need for pesticides: By promoting natural antagonists of pests and the use of crop rotation and mixed crops, the need for chemical pesticides can be reduced. This not only protects the environment, but also the health of farmers and consumers.
- Preserving genetic diversity: The use of a wide range of crops and animal breeds preserves genetic resources that could be important in the future to respond to new challenges such as climate change or emerging pests and diseases.
- Ecosystem services: Diverse agricultural systems provide important services such as water purification, nutrient cycling and climate regulation. These services contribute to the general well-being and sustainability of agricultural landscapes.
- Cultural and social benefits: The preservation of traditional and locally adapted varieties and breeds contributes to the cultural heritage and identity of rural communities. Diverse agricultural systems can also promote tourism and education.

4 The role of agriculture and the food industry

Incentives and funding opportunities

The implementation of measures incurs costs of various amounts due to the time spent by employees or materials such as seeds and seedlings. The potentially lower or lost yield must also be taken into account when budgeting for measures.

The public sector offers the following funding opportunities:

- The DVS ("Deutsche Vernetzungsstelle Ländliche Räume", German Networking Agency for Rural Areas) has compiled a brochure with all the agri-environmental support programs of the federal states.
- By complying with EU eco schemes, various measures, such as ecologically very valuable old grass strips, are promoted as part of EU agricultural funding.
- Further measures are financially supported via agri-environmental programs, such as FAKT in Baden-Württemberg (BW) in Germany.
- The Landscape Conservation Directive ("Landschaftspflegerichtline", LPR) can be used to promote measures in BW.
- In addition, flowering sponsorships can be organized via institutions, e.g. via a flowering fund. This can be introduced and managed by insect-friendly municipalities, but also by NGOs.

Financing by the trade:

- There are biodiversity programs that retailers negotiate with associations or directly with farmers, such as the „Wir sind Artenvielfalt" campaign - a cooperation between Aldi and Naturland that promotes biodiversity measures.
- The food retail trade can demand conditions for the cultivation of products.
- The Initiative „Du bist hier der Chef" includes the desired nature conservation measures in the price via fair price negotiations and transfers the added value directly to the farmers.
- The food retail sector makes the promotion of insects partly visible through products and markets products that promote insects. The surcharge for the products is passed on to the farmers. Negotiations can be promoted by companies through certifications.

Good examples from practice

Altschorenhof

On the Altschorenhof dairy farm, in addition to mixed cultivation (maize/beans), which is gentler on the soil than monoculture, strips of old grass are left standing when mowing. Strips of old grass provide the necessary habitat and food for insects on the area, especially directly after mowing. Grass strips are now being promoted (subject to certain conditions) under the first EU eco scheme.

Education and advice

Some farmers are very knowledgeable about biodiversity issues. Others have a rough idea. However, in order to move from acceptance of the measures to implementation, knowledge of how to implement the measures correctly is needed in addition to financial incentives. Over the last few years, the range of training and consultancy opportunities on biodiversity measures has been expanded. This transfer of knowledge is of great importance:

- The federal states (agricultural offices & chambers) offer subsidized whole-farm biodiversity advice, e.g: Biodiversity Advice in BW. In addition, there are biodiversity advisors at district level in BW who can advise farmers on various topics and measures.
- Various farming associations offer biodiversity advice, such as the organic associations Bioland and Naturland or other institutions such as the Stiftung Rheinische Kulturlandschaft.
- Nature conservation organizations (e.g. Lake Constance Foundation, Nabu, BUND) provide assistance with events and materials, and in some cases individual farm advice can also be offered. Cooperation with local groups can support farmers with certain measures, such as the removal of mown grass.
- Field days that provide information on biodiversity topics are organized by various networks, such as the Biodiversity Network BW, and strengthen the exchange between stakeholders.
- The FiBl offers good training opportunities and materials.
- Research institutions such as the ZALF, IFAB or Thünen Institute publish current research results. Results from the long-standing F.R.A.N.Z. project are shared on its homepage.
- Scientists publish books with practical advice on the topic, e.g. „Insektensterben in Mitteleuropa“ by Prof. Dr. Fartmann et al.
- Digital discussion forums, social media and video portals enable farmers to exchange ideas.
- There is an increasing number of study opportunities for people who want to specialize in this area (whether for their own farm or as a consultant), e.g. the „Certificate Program Biodiversity in Agricultural Landscapes“ at the University of Kassel/Witzenhausen.
- Biotope network ambassadors or, if applicable, a landscape planning office involved provide information on the subject of biotope network planning. »

Development of a farm biodiversity action plan (BAP)

In order to effectively protect and promote biodiversity on the farm, a **management plan** is required. This sets out overarching objectives, specific measures, timeframes and responsibilities. This helps to better combine operational processes with the promotion of biodiversity.

Such a plan for biodiversity is called a **Biodiversity Action Plan (BAP)**.
You can find a template for the BAP at insect-responsible.org/leitfaden

