

# NL Pollinator Strategy

## “Bed & Breakfast for Bees”





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## Introduction

### A pollinator strategy involving 43 partners

**We are pleased to present the NL Pollinator Strategy for the Netherlands in this booklet, in collaboration with 35 partners who have prepared the strategy. Meanwhile another 8 partners joined, all developing their initiatives. The number of partners continues to grow! All partners are set to implement the strategy jointly.**

Owing to the role that they play in pollinating plants, bees are absolutely essential for the conservation of flora and fauna in the Netherlands, and they have a crucial economic function in agriculture and horticulture.

It has been apparent for a number of years now that action needs to be taken if bees are to be protected. In 2013, a *Bee Health Action Programme* was presented by the then government, focusing primarily on the honeybee. This new NL Pollinator Strategy is aimed at all “pollinators”, particularly the many *wild* bee species. Wild bees are in fact among the most important pollinators in the Netherlands. However, more than half of the wild bee species are on the Red List, meaning that they are threatened with extinction.

With this new strategy, we believe that we have found an all-encompassing approach that will ensure the long-term conservation of all bee species and other pollinators. For this situation to happen, wild bees require two things: nesting sites and an adequate food supply; in other words, *bed & breakfast for bees*. Three key themes have been established in the many initiatives being pursued and in this strategy, to wit 1) promoting biodiversity, 2) improving agriculture-nature interaction and 3) helping beekeepers to improve the health of the honeybee.

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**Wild bees require two things: nesting sites and a supply of food; in other words, *bed & breakfast for bees*.**

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We have included measurable targets with 2023 and 2030 as benchmark years, so we can produce demonstrable results. All parties involved will discuss the progress of their initiatives annually as a means of ensuring that objectives are in fact achieved.

The following pages contain a summary of the strategy in the answers to several questions:

- Why do we need the strategy?
- What do we hope to achieve with it?
- How are we going to implement it?

The precise, official agreements between the partners are then set out in the full text of the strategy. Finally, this booklet provides a complete list of the more than seventy initiatives to which the signatories to this strategy are committing themselves and which they will be implementing in the years ahead so as to achieve this strategy’s objective. Those initiatives form the basis, while the strategy ties them together in the form of an all-embracing programme.

The commitment shown by all those who have worked on the strategy illustrates how certain they are of the need for it. It took just a few months before consensus was reached by divergent parties such as the Dutch Federation of Agricultural and Horticultural Organisations (LTO), farmers’ cooperatives, beekeepers’ organisations, Natuur & Milieu (Nature & Environment), Dutch Butterfly Conservation (De Vlinderstichting), Society for the Preservation of Nature in the Netherlands (Natuurmonumenten), the Dutch Water Authorities, the provinces, the national forestry management agency in the Netherlands (Staatsbosbeheer), Bayer, BASF, Syngenta, and knowledge institutions such as Naturalis, Stichting EIS and Wageningen University & Research (Wageningen UR).

We will make efforts to ensure that the strategy is actually implemented so its objective is achieved. This duty is ours if we want the responsibility that we are taking for the conservation of flora and fauna to reap real results.

The Hague, 22 January 2018

Carola Schouten,  
*Minister of Agriculture, Nature  
and Food Quality*

Marc Calon,  
*Chair of the Dutch Federation of Agricultural  
and Horticultural Organisations*

Marc van den Tweel,  
*Chair of the Society for the Preservation of  
Nature in the Netherlands*

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## Signatories to the NL Pollinator Strategy

The following parties signed the NL Pollinator Strategy on 22 January 2018.