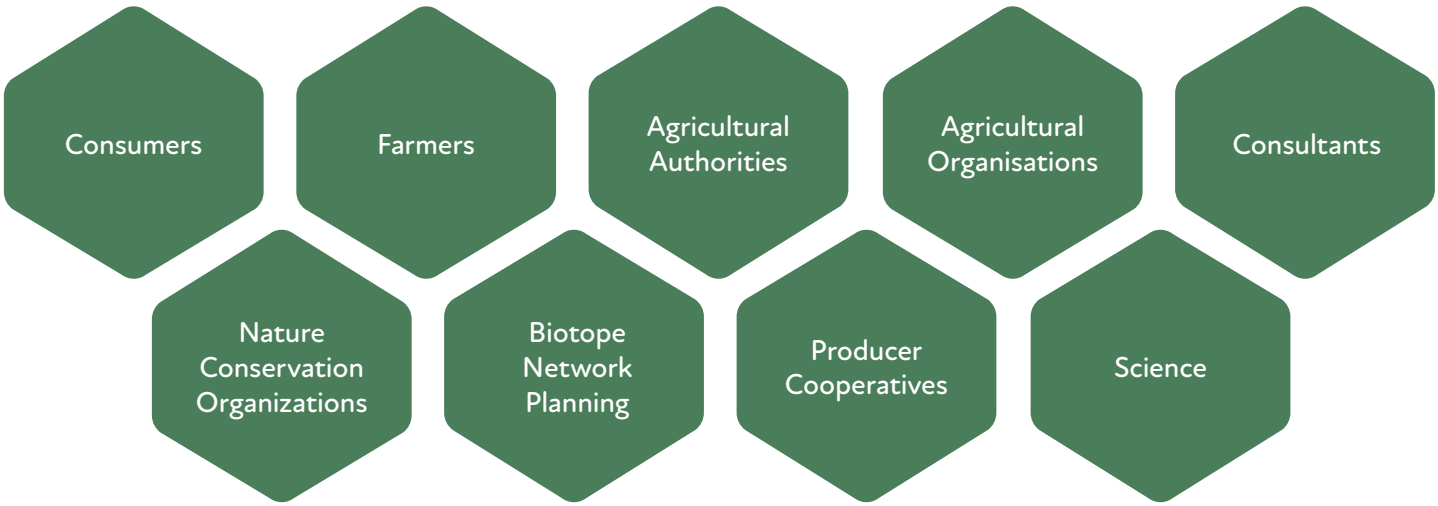
- the Biodiversity-Performance-Tool (BPTI) enables farmers to monitor biodiversity and insect diversity on their farms over a longer period of time and identify potential for improvement

Creating acceptance through public relations & networking

Building information bridges between agricultural stakeholders and the rest of society is crucial for fostering a positive attitude toward the sector. A positive image can increase the public's willingness to pay, which in turn can facilitate more nature conservation measures.

- Effective marketing for direct sales, such as banners and flyers with QR codes at the market, on the farm, or in the farm store, is particularly impactful.
- Customers can be informed about measures through a website featuring news and information.
- Citizens can learn about measures through field signs in cultivation areas. Social media and events like „open days" offer citizens a deeper look into production processes.
- Interviews with organizations and journalists for newspaper articles or radio reports can help increase regional understanding of land managers' work.
- Networking between farmers is important, as is the cooperative organization of producers and political participation, such as local council membership, where one can serve as an expert on agriculture and biodiversity.

You are not alone! Many players are working on the topic of biodiversity in general and insect protection in particular. Get connected!



4.2 Food industry

The food industry encompasses the production, processing, and trade of food products. Companies in the sector have various connections to biodiversity promotion: they can process products from biodiversity-promoting farms and / or engage in biodiversity initiatives at their own location. The retail sector also has the opportunity to highlight and promote products with specific production conditions through their product range.

Instruments to promote an insect-friendly value chain

The responsibility for strengthening biodiversity in agriculture should be shared by all actors along the supply chain. For example, food companies or standards can offer training courses or demand and financially support measures that promote biodiversity.

- Ambitious food standards are a suitable instrument for establishing biodiversity in the food industry. In recent years, standards such as GlobalGAP and Donau Soja, as well as organic standards such as Bioland, Naturland and Demeter, have significantly improved their criteria for protecting biodiversity.
- Companies in the food industry are supported in their continuous improvement of the implementation of biodiversity goals through membership in the „Food for Biodiversity“ association. The association has developed a so-called „Basic-set“, which can be used to take first, but also very far-reaching steps towards biodiversity protection.

Linkbox

Here you will find a selection of relevant links to standards:

Basis-Set von Food for Biodiversity

GlobalGAP Biodiversity Standard

Biodiversitätsprojekt der REWE Group

- Buyers can demand standards or company regulations, e.g. Albgold requires minimum area of biodiversity areas; Lidl requires (GlobalGAP Standard-Biodiversity Standard).
- Projects such as the biodiversity project in table fruit cultivation in cooperation with the REWE Group promote insect-friendly agriculture through the sale of these products.
- To ensure that products that promote biodiversity can be sold, food retail employees should also be trained in biodiversity and customers should be sensitized.

4 The role of agriculture and the food industry

Advantages of the insect-friendly value chain

The promotion of biodiversity-promoting foods is future-oriented and supports the sustainable development of the food industry.

- Ecosystem services: Food production is dependent on the diversity of genes and species. The preservation and promotion of biodiversity is therefore the basis for maintaining a healthy and sustainable food system.
- Resilience: Biodiversity makes agricultural systems more resistant to disease, climate change and other disruptions. Resilient farming systems preserve the food industry.
- Health: Food from biodiversity-friendly production is often healthier as it contains fewer pesticides and chemical residues. Healthy food is easier to market.
- Reporting: The requirements for companies to report on biodiversity criteria are growing. The sooner a company addresses this issue, the sooner it can recognize and counteract the industry's negative impact on biodiversity.
- Economic opportunities: Biodiversity-friendly agriculture can open up new markets and promote innovative business models.

Good examples from practice

More land for biodiversity: Alb.Gold

Following a biodiversity check, the company Alb.Gold has committed itself not only to making its own company premises more nature-friendly, but also to obliging farmers who supply durum wheat to plant 10 % biodiversity-promoting extensive fields. Extensive fields do not have to relate to the durum cultivation area but can also be planted in other crops. This obligation was subsidized with a fixed supplement.

Incentives and funding opportunities

The following incentives can be listed with regard to the production and marketing of insect-promoting products for the food industry:

- Food retailers can achieve a surcharge for products that promote biodiversity. The majority of this surcharge should be passed on to the farmers. Negotiations can be promoted on the farm side through certification or the use of tools.
- Labels can increase competitive opportunities.

Incentives from the food industry:

- Food processors can offer farmers financial support for the implementation of certain measures. For example, producers of strawberries and cherries for Schwartau can choose suitable measures from a catalog of measures and receive financial support.
- Barilla has launched the Carta del Mulino and Carta del Basilico programs to protect pollinating insects and supports farmers in the establishment of flowering areas and measures to reduce the use of pesticides.

Good examples from practice

Hegaukorn

Hegaukorn is a small marketing association west of Lake Constance. The grain is produced organically on structurally rich farms and thus promotes biodiversity. The grain is processed locally in the Steigmühle mill in Hegau. The landscape symbol (right) serves as a brand logo for customers.