- Association of Drinking Water Authorities in the Netherlands (Vereniging van waterbedrijven in Nederland)
- Association for Ecological Living and Gardening (Velt - Samen Eco Actief)
- Association of Regional Water Authorities (Unie van Waterschappen)
- BASF
- Bayer
- Bayer Bee Care Center
- Bee Foundation
- Bij Bewust Betuwe
- BoerenNatuur
- Centre for Agriculture and the Environment (Centrum Landbouw en Milieu)
- CITAVERDE College
- De Dommel Water Authority
- De Coöperatieve Betuwse Fruitmotor
- Dutch Beekeepers' Association (Nederlandse Bijenhoudersvereniging)
- Dutch Butterfly Conservation (De Vlinderstichting)
- Dutch Federation of Agricultural and Horticultural Organisations (LTO Nederland)
- Dutch Fruit Growers' Organisation (Nederlandse Fruittelers Organisatie)
- EIS Foundation – Knowledge Centre for Insects (Stichting EIS Kenniscentrum Insecten)
- Inbuzz Extra
- Koppert Biological Systems
- Landal GreenParks
- Landschappen NL
- Louis Bolk Institute
- Nature and Habitat Knowledge Centre (Kenniscentrum Natuur en Leefomgeving)/ Van Hall Larenstein
- Naturalis Biodiversity Center
- Nature & environment foundation (Stichting Natuur & Milieu)
- Nefyto Royal General Bulb Growers' Association (Koninklijke Algemeene Vereeniging voor Bloembollencultuur)
- Plattelandscoöperatie
- Professional Association of Dutch Beekeepers
- Society for the Preservation of Nature in the Netherlands (Natuurmonumenten)
- Skylark Foundation (Stichting Veldleeuwerik)
- Syngenta
- The province of Limburg
- The province of North Brabant
- The province of Overijssel
- The province of South Holland
- The national forestry management agency in the Netherlands (Staatsbosbeheer)
- The BEEP foundation (Stichting BEEP)
- The Federation of Heathland Farms (Federatie van Heideboerderijen)
- The Ministry of Agriculture, Nature and Food Quality
- Van Hall Larenstein/Bee Health Research Group
- Wageningen University & Research

## Why do we need an NL Pollinator Strategy?

**Pollination – the transfer of grains of pollen – is an essential step in the reproduction process for most food crops and plants. This process takes place as bees and other pollinator species, such as hoverflies and butterflies, move from plant to plant. Bees account for the lion’s share of all insect pollination. Pollination is necessary for more than 75% of our food crops, primarily vegetables and fruit, and for more than 85% of wild plants in the natural environment.**

According to the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES), numbers and species of bees and pollinators are declining worldwide. This fact is undoubtedly also true of the Netherlands: we have 360 bee species, but more than half of are on the Red List, i.e. their continued survival is threatened.

In recent years, many parties in the Netherlands have been working actively on the conservation of bee populations. That work took place as part of the Bee Health Action Programme (2013). It focused primarily on the *honeybee*, managed by humans. However, it has now emerged that *wild* bees are at danger as well. It is vital that we extend and intensify the focus that is already on the honeybee to include *all* pollinators, particularly wild bees, but also hoverflies and butterflies.

Pollinators are indispensable if the natural ecosystem is to function well. Insufficient pollination results in fewer seeds and fruit, causing vegetation to decline and potentially giving rise to a food shortage for wild animal species, including bees, mammals and insects.

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*More than half of the 360 wild bee species are on the Red List.*

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Agriculture also has a substantial economic interest in sufficient pollination. Without pollinators, crop yields fall and the quality of the food product is unsatisfactory. For example, pollinating insects are jointly responsible for between 18% and 68% of apple, pear, strawberry and blueberry yields.



## What do we hope to achieve?

**The primary objective of the NL Pollinator Strategy is for us once again to have populations of bees and other pollinators that are stable and/or developing in a positive direction by 2030. There are many parties having an influence here, including the agricultural sector, site managers and government authorities. As a result, they need to develop a targeted pollinator-friendly policy and measures, as well as taking account of the impact that all their activities have on managed and wild bees.**

The NL Pollinator Strategy contains measurable targets, with the intention that they will be achieved in stages. For instance, the aim is to arrive at a greater number of bee species showing a stable or positive population trend by the benchmark years 2023 and 2030. An additional aim is to bring about an increase in the distribution of bees throughout the Netherlands.

To ensure that the objectives are achieved, we have focused on three themes: 1) promoting biodiversity, 2) improving nature-agriculture interaction and 3) helping beekeepers to improve the health of the honeybee.

- *Biodiversity*  
It is important for biodiversity that the habitat of wild and other bees is enhanced in the countryside as well as in towns and cities. In particular, it is crucial that a food supply and nesting sites are available. We intend to provide managers of sites, infrastructure and public green spaces with tools so these essential requirements are met. It is important that public spaces are designed and managed in such a way as to give herbs and flowers full potential to grow and flourish, and that nesting sites are provided.
- *Nature-agriculture interaction*  
The purpose of improved nature-agriculture interaction is to create a good habitat for bees in all parts of the agricultural environment, such as fields, farmyards, contiguous nature areas and public space. For this reason, the pollinator strategy is focused among other things on agriculture that is more nature-based, as well as on providing guidelines to farmers and horticulturists for them to establish a pollinator-friendly operational management.
- *Honeybees*  
The strategy also focuses on transferring knowledge to beekeepers, showing them how they can improve the health of honeybees. One of the aims is to develop a “resistant” bee, making the honeybee better able to withstand diseases and pests.

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*The aim is to arrive at a greater number of bee species showing a stable or positive population trend by 2023 and 2030.*

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To achieve those aims, much attention will be devoted to three subjects which concern these themes.

First is the expansion and dissemination of scientific and applicable knowledge. Consumers will also receive more information about the importance of a healthy bee population and how they can contribute to that situation, e.g. with a pollinator-friendly garden or terrace.

Second, the EU is currently preparing a new Common Agricultural Policy (CAP) post-2020. The Netherlands is committed to developing and applying pollinator-friendly greening measures and agricultural nature conservation. New greening tools could improve the living conditions of pollinators.

Finally, the Netherlands has taken the initiative and created a network of like-minded countries, the *Coalition of the Willing on Pollinators*. The objective is to develop pollinator strategies, to make international research capable of practical application, and to learn from and inspire each other. Fifteen countries, including some which are far beyond Europe's borders, have already joined the coalition.

## How are we going to implement the strategy?

**Before implementing the strategy, we will start with the over seventy initiatives that we have included in this booklet. They are concrete plans of the 43 partners which jointly formulated this strategy. Activities at various levels are involved: local, regional, national and international.**

All of the parties are setting in motion actions intended to ensure that the common objective is achieved. They include monitoring progress, sharing results and constructive cooperation. Frontrunners and their initiatives can be a source of inspiration for many. As social organisations focus particularly on the citizen and consumer, they help to raise awareness within society. Positive activities and campaigns aimed at the general public can be very instrumental here.

The NL Pollinator Strategy contains measurable objectives. The years 2023 and 2030 are benchmark points in time which will be used to determine whether the objectives have been achieved. We will discuss progress among ourselves every year.

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*All of the parties are setting in motion actions intended to ensure that the common objective is achieved.*

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The government authorities involved can contribute towards the strategy's implementation using a variety of tools, including communication, consultation, financial support, research and appropriate regulations. The Ministry of Agriculture, Nature and Food Quality (Landbouw, Natuur en Voedselkwaliteit, LNV) will facilitate the implementation of the strategy by bringing parties together by organising annual meetings, among other things, having knowledge developed and promoting the implementation of the NL Pollinator Strategy, also in the new Common Agricultural Policy. In addition, the Netherlands continues to play a pioneering role in the network of like-minded countries, the *Coalition of the Willing on Pollinators*.

# NL Pollinator Strategy

## “Bed & Breakfast for Bees”

### 1. Importance to society

The global demand for food will increase considerably over the next few decades, even though great demands are already being placed on the planet. Food security is a factor that will determine the future. For instance, food production and consumption are responsible for about one third of the climate impact, and are also causing a significant reduction in biodiversity in rural areas, among other places. Pollination is necessary for more than 75% of our food crops, primarily vegetables and fruit, and for more than 85% of wild plants in the natural environment. The recent publication of the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES)<sup>1</sup> and research of Wageningen University Research (WUR)<sup>2</sup> show that this situation concerns not just managed bees, but especially the species found in the wild. This IPBES publication notes that about 35% of the total volume of food crops produced worldwide comes from crops that are dependent on pollinators, and that the numbers and species of bees and pollinators are declining throughout the world. In the Netherlands, over half of the wild bee species are in danger of disappearing (national Red List for bees)<sup>3</sup>.

Without pollination and pollinators, such as managed and wild bees, crop yields requiring pollination fall and the quality of the food product is unsatisfactory. WUR research into the cultivation of four fruit crops (apple, pear, strawberry and blueberry) in the Netherlands shows that pollinating insects are jointly responsible for between 18% and 68% of the yield, as well as that the bulk of this contribution is provided by wild species<sup>4</sup>. Pollinators are indispensable if the natural ecosystem is to function well. Insufficient pollination results in fewer seeds and fruit, causing vegetation to decline and potentially giving rise to a food shortage for wild animal species, including bees, mammals and insects. Outside food production, a rich diversity of species depends on guaranteed pollination.