Joint direct processing and marketing means that a higher market price can be achieved for the products. Of course, there are still transaction costs due to agreements and joint processing, etc.

Education and advice

Opportunities for further training and advice are being expanded in the sector. Interest is high - and not just because of mandatory reporting.

- Further training is offered throughout the entire value chain - from cultivation to sale - e.g. for sales staff at REWE Group.
- The Food for Biodiversity association offers training courses for its members. The Bundesverband des Deutschen Lebensmittelhandels e.V. (BVLH) is a member of Food for Biodiversity and organizes training courses.
- Producer cooperatives offer advice on the implementation of biodiversity-promoting measures.

4 The role of agriculture and the food industry

Good examples from practice

Campaign work

With information on insect-promoting cultivation and the positive effects on the environment, information campaigns (with verified data) can be implemented in accordance with the EU Green Claims Directive and the products can be advertised with their positive properties. With the development of good information material, various channels such as social media or points of sale can be used on a regular basis.

Creating acceptance through public relations & networking

The acceptance of biodiversity-promoting products should be constantly growing in order to promote consumer appreciation and willingness to pay. Consumers will then spend more money on products that are hardly different on the outside but have a higher ecological added value.

- Companies can inform and sensitize consumers about topics such as biodiversity and insect protection via product labels, directly at the point of sale or in household advertisements.
- Campaigns can be carried out in food retail / point of sale to draw attention to products that promote insects. They can be reinforced with information materials. QR codes on products can lead to further information and e.g. criteria of the various certifications/labels.
- Interest in sustainability issues can be promoted with famous role models / celebrities. Interactions / exchanges via social media can connect people who are committed to the topic and promote the issues and acceptance.

You are not alone! Many players are working on the topic of biodiversity in general and insect protection in particular. Get connected!

Processing Industry

Food Retailing

Clubs

Producer Cooperatives

Consumers

A forest without insects? Unthinkable. Beetles, flies, and moths perform countless vital functions, even though they often remain hidden from view.

While many tree species are pollinated by the wind, insects such as bees and butterflies rely on trees like maple, dogwood, hawthorn, service tree, cherry, buckthorn, willow, rowan, and lime for pollen and nectar, which ensure pollination and their survival. Ants spread the seeds of certain herbaceous plants, helping them reach new habitats. Caterpillars and other early developmental stages of insects feed on leaves and needles, influencing nutrient cycles. The nutrients stored in dead trees are released through insect feeding, making them available to the ecosystem more quickly. Insects also serve as a food source for birds and bats in the forest. According to experts, over half of the biodiversity in forests is driven by insects.

5 The role of forestry

5 The role of forestry

Insects living in forests can be supported in various ways. Pesticides play only a minor role in Germany, as they are rarely used in forests, and only in exceptional cases. Far more important is the development of near-natural mixed forests with a rich variety of tree species, which can undergo a complete lifecycle from germination to death and mineralization, at least to some extent.

Different people and organizations, such as forest owners and authorities, are involved in the planning, approval, and implementation of nature conservation and insect-promoting measures in forests, depending on the extent and type of forest ownership. If the structure, management style, or regeneration method of a forest area is altered, the local forestry authorities and their representatives must always be involved, particularly outside of private forests. When implementing Ökokonto measures under nature conservation law in Germany, for example, the regional nature conservation authority is primarily responsible.

Instruments for insect-friendly management

Forestry differs from agriculture (and other land-using industries such as mining) in that production cycles generally last for many decades. Measures for the ecological enhancement of forest areas should be tailored to these periods and take them into account. In addition, measures can be established at different levels, from the individual tree to the entire farm.

- Habitats for native insects are created through the continuous establishment of near-natural mixed stands of deciduous trees.
- The natural dynamics of plant growth on rejuvenated areas should be utilized.
- Habitat trees and groups of habitat trees should be designated within a stand.
- Designated wilderness areas, natural forest cells, forest refuges and protected forests are particularly protected and valuable habitats.
- Pioneer tree species should be permitted in newly developed areas and, if necessary, pre-forests should be established.
- Flowering and rare tree species or tree species that are in the minority should be protected and promoted due to their special characteristics.
- Historical land use forms (coppice forests, high forests, and wood pastures) should be revived and established.
- The authorities‘ forest conservation strategies should be considered when maintaining and using the forest.
- In particular, the volume of deadwood should be increased, and decay rates should be permitted.

Linkbox

Here you will find a selection of relevant links to measures:

Forst BW

Hessen Forst

Thüringen Forst

Landesbetrieb Wald und Holz Nordrhein-Westfalen

Good examples from practice

Regional Forestry Office Hochstift

A particularly conclusive practical example with regard to the promotion of insects is the forest edge design in the Hochstift regional forestry office. This forest edge design not only benefits biodiversity but also promotes cultural and economic synergy effects. The newly created middle forest-like structures and the alternative forest edge design have had a positive effect on the butterfly fauna, for example, in terms of species numbers and individual densities.

Advantages of insect-friendly cultivation

Biodiversity in the forest results in greater stability of forest ecosystems. Damage caused by weather, especially storms, is mitigated, as is the likelihood of harmful insects (e.g. bark beetles) developing. If damage does occur, it is overcome more quickly in species-rich forests.

Incentives and funding opportunities

Public funding for biodiversity-promoting measures in municipal and private forests is diverse and varies across federal states in terms of designation and form. It is important to note that these regulations are regularly revised by the federal states, and the available funding may be limited or temporarily exhausted. Whether a specific measure is eligible for funding or can be supported financially must be clarified with the relevant regional authorities (such as forestry authorities, district offices, or nature conservation authorities). The following are eligible:

- A list of measures eligible for funding in the forest can be found on the websites of the agricultural and forestry administrations (see, for example, the forest nature conservation funding for sustainable forest management in Baden-Württemberg (BW) in Germany).
- The implementation of silvicultural measures is promoted in all federal states of Germany: Conversion of pure stands and non-natural stands into stable deciduous and mixed stands as well as the further development of near-natural forest communities.
- Special species protection measures: The protection, restoration and development of habitats of protected or endangered species can be financed through projects such as the Landesjagdverband BW e.V..
- Biotope and habitat maintenance on areas in designated Natura 2000 forest areas and other protected areas are funded, for example, via the Umweltzulage Wald (UZW) in BW. »

5 The role of forestry

- Designation of groups of habitat trees in accordance with the old-growth and deadwood concept of the state of Baden-Württemberg (e.g. as compensation for interventions in nature and landscape).
- In addition, local foundations, companies and corporations usually promote habitat- or species-specific measures, such as the „Impulse für die Vielfalt“ funding of Energie Baden-Württemberg AG (ENBW).
- In addition, certification in accordance with FSC or PEFC standards provides for special recognition of biodiversity aspects. These certificates make the particularly responsible actions of the managers marketable.