### 2. Social context and cooperation

Many parties have been taking action to promote bee populations in recent years. Examples include the Bee Health Action Programme (Parliamentary paper 27858, No 224) of 2013. Various activities and new social initiatives have been taken up and implemented in this regard, including the Bees Research Group, research into resistant honeybees, dissemination of knowledge on sound beekeeping and agricultural practices, and bee ribbons, primarily focusing on the honeybee. As it has now emerged that wild pollinators are not flourishing either, it is important that efforts are extended and intensified to include all pollinators. In autumn 2016, the then Minister for Agriculture announced that he intended to develop a NL Pollinator Strategy jointly with social parties and scientists (Lower House 31532, No 174). That strategy concerns all pollinators with the managed and wild bee as exponent and poster boy.

<sup>1</sup> Summary for policymakers of the assessment report on pollinators, pollination and food production, 2016: [https://www.ipbes.net/sites/default/files/downloads/pdf/spm\\_deliverable\\_3a\\_pollination\\_20170222.pdf](https://www.ipbes.net/sites/default/files/downloads/pdf/spm_deliverable_3a_pollination_20170222.pdf).

<sup>2</sup> De Groot, G.A., N. Knoben, R. van Kats, W. Dimmers, M. van 't: Zelfde, M. Reemer, J. C. Biesmeijer & D. Kleijn., 2016. De bijdrage van (wilde) bestuivers aan een hoogwaardige teelt van peren en aardbeien; Nieuwe kwantitatieve inzichten in de diensten geleverd door bestuivende insecten aan de fruitteeltsector in Nederland [The contribution of managed and wild pollinators to a high-quality crop of pears and strawberries: new quantitative insights into the services provided by pollinating insects to the fruit production sector in the Netherlands]. Wageningen UR, Alterra report 2716.

<sup>3</sup> Peeters & Reemer, 2003. Bedreigde en verdwenen bijen in Nederland (Apidae s.l.) [Threatened and disappearing bees in the Netherlands (Apidae s.l.)]. Stichting EIS Nederland.

<sup>4</sup> De Groot, G.A., R. van Kats, M. Reemer, D. van der Sterren, J. C. Biesmeijer & D. Kleijn, 2015. De bijdrage van (wilde) bestuivers aan de opbrengst van appels en blauwe bessen; Kwantificering van ecosystemediensten in Nederland [The contribution of managed and wild pollinators to apple and blueberry yields: quantification of ecosystem services in the Netherlands]. Wageningen, Alterra, Alterra report 2636.

The Primary Objective of the NL Pollinator Strategy is to ensure that pollinators and pollination will be sustainably maintained and promoted by 2030. As a distant vision, 2030 also marks the end of the period set for the UN's *Sustainable Development Goals*. Among the goals that we endorse are Goal 12 (Sustainable consumption and production) and Goal 15 (Halt biodiversity loss).

The strategy describes the additional efforts required on top of the existing policy and initiatives, and has combined them for the period 2018–2023 so these objectives can be achieved at the national as well as the international level. The starting point is that this initiative is a joint plan of action for pollinators, i.e. a plan of action involving social partners and government authorities. Parties such as the business community, including the farming community, beekeepers, organisations that manage sites, social organisations, municipalities, scientists, citizens and consumers can all play an important part in conserving and promoting pollinators, individually and jointly.

In the Netherlands, the initiatives set up and implemented in collaboration with social partners represent a significant part of the efforts made to help pollinators. New initiatives may also be added to the existing ones over the duration of the strategy. At the international level, as a member of the *Coalition of the Willing on Pollinators*, we exchange knowledge and experience with other countries.

### 3. Targets of the NL Pollinator Strategy

#### Primary objective

The key objective of the NL Pollinator Strategy is to ensure that *pollinators and pollination will be sustainably maintained and promoted by 2030*.

To do so, parties having an influence in this regard will have to develop a pollinator-friendly policy and measures, taking account of pollinators in related policy and ensuring that it is implemented in a pollinator-friendly manner. This process will enable many parties (including those which did not co-write the strategy) to work in a systematic and structural way on improving habitats for all pollinators, with a view to the 2030 objective. A regional approach, custom solutions and adequate management are essential here.

The following measurable objectives have been specified for the Netherlands to ensure that the primary objective is achieved, with the intention that they will be achieved in stages:

- Boost the number of bee species showing a stable or positive population trend according to Reemer et al. (2012)<sup>5</sup>:
  - By 2023, reduce the number of species showing a downward or sharply downward trend by 30% and increase the number of species with an upward or sharply upward trend by 30% compared with 2012.
  - By 2030, reduce the number of species showing a downward or sharply downward trend by 50% and increase the number of species with an upward or sharply upward trend by 50% compared with 2012.
- Promote species diversity of bees:
  - The year 2030 should see a significant trend showing that the distribution of bees (in terms of area) has increased nationwide compared with 2012.
- Guarantee efficient pollination:
  - By 2030, pollination will no longer be a limiting factor in seed setting of food crops and wild plants in 90% of cases.

This fact means that that managed and wild bees are the key indicator in establishing whether or not the aforementioned primary objective has been achieved. The assumption is that when managed and wild bees flourish in the Netherlands, this situation can be taken as a sign that habitats have improved for all pollinators. According to Reemer et al. (2012)<sup>6</sup>, the population trends should be recalculated to obtain a baseline measurement for the situation in 2018, based on census data for the period up to and including 2017.

<sup>5</sup> Reemer, M., D. Kleijn & I.P. Raemakers, 2012. Veranderingen in de Nederlandse bijenfauna [Changes in Dutch bee fauna]. – In: Peters, T.M.J., H. Nieuwenhuijsen, J. Smit, F. van der Meer, I.P. Raemakers, W.R.B. Heitmans, C. van Achterberg, M. Kwak, A.J. Loonstra, J. de Rond, M. Roos & M. Reemer, 2012. De Dutch bijen (Hymenoptera: Apidae s.l.) [Dutch Bees (Hymenoptera: Apidae s.l.)]. – Natuur van Nederland 11, Naturalis Biodiversity Center & European Invertebrate Survey – The Netherlands, Leiden: 103–107.

### Underlying objectives for the three key themes

To ensure that the objectives are achieved, we have focused on three themes, namely 1) promoting *biodiversity* by citizens, businesses and government authorities (in public and private spaces), 2) improving *nature-agriculture interaction* and improving the habitat of bees and 3) improving the beekeeping practice and the health of the *honeybee*. Commitment will be required, as will measures and activities pertaining to these three key themes. Needless to say, the themes are linked as the Dutch landscape is multifunctional and serves many purposes. The preconditions explained in Section 7 must be met if the objectives within the themes are to be attained.

#### Biodiversity

The purpose behind promoting biodiversity<sup>6</sup> is to improve the habitat of wild bees in the green (rural) environment as well as in urban areas, focusing on:

- ensuring a year-round, varied food supply in urban and rural areas;
- increasing the number of nesting sites for above-ground and below-ground nesting species;
- providing perspective for action to managers of sites, infrastructure and public green spaces as well as to citizens, supplemented at the regional level and/or with custom solutions;
- raising awareness of the added value that wild pollinators provide for food and nature;
- monitoring the impact of measures taken at the national as well as at the regional level (see key objective). As monitoring the use of volunteers and specialists is important, we will link up with existing monitoring networks and use experiences gained from initiatives;
- encouraging a different layout and management of public space, allowing room for herbs and flowers to spread.

#### Nature-agriculture interaction

The purpose behind improving nature-agriculture interaction is to create a better habitat for pollinators in all parts of the agricultural environment (including farmyards, plots of land, contiguous nature reserves or public space) and to optimise pollination services in relation to the essential preconditions in agricultural production, such as sustainable plant protection and fertilisation. Agricultural biodiversity is important for agricultural production and the environment. The focus is on:

- promoting nature-based agriculture as an ecologically and economically sustainable form of food production<sup>7</sup> as well as a pollinator-friendly method of managing agricultural sites and nature reserve sites; This element is also aimed at increasing the supply of food and nesting sites.
- exploring the possibility of an upgrade to existing quality marks through pollinator-friendly measures;
- creating and announcing perspectives for action for farmers and horticulturists, e.g. through new market concepts, awareness-raising campaigns and green education;
- raising awareness of the relationship between pollinators and natural pest management or control (for example, in functional agricultural biodiversity);
- limiting the burden on the environment caused by plant protection products, in accordance with the policy applied by the Ministry of Agriculture, Nature and Food Quality (LNV) in the Health Growth, Sustainable Harvest Policy Document (GGDO)<sup>8</sup>.

#### Honeybees

The objective in respect of honeybees (and managed bees) is to improve bee health and ensure sound beekeeping practices, where the focus is on:

- optimising apiculture and beekeeping practices, promoting bee health (for example, through awareness-raising campaigns and knowledge transfer);
- developing and creating favourable conditions for a “resistant bee”, making the honey better able to withstand diseases and pests;
- facilitating the year-round availability of food plants;
- optimising collaboration between beekeepers on the one hand and fruit and vegetable growers on the other.