Good examples from practice

Habitat trees

A significant portion of forest biodiversity depends on the presence of old, dying, or already dead trees. The number of insect species that inhabit such trees exceeds several thousand. Selecting and permanently preserving these so-called habitat trees is therefore one of the most effective methods for protecting species and, in particular, insect diversity. When selecting habitat trees, the presence of microhabitats (e.g., cavities) and tree diameter are the most important criteria. Habitat trees can be designated by all forest owners, including private forest owners, municipalities with forest ownership, and church forests.

The state forestry administration of Baden-Württemberg serves as a particularly exemplary model. In the Baden-Württemberg state forest alone, habitat trees have been designated individually or in groups for over a decade. Currently, more than 260,000 trees, organized into over 24,000 groups and nearly 3,000 forest refuges, are provided as habitats.

Education and advice

There are various resources available for learning more about forest biodiversity protection, provided by authorities at all administrative levels and state research institutes. These resources include materials, reports, guidelines, and work aids offered through various channels and formats such as training series, information materials, online libraries, and social media, all emphasizing the ecological value of forests and how it can be enhanced.

Associations, local clubs and environmental organizations are also dedicated to the topic of biodiversity conservation in forests. To tailor the vast array of available information to individual interests and local issues, it is beneficial to engage in direct dialogue with regional experts from research, administration, and civil organizations.

Good examples from practice

Rare deciduous tree species in Hohenlohe

The promotion of insect-pollinated tree species contributes to forest biodiversity alongside the establishment of structurally rich mixed forests. In the Hohenlohe Forestry Office (Heilbronn-Franken region, Stuttgart administrative district), rare deciduous tree species receive special support. Adjusted wildlife densities allow for the natural regeneration of the wild service tree (Sorbus torminalis). To adapt the forest to climate change, checker trees (Sorbus domestica) are being widely planted. With appropriate silvicultural management, both species produce flowers and fruits. The former has been shown to provide food for nearly 80 insect species.

- Depending on the type of forest ownership (public, private), individual advisory services are offered by the state forest administrations together with the forestry offices and forest research institutes (e.g. state forest administration in BW).
- In addition, biodiversity-promoting measures can also be supported by agencies such as Flächenagentur Baden-Württemberg GmbH.
- Forestry associations, such as the Landeswaldverband Baden-Württemberg (LWV BW), can help with the planning and monitoring of biodiversity-promoting measures.
- Environmental associations also have contacts for species protection in forests, such as NABU BW.
- Consultancy firms, such as UNIQUE land use, and planning offices can help shape the planning and implementation of projects.
- Foundations, such as the Stiftung Wald für Sachsen, can finance and support projects.
- Websites such as waldwissen.net, provide information about species conservation in forests. Basic questions can also be answered with the help of digital applications such as the App WaldExpert.

5 The role of forestry

Creating acceptance through public relations & networking

Forest owners have various media and channels at their disposal to communicate biodiversity-promoting measures and activities. These range from traditional methods to modern digital platforms, often used in combination to maximize reach. Additionally, information can be shared directly with visitors through signage, themed trails, and guided tours in the forest.

- Use of public channels (print media, Internet)
- Information boards and themed trails
- Forest inspections
- Public municipal council meetings and meetings of the business communities
- Trade press

You are not alone! Many players are working on the topic of biodiversity in general and insect protection in particular. Get connected!

Municipal areas such as parks, cemeteries, roadside greenery, compensation areas and many others offer great potential for biodiversity, which unfortunately often remains underutilized. Roadside edges are being mulched, golf turf is being cultivated in parks and compensation areas are often planted with non-native plants.

Unlike private gardens, public spaces face the challenge of balancing a variety of usage and spatial demands. These include the height of plantings along roadsides, the accessibility of green spaces in parks, and the proper, site-specific maintenance of all areas.

To meet these diverse requirements, the planning and implementation of nature-friendly designs in public spaces must take numerous factors into account and involve multiple stakeholders.

6 The role of municipalities

6 The role of municipalities

6.1 Municipal mangement

For the sustainable redesign of residential areas, it is essential to involve not only the planners but also those responsible for implementing and maintaining the area. Many small-scale redesigns and maintenance adjustments can be managed directly by the municipal building yard in consultation with local administration. However, for extensive changes in inner-city areas, the local council should be included in the decision-making process. A sustainably functioning system can only be achieved if all stakeholders share and support the vision of the redesign.

Instruments for insect-friendly municipal planning and design

In principle, all municipal planning is based on the land use or development plan. How undeveloped areas are actually designed is the responsibility of the respective municipality. In terms of nature conservation, biotope network planning should be taken into account and corresponding priority areas for nature should also be designed as such.

The first important step towards more biodiversity in the community is to avoid the use of pesticides and to source local seeds and plants in peat-free soil.

Which areas can be redesigned to promote biodiversity depends on many factors such as land use, traffic safety and public acceptance. The measures that can be implemented in such areas are diverse and can be individually adapted to the respective area. Suggestions can be found in the catalogs of measures in the **Linkbox**.

Linkbox

Here you will find a selection of relevant links to catalogues of measures:

Wege zur Natur in kommunalen Freiräumen

Insektenschutz in der Kommune

Other aspects that can be considered when planning specific projects include:

- Insect protection / biodiversity strategies or similar of the district or state should be taken into account.
- Overlaps with the climate goals of the municipality, district or state should be identified and tackled together.
- Tenders for the design of new development and commercial areas should be based on nature-oriented design.
- Insect- and biodiversity-friendly lighting should be considered, especially for new buildings.