<sup>6</sup> We define biodiversity as the diversity of species, ecosystems and genes.

<sup>7</sup> Nature-based agriculture is a form of sustainable agriculture as well as part of a resilient ecosystem and food system. It makes optimum use of the natural environment and integrates it into routine farm management. Nature-based agriculture also contributes actively to the quality of the natural environment. It ensures that food and floricultural products are produced within the limits of nature, the environment and habitats, and has a positive impact on biodiversity.

<sup>8</sup> Gezonde Groei, Duurzame Oogst (GGDO) Document, 14 May 2013 (Parliamentary paper 27858, No 146).

### Interconnections between the objectives and the commitment

The following cross-cutting subjects are relevant to the three key themes.

#### *Knowledge*

- Knowledge involves development and transfer processes, including green education. Various studies pertaining to pollinators have already been started.
- Knowledge is essential if we are to identify pollinators’ needs. What is required in order to acquire it? Insight into the costs and benefits of measures (efficiency and effectiveness of measures and activities).
- The Knowledge Impulse – Pollinators is financed by the Ministry of Agriculture, Nature and Food Quality. It is principally geared towards acquiring knowledge and raising awareness to ensure the sustainable conservation and promotion of pollinators and pollination services, with a focus on habitat improvement, both within and outside the agricultural context. A scientific consortium, led by Wageningen Research, is responsible for its implementation. The research conducted as part of the knowledge impulse involves:
  - helping initiatives with shaping efficient contributions to promote pollinators by supplying them with the requisite knowledge;
  - identifying success factors in ongoing and new initiatives for pollinators, and analysing ways of overcoming present obstacles;
  - developing guidelines in order to assess the extent to which present and future initiatives will in fact lead to an improvement in the conservation and promotion of pollinators;
  - generating a greater understanding of the way in which and the degree to which generic measures for pollinators contribute, or could contribute, to the protection of rarer species.
- Knowledge projects are already being executed for the honeybee; see Section 5.
- Expectations are that addressing bees and pollination in green education will help to instil a pollinator-friendly approach in those involved with agriculture, horticulture and the management of green areas. By extension, it is also important that knowledge about pollinators is made available to designers and managers of projects, including infrastructure projects.
- Scientific knowledge networks, such as Super-B, help to develop and disseminate knowledge on pollinators. Naturalis plays a prominent role here at the national and international level.

#### *International aspects*

- The Netherlands took the initiative to create a learning network: the Coalition of the Willing on Pollinators (Parliamentary paper 31532, No 174). The aim is to develop pollinator strategies, render international research capable of practical application, and to learn from and inspire one another. Fifteen countries have now joined the coalition.
- Among other things, the recommendations in the IPBES report are now capable of practical application at the national level as part of the NL Pollinator Strategy. We will be able to share the experience that we gain in the Netherlands within the coalition.

#### *Consumer and citizen*

- Raising citizens’ and consumers’ awareness of the importance of pollinators and pollination, and encouraging their active involvement, with the aim of changing behaviour. Examples include providing a perspective for action and information services.
- Facilitating awareness-raising and involvement through activities in the Netherlands. This aim can be achieved by, among other things:
  - publicising sound citizen practices;
  - having the retail sector provide information on the usefulness of and necessity for pollination;
  - discouraging the “paving over” of gardens, and encouraging pollinator-friendly garden and terrace design;
  - encouraging citizens to become actively involved in organisations that manage the landscape and social initiatives;
  - involving citizens and schoolchildren in pollinator and pollination surveys.
- Encouraging the development of guaranteed pollinator-friendly food products.

#### *Government authorities and semi-government authorities*

- Promoting the generation of knowledge at the central government level by the Ministry of Agriculture, Nature and Food Quality. One example is the Knowledge Impulse – Pollinators, which will run for a five-year period. Publishing and sharing knowledge are a crucial part of the process.
- Encouraging the authorities to design and manage government properties in a pollinator-friendly manner.
- Identifying the right management measures to conserve and promote managed and wild bees (perspective for action). The Netherlands is committed to making the CAP more pollinator-friendly; see below.

#### *European Agriculture Policy*

Opportunities for pollinator-friendly agricultural production under the Common Agricultural Policy (CAP) have been included as a subject with the cross-cutting themes, as the CAP is an influential policy and can provide possibilities for all of the key themes. Examples include the EU/NL honey programme, agricultural nature conservation and collectives.

- Efforts of the Netherlands relating to the post-2020 CAP will focus on placing a greater emphasis on targeted payments to farmers so as to ensure a more sustainable form of agriculture.
- The aim is to encourage the development and application of pollinator-friendly greening measures and agricultural nature conservation within the CAP, thus providing agricultural and other businesses with opportunities to improve pollinators’ habitats.
- Below are some examples of ways in which this aim could be achieved:
  - using the set of instruments for greening that the CAP provides to promote and strengthen pollinators; creating more space for bees on farms and in the surrounding area;
  - providing scope for custom solutions.

The focus will be on

- exploring how pollinator-friendly the existing set of instruments is (Pillars 1 and 2).
- The present Dutch efforts in relation to bolstering biodiversity and the set of instruments have been communicated (Lower House 28 625, No 247). A next step is to translate these effort into practice through political lobbying, policy and the sector.

## 4. The strategy’s duration and activities

In order to achieve the primary objective by 2030, this strategy will be used in the period between 2018 and 2023 to commence work on the parties involved at the various organisational levels, from local and regional to national and international. The idea is that as from 2023, following the finalisation of the strategy, the objectives will have been sufficiently implemented by and for the partners involved as well as any new partners, and that sufficient perspective for action will have been developed, agreed and partly or fully applied for us to continue the promotion of pollinators in a structured and sustainable way.

#### **Schedule**

- Completion of the strategy: end of 2017.
- Presentation: 22 January 2018.
- Baseline measurement: 2018, based on a recalculation using the method by Reemer et al.
- Duration of the strategy: 2018–2030, including a progress report before 2023

(the progress report date is aligned to the end of the knowledge investment impulse).

It will be possible to determine in 2022/2023 which additional measures and activities, if any, are required as we move towards 2030.

## 5. Positioning of the strategy

It goes without saying that the NL Pollinator Strategy is not separate from, but rather dovetails with, existing policy, ongoing activities and social initiatives. In principle, the existing efforts form the framework within which the strategy can be implemented. The strategy will be able to enhance those efforts where necessary and possible. It will also challenge parties to innovate and change; for instance, by adopting a more comprehensive approach to a multi-layer social problem as well as by mobilising consumers and citizens.

### *a) Existing initiatives*

Many good initiatives aimed at fostering pollinators have already been launched. Examples include bee ribbons, seed-sowing activities, Bee Deals and the Green Deal Infratuur. Those initiatives could be regarded as forerunners of this strategy. In the present NL Pollinator Strategy, we have concentrated on initiatives with a comprehensive, long-term management component.

### *b) Key policy areas relating to the pollinator strategy include:*

- nature and biodiversity policies, including nature-based agriculture;
- knowledge policy (for example, pertaining to the honeybee and to green plant protection);
- plant protection policy and the relationship with pollinators, as laid down in the GGDO Policy Document (Parliamentary paper 27858, No 146). Sustainability is a prime consideration in this policy document, which also covers biodiversity and pollinators. Specific objectives and interim objectives have been set. The first independent interim evaluation of the policy will take place in 2018. The results will determine whether additional policy will be required in order to achieve the objectives planned by 2023, which is also when a further evaluation of the policy is scheduled to take place;
- policy on honeybees and pollination, including the Bees Research Group, honeybee monitoring programme and honey programme;
- relationship between the Action Programme/Bee Forum and the NL Pollinator Strategy, including the network;
- CAP (greening, agricultural nature conservation, collectives);
- water management policy, including flower-rich dykes and dyke management;
- environmental vision and the Environment and Planning Act (Omgevingswet; infrastructure and environment).

There may also be policy-related and/or social themes which do not appear to be related to bees and pollinators at first glance, but which can provide reference points and/or justification for the parties concerned to make a link with the promotion of pollinators within their own organisations and under their own responsibility. Below are some examples of themes:

- clean water (water policy, emissions policy);
- climate adaptation (climate policy);
- green education;
- urban agriculture.

## 6. Expectations and roles

### **Role and needs of social partners**

There is much enthusiasm, commitment and a sense of responsibility among the participating social parties. Our partners are prepared to set activities in motion in order to achieve the common objective. These activities will include monitoring progress, sharing results and operating in a consistent manner. The joint approach means that we will hit our target sooner. Frontrunners and their initiatives can be a source of inspiration for many. As social organisations focus particularly on the citizen and consumer, they help to raise awareness within society. Positive activities and campaigns aimed at the general public can be very instrumental here.