Advantages of insect-friendly municipal planning

In addition to municipal biodiversity goals, nature-oriented design in urban areas fulfills a variety of other benefits for cities and municipalities and their residents:

- Many districts, cities and municipalities are developing climate, sustainability and / or biodiversity strategies, the core of which is the nature-oriented design of municipal areas.
- Near-natural designs are more resilient to extreme weather events such as heavy rainfall or prolonged heat and drought.
- Near-natural areas can be attractively designed and form a unique selling point for the municipality.
- In the long term, near-natural design means more extensive maintenance and therefore lower costs.

Incentives and funding opportunities

Many measures for biodiversity and climate protection can be financed through subsidies. Municipalities themselves can also create incentives for their land users to contribute to biodiversity conservation.

Funding for municipalities:

- The KfW banking group offers a funding rate of up to 90 % for the planning, creation and redesign of biodiversity-friendly areas as part of its "Natural climate protection in municipalities" funding program.

Promotion and incentives from local authorities:

- Tenants of municipally owned land can receive (financial) incentives to contribute to biodiversity conservation, as is encouraged with Fairpachten.
- Citizens can receive (financial) incentives to design their gardens in a nature-oriented way, as the city of Friedrichshafen, for example, demonstrates in its „Häfler Zukunftsgrün" funding program.
- The purchase of insect-friendly, regional products in the municipal sector (canteen with regional products, building projects with own wood, etc.) supports producers in financing their measures.

6 The role of municipalities

Good examples from practice

Biodiversity strategy Ravensburg

As part of the **Ravensburg (Germany) district's biodiversity strategy** various stakeholders in the district are being made aware of biodiversity issues and connected with each other. Funding is provided for projects, and nature and species conservation are promoted throughout the district. The projects coordinated by the Landscape Conservation Association range from advising construction yards and companies on nature-oriented design to seed distribution campaigns for citizens, as well as classic species protection measures such as the creation of ponds.

Education and advice

Municipal decision-makers do not always have the expertise to design and maintain municipal areas according to nature-oriented criteria. Many experts therefore offer further training in this area.

Cities and municipalities can receive support here:

- The Municipalities for Biodiversity Alliance networks and supports municipalities in the transformation of urban areas and offers online seminars and advice for member municipalities.
- In almost all federal states, there are associations at regional level that are committed to the networking of biotopes and landscape conservation, of which local authorities can become members. The DVL provides an overview of the associations in Germany. Regular seminars are also offered here.
- Nabu and BUND local groups pursue some of the same goals and may have the expertise to provide advice.
- Fairpachten is a Nabu initiative that offers free advice and information for anyone who leases agricultural land and wishes to realize more nature.

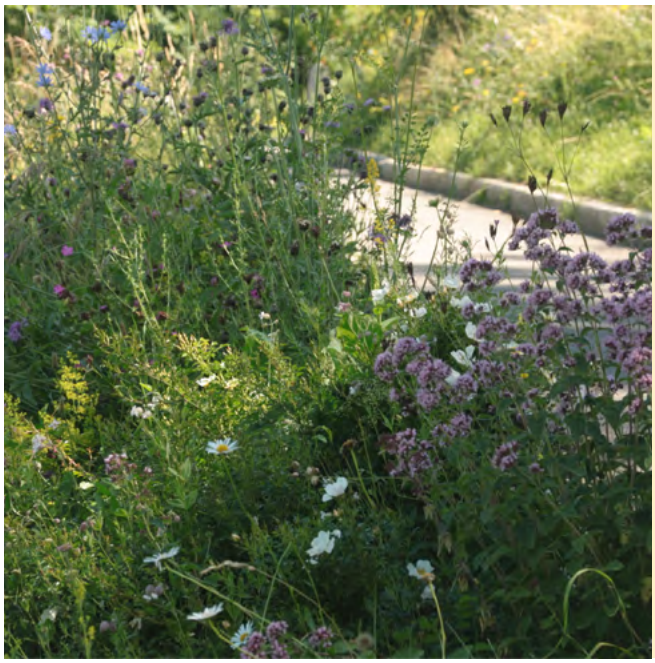
In order to establish insect-promoting measures throughout the municipality in the long term, both professionals and citizens should be trained in the area of nature-oriented design and maintenance:

- Building yard employees should receive further training in the selection of native plants and the maintenance of near-natural areas. Such training courses are offered, for example, in the Lake Constance Foundation's Zukunftsgrün project with the project partners.
- Citizens can be offered evening lectures about nature-oriented design.
- Citizens can be offered gardening advice

Creating acceptance through public relations and networking

On the one hand, broad media coverage of municipal commitment to biodiversity conservation aims to increase citizens‘ acceptance of certain measures. On the other hand, the municipality acts as a role model and should encourage citizens to imitate certain design elements.

- Signage in the area where measures are to be taken provides information. This can also be used to point out opportunities to take action yourself.
- A series of articles for citizens in the community newspaper on current topics relating to insect protection (in your own garden) such as early bloomers, balcony boxes and fall care can encourage participation.
- An „Open Garden Day“ or garden competitions, where criteria such as plant selection, habitat provision etc. are taken into account, also emphasize the involvement of citizens.
- Newspaper articles explaining why certain (communal) areas are maintained in this way and not otherwise prevent complaints and vandalism.
- The topic of biodiversity can be included in events such as Harvest Festival, sustainability days or similar.
- The promotion of biodiversity can be made visible in public procurement, for example by purchasing products from regional farmers who are committed to biodiversity.



Good examples from practice

Biodiversity in Bad Saulgau

The town of Bad Saulgau in the district of Sigmaringen (Germany) has been committed to biodiversity since the 1980s. The **Biodiversity Concept of the town Bad Saulgau** comprises 5 pillars: In addition to the almost complete conversion of uniform green spaces into species-rich areas in the town‘s inner city, numerous nature trails have been set up, biotopes have been upgraded, river sections have been renaturalized and a nature theme park has been established. All activities are accompanied by intensive public relations work.

6 The role of municipalities

Other players who design areas in public spaces and with whom an exchange may be worthwhile are:

- The district administrator may provide considerable tailwind for the project.
- Churches have large areas of land and some of them are already actively committed to the sustainable design of these areas, for example the „Grüner Gockel“ initiative.
- Companies have a lot of potential to make their areas biodiversity-friendly and can be involved in the planning of redesigns.
- Local Nabu and BUND groups are often active in residential areas and have expertise in nature-oriented design.
- Local tourism associations can take up the issue and should be involved in communities that are heavily influenced by tourism.
- Lions/Rotarians may be interested in supporting biodiversity projects.
- Citizens can do more than just accept changes; they can actively shape them.

You are not alone! Many players are working on the topic of biodiversity in general and insect protection in particular. Get connected!

6.2 Citizens

Citizens have a considerable influence on local biodiversity. Every garden owner can decide for themselves whether to plant beech or cherry laurel hedges, maintain meadows or golf turf, seal or plant areas. However, citizens can also join forces and influence other stakeholders, raise awareness in the neighborhood and much more.

Instruments for insect-friendly garden design

Encouraging insects in your garden requires more than just colorful flowers for pollen and nectar – it also calls for habitat structures for egg-laying and hibernation. A diverse mosaic of habitats and food sources is key to sustainably supporting insect populations. You don't need to redesign your entire garden; often, adding ‚wild corners', providing nesting aids, maintaining open soil patches, and avoiding pesticides can make a big difference. You can find a variety of ideas and step-by-step instructions in the **Linkbox**.

Linkbox

Here you will find a selection of relevant links to catalogues of measures:

Netzwerk blühende Landschaft

Nabu

IFR

Advantages of insect-friendly garden design

A near-natural garden design benefits not only insects but also the entire ecosystem. Biodiversity-friendly spaces serve many important functions, including:

- Compared to sealed surfaces, vegetation regulates the temperature: on hot days, up to 15 °C less is measured on a meadow than on asphalt.
- Species-rich greenery is more resilient to extreme weather events and heat.
- Semi-natural areas require less maintenance compared to alternating flower beds or short-cut lawns.
- Natural garden design brings people together: Anyone who engages in the topic will quickly find fellow campaigners.

Incentives and funding opportunities

Some municipalities have set up funding programs for their citizens, from which certain measures to promote biodiversity can be (partially) funded, such as the removal of gravel gardens, sowing of flower meadows, creation of dry stone walls, and much more.
Ask about this in your municipality.

6 The role of municipalities

Good examples from practice

„Häfler Zukunftsgrün“

The **„Häfler Zukunftsgrün“** funding program in Friedrichshafen (Germany) supports property owners and tenants of private and commercial buildings as well as public associations and institutions in implementing measures for climate adaptation and native biodiversity in and around their buildings. Subsidies of up to 70 % are available for the near-natural planting of gardens, green roofs and facades, the creation of biotopes and other measures.

Education and advice

There are many opportunities to learn more about natural garden design. Lots of information, instructions and tips are also available online.

Caution is advised when purchasing seeds and plants. The „bee-friendly plants“ advertised in DIY stores and nursery chains are often not native and their actual value for biodiversity is questionable. Therefore, when buying, certified seeds (e.g. from VWW) and / or nurseries that produce regional wild plants should be used. Nabu has compiled some sources of supply in Germany.

Citizens can get support here:

- Nabu and BUND local groups are often experts when it comes to nature-oriented garden design. Their homepages provide many valuable tips on design and maintenance.
- Volunteer networks such as flower ambassadors („Blühbotschafter*innen“) or ambassadors from the Netzwerk blühende Landschaft can provide advice on site.
- NaturGarten e.V. provides lots of useful instructions and information.
- Perhaps your own municipality also offers advice on natural garden design.
- Lectures and seminars on biodiversity are often offered at adult education centers.

Creating acceptance through public relations and networking

In addition to the scope for action in their own garden or on their balcony, citizens can organize themselves collectively:

- Citizens can become active in existing initiatives, associations and nature conservation organizations (see above).
- Citizens can set up their own local (citizens') associations for the protection of biodiversity and thus influence and / or actively shape various actors in the community, including their community itself.
- Citizens should inform and – ideally – involve their neighborhood in any major redesign in order to increase acceptance.
- Signage and / or an „open garden day" can also increase the acceptance of the near-natural garden.

You are not alone! Many players are working on the topic of biodiversity in general and insect protection in particular. Get connected!

Companies generally have two connections to biodiversity: they process products that rely on the diversity of natural resources, and their company sites are significant infrastructures that directly impact the ecosystem.

On one hand, company sites have a responsibility to reduce area fragmentation wherever possible by increasing the permeability of the site through the creation of near-natural areas and corridors. On the other hand, company premises can serve as important refuges for animal and plant species. In most cases, it is relatively easy to allocate space for native flora and fauna without restricting operations or development opportunities at the site.

7 The role of companies

7 The role of companies

7.1 Procurement

The main negative impacts on biodiversity caused by companies are generally to be found in the supply chains. Be it the clearing of forests for agricultural land, the overfishing of certain species, the destruction of ecosystems through the extraction of mineral raw materials, the construction of a hotel in a protected area, the establishment of forest monocultures for paper and furniture production or the collection of wild plants for the extraction of medicinal substances: Almost all raw materials and (preliminary) products that a company's purchasing department has to procure are associated with impacts on biodiversity.

Chapter 3.1 reports on the insect-friendly cultivation of agricultural raw materials. However, a company procures other raw materials, materials or finished products whose production, use or disposal has a direct or indirect impact on biodiversity.

Instruments for insect-friendly procurement

Given the large number of materials and products, a company should first identify the essential materials and products - essential in terms of their impact on biodiversity and / or in terms of the quantity required and their importance for production processes and other procedures. Specifications for the environmentally friendly and resource-conserving procurement of these materials and products contribute to greater sustainability and thus also to the protection of biodiversity.