### Role and needs of the government

The government authorities involved can assist in the activities taking place when the strategy is implemented using a variety of tools, including communication, consultation, financial support, knowledge and research, and appropriate regulations. In concert with the partners, the government authorities involved will make efforts to examine which tools are required and what possibilities there are for using them. Government authorities may also launch initiatives themselves.

#### *The role of the Ministry of Agriculture, Nature and Food Quality*

The Ministry of Agriculture, Nature and Food Quality will take on a number of tasks in order to perform its role. Those tasks involve mobilising parties and generating awareness of managed and wild bees, facilitating the development and dissemination of knowledge (among other things), organising events, establishing links between parties and processes, and providing clarity and managing expectations (what we will and will not be doing).

#### *Other government authorities*

Other government authorities are also contributing to the strategy and promoting pollinators; examples include the Ministry of Infrastructure and Water Management, the Directorate-General for Public Works and Water Management (Rijkswaterstaat), the national forestry management agency in the Netherlands (Staatsbosbeheer), the provinces, water authorities and municipalities. The Ministry of Agriculture, Nature and Food Quality is collaborating with them on the development and implementation of the NL Pollinator Strategy. Contributions of the other government authorities will support and strengthen pollinator-friendly measures and initiatives from society as well as within their own organisations.

## 7. Preconditions

The following preconditions are essential if the primary objective is to be achieved by 2030, including the underlying objectives of the strategy set out above. Together, we must monitor these factors so we can make the necessary changes in good time and continue on the right course in liaison with one another.

Preconditions for achieving the objectives of the NL Pollinator Strategy are:

- 1) Long-term use of pollinator-friendly measures, including a budget.
  - 2) Knowledge of effective measures for pollinators in a specific area, suited to the particular type of landscape, soil type and designated use of the area. This process will require an understanding of the right combination of plants and pollinators for each region, for example.
  - 3) Sufficient variation in the measures.
  - 4) Provision of information in order to offer all partners a perspective for action and to feed the network.
- 
- Re 1) Guaranteeing the sustainable conservation of new elements installed and of their quality. Long-term maintenance at the same location, long-term pollinator-friendly management and regular quality assurance checks by the initiator itself with the necessary adjustments (a flower border will often have to be resown every few years).
  - Re 2) Coordinating the selection and design of measures in line with the type of landscape and the associated pollinator species pool. Ensuring that the right seed and stock plants are chosen when planting a new area. Ensuring that there is a good match of plants and their pollinators for each region.
  - Re 3) Ensuring spatial cohesion; a nesting site makes sense only when combined with a nearby food supply and vice versa. This condition will require planning and thus collaboration between partners at the regional level.
  - Re 4) Providing structured and periodic feedback on results, and sharing experiences, at the national and international level.

## 8. What happens next?

After the NL Pollinator Strategy has been signed and presented on 22 January 2018, the initiative owners and partners will set to work or continue to work on their initiatives and activities for pollinators in order to achieve the objective.

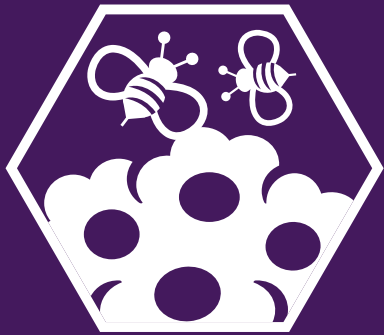
In the years running up to 2023, meetings on the “Current Situation of the NL Pollinator Strategy” will be held at least once a year in order to discuss progress and exchange experiences. All the initiatives proposed, the results of the pollinator survey, advances at the international level and the part of the CAP pertaining to pollinators will be covered.

With this active approach, we will keep one another up to the mark, and together monitor the strategy’s progress as well as its implementation to ensure that we remain on course for 2023 and 2030.

## 9. Appendix

The social initiatives included with this strategy are contained in the appendix to it. Through the number of initiatives, the strong commitment that this subject inspires becomes visible. The partners are intent on achieving the stated objectives and hope to inspire others to contribute in turn. Attention will be drawn to and efforts made for pollinators at many levels outside this strategy as well. Together, we can achieve our objective by 2030.

The appendix containing initiatives has been fleshed out on the basis of the three key themes: biodiversity, nature-agriculture interaction and the honeybee. Moreover, the interconnections are explained in more detail, covering knowledge, international aspects and the CAP in relation to pollinators.



# NL Pollinator