- Standards and labels play a major role in some industries when it comes to ensuring a certain quality of the raw material and its production or extraction. By continuously increasing the proportion of certified products it purchases, the company improves its biodiversity performance - and thus also insect conservation.
- The WWF Biodiversity Risk Filter in combination with the Water Risk Filter helps companies and financial institutions to identify the risks associated with biodiversity on their own sites, value chains and investments and then reduce them step by step.
- DIY stores and food retailers should increase their range of native, biodiversity-promoting ornamental plants and offer certified plants that have been produced according to biodiversity criteria, among other things. In this way, they can increase their insect-friendly range.

Linkbox

Here you will find a selection of relevant links to measures:

Leitfaden "EMAS und Biodiversität: Schutz der biologischen Vielfalt im Rahmen von Umweltmanagementsystemen"

WWF Biodiversity Risk Filter

Biodiversity in Good Company

Unternehmen Biologische Vielfalt (Ubi)

- Canteens have the opportunity to offer biodiversity-friendly dishes, e.g. with a high proportion of vegetarian dishes, organic products and / or fair trade products, MSC-certified fish, etc. Activities relating to agro-biodiversity also make an important contribution to raising awareness: dishes with products from old crops (e.g. ancient grains) or offering a selection of old fruit varieties. The canteen is also a good place to inform employees about the company's activities to protect biodiversity, e.g. by means of an exhibition, a brochure or a note on the menu.
- Companies in the ready-mixed concrete and precast concrete industry can be certified according to the CSC standard of the Concrete Sustainability Council There are four categories: Economy, ecology, the social aspect of sustainability and management. The certification covers both the concrete company or plant and its supply chain and includes biodiversity criteria.
- An appropriate price that covers the costs of effective measures and rewards the added value of the products should be a matter of course.

Good examples from practice

„AZUBI-gardens"

Young trainees can be very well involved in the upgrading process: In the **AZUBI-gardens project**, the Lake Constance Foundation has developed materials for workshops that provide trainees with basic information about biodiversity and climate change and support them in developing AZUBI projects at the site. The materials can be obtained free of charge from the Lake Constance Foundation or workshops can be booked as a service from the Lake Constance Foundation.

Advantages of insect-friendly procurement

Regardless of whether a company has direct or indirect links to biodiversity, there are always dependencies on biodiversity and its ecosystem services. For their own benefit, companies should therefore consider the protection of biodiversity in procurement, product design and production, thereby safeguarding their economic foundations.

- Environmental or sustainability reports are typically written for representatives of interest groups, such as environmental and consumer protection organizations, trade associations, authorities, etc. These reports are also important for business customers, especially since biodiversity loss is increasingly being recognized as a risk factor that could affect the company's operations and reputation. »

7 The role of companies

- The new EU directives and regulations, above all the Corporate Sustainability Reporting Directive (CSRD), stipulate reporting on biodiversity. This means that large companies must report on their risks and dependencies in relation to biodiversity and draw up a plan to reduce risks.
- The success of organic or fair trade products and the upswing in eco-tourism are indications that survey results and consumers' actual actions are increasingly in line.

Incentives and funding opportunities

The protection of biodiversity is now a field of action in numerous funding programs. Companies can participate in projects within the framework of EU programs and / or find funding opportunities at state or national level. Joint applications with environmental organizations and / or scientific institutions are recommended and usually receive additional points in the evaluation. These are some examples of funding opportunities for companies:

- KfW program Natural climate protection in companies: The module for natural climate protection measures in the KfW environmental program supports companies that implement measures to strengthen climate protection and biodiversity on company premises, on company buildings or on areas of commercial or industrial parks.
- Companies can participate in projects funded by the Interreg program A for cross-border cooperation or one of the six transnational Interreg B programs. The Interreg C program promotes interregional cooperation and is generally also open to the participation of companies.
- The EU LIFE program is the EU Commission's largest environmental protection program. Companies can also submit projects or participate in them.

Representatives of Slovakian NGOs and municipalities inform themselves about nature-oriented design on the premises of Ravensburger Verlag GmbH.

Good examples from practice

Biodiversity at Ravensburger Verlag GmbH

The Ravensburger Verlag GmbH began upgrading areas at its site in 2019. The first areas were redesigned based on a committed employee who sought out fellow campaigners within the company. Around 30 colleagues are now active and committed to biodiversity at the site. The company also allows groups of visitors to tour the site on request and shares its experience with nature-oriented design.

Education and advice

Biodiversity is complex, and companies are well-advised to provide thorough training for the person responsible for this topic. There is an increasing number of opportunities for further education and exchange of experiences, both industry-specific and cross-industry.

Further training for the company:

- The German Biodiversity in Good Company initiative was the first national initiative of the European Business and Biodiversity Campaign. Members sign a „Leadership Declaration“ with the commitment to continuously improve the protection of biodiversity. Further training, exchange of experience and practical handouts are among the services provided by the association.
- On the website Unternehmen Biologische Vielfalt (Ubi), a company can find practical information for improved biodiversity management: definition of terms, significance check, information on instruments such as the Biodiversity Check, advice offered by the chambers of industry and commerce for companies and much more.
- The international initiatives as Business for Nature is an association of international pioneering organizations and companies that jointly develop demands in order to shape the political dialogue in particular.
- The World Business Council for Sustainable Development (WBCSD) is a think tank made up of over 200 international companies and has been working intensively on biodiversity since 2007.

Training by the company:

- As part of Unternehmen Biologische Vielfalt the Global Nature Fund and the Lake Constance Foundation regularly offer further training for employees in the areas of product and quality management, purchasing and CSR management. The common thread for the training modules is the „EMAS and Biodiversity“ guideline.
- The CCIs are also increasingly addressing the area of biodiversity and organizing training courses and the opportunity to share experiences - both within and across sectors. Information is also provided on the UBi website.
- The company itself should offer training and / or an exchange of experience for suppliers and producers. Without their commitment and support, most companies will not succeed in improving their biodiversity performance. Training is also a good opportunity to learn more about the commitment of suppliers and producers and to consider joint activities.

7 The role of companies

Creating acceptance through public relations & networking

Communication on biodiversity is increasingly becoming a „selling point“ for companies in order to appeal to the ever-growing group of customers interested in more sustainable products and to stand out from the competition. Credible communication can strengthen a company‘s reputation and attract new customer groups.

- Customers are less interested in comprehensive environmental or sustainability reports. However, the EMAS environmental statement or the sustainability report with its data-based information can provide a good basis for communicating with consumers.
- Communication on biodiversity must be credible - as with all other environmental and social issues. If communication is transparent and fact-based and the relationship between the core business and the activity being communicated is correct, there is no risk of being accused of greenwashing. The planned EU Green Claims Directive sets out the framework for how companies will have to substantiate environmental claims about their products or services in future.
- Good and transparent communication on biodiversity also helps to prevent negative impacts on nature through the incorrect use or disposal of products. In most cases, it is carelessness or a lack of information on the part of consumers that leads to negative effects, such as the incorrect use of pesticides in the garden.

You are not alone! Many players are working on the topic of biodiversity in general and insect protection in particular. Get connected!

7.2 Company premises

In urbanized areas in particular, nature has become scarce: sealed surfaces, fragmented habitats and fewer and fewer food sources are contributing to the loss of biodiversity. Every near-natural area counts!

On many company premises, space can easily be created for native plants and animals without disrupting business operations or restricting the future use of the site. Nature-oriented design is positive for the working atmosphere and provides numerous opportunities to involve employees. There are also synergies with climate protection and cost savings for some measures.

Instruments for insect-friendly site design

Nature conservation authorities and private nature conservation organizations can support companies in the development of meaningful measures or in the creation of a roadmap for the introduction of nature-oriented design.

For the actual implementation, a company should look for a horticultural company that works close to nature. They have the knowledge and experience to bring together the idea of nature-oriented design with the aesthetic, practical or legal requirements of a company in terms of landscaping.

You can find suggestions on how to promote biodiversity on company premises in the **Linkbox**.

Linkbox

Here you will find a selection of relevant links to catalogues of measures:

Naturnahe Firmengelände - biodiversity premises

Presentation of the initial certification „DGNB „Biodiversity-promoting outdoor spaces“ at the UBi Dialogue Forum 2024.

Good examples from practice

DGNB certification „Biodiversity-promoting exterior spaces“

In June, L'Oréal's logistics center in Muggensturm was the first company to be awarded the DGNB certification „Biodiversity-promoting exterior spaces“ in gold. With 30,000 m² of green roofs, near-natural retention areas with species-rich flower meadows and various habitat structures, L'Oréal shows what is possible on a logistics site. L'Oréal's company-wide biodiversity management has set itself the goal of achieving an increase in biodiversity at all sites by 2030 compared to 2019.

7 The role of companies

Advantages of insect-friendly landscaping

As well as reducing the amount of maintenance required, redesigning company premises can also create more pleasant areas for employees to spend time in. Climate change adaptation also plays a major role in the design of outdoor areas and goes hand in hand with biodiversity aspects. Nature-oriented design options can therefore offer tangible benefits:

- Perennial flowering areas and meadows are mowed less frequently than ornamental lawns, for example, which often must be mowed, fertilized or scarified.
- Near-natural design of infiltration troughs or trenches can increase the seepage capacity through better root penetration.
- Green roofs and facade greening reduce the energy required for air conditioning, which is necessary for the health and performance of employees and for the quality of production processes.
- Green roofs also offer increased resilience to hail and reduce the risk of flash flooding by delaying the release of rainwater into the environment.
- Near-natural areas promote the well-being of employees and increase the attractiveness of the workplace - an increasingly important factor, especially in view of demographic change and the shortage of skilled workers.
- Biodiversity-promoting design offers numerous opportunities to involve employees and thus strengthens their identification with the company.

Incentives and funding opportunities

There are various funding opportunities for certain nature-oriented design measures. As part of the "Natural Climate Protection" action program, the German government is successively publishing further funding programs for local authorities and other interest groups, e.g. companies. For example, the module for natural climate protection measures in the KfW environmantal program supports companies that implement measures to strengthen climate protection and biodiversity on company premises, on company buildings or on areas of commercial or industrial parks: Unsealing and renaturing areas, creating near-natural green and open spaces or small bodies of water, planting trees, greening roofs and facades and taking measures to infiltrate and use precipitation and grey water. »

Since April 2024, it has been possible to have the near-natural company premises certified by the German Sustainable Building Council ("Deutsche Gesellschaft für Nachhaltiges Bauen", DGNB) - an attractive goal for companies.

Education and advice

The lighthouse initiative „Mainstreaming nature-oriented company premises" is part of the „Unternehmen Biologische Vielfalt (UBi)" project. A large number of measures and positive examples are described on the website. There are also links to regional initiatives that support companies in designing their sites in a nature-oriented way.

As part of the „Mainstreaming near-natural company premises" project, the „Nature Incorporate" monitoring system for near-natural company premises was. Nature InCorporate can be used to monitor and evaluate the development of biodiversity potential on individual company premises or several sites. Social aspects, such as acceptance by employees, and the management of biodiversity aspects beyond the company premises are also examined.

The criteria of the new DGNB certification „Biodiversity-promoting exterior spaces" offer companies good guidance on how to plan and implement an ecologically high-quality design of outdoor facilities. The certification was developed jointly by the Lake Constance Foundation and the DGNB and can be obtained free of charge from the DGNB website.

Training by the company:

For both facility managers and landscape gardeners who create or maintain near-natural areas (or tender for corresponding services), near-natural design means a change. Interested parties can find offers for example from Biodiversity Premises project. It offers guides, examples, contacts with regional initiatives and much more.

Creating acceptance through public relations & networking

Onsite and external information and communication enhance acceptance and are effective ways to address environmental issues with employees and visitors:

- Information signs on site explain the concept of near-natural design and ecological relationships. This increases acceptance. The information signs also serve as a station for site tours by guests - thus contributing to environmental education beyond the workforce.
- Involving employees is also part of successful communication: employees who are involved in the creation and maintenance of near-natural areas are important advocates for the measures implemented and also gain knowledge that they can apply in their own gardens.

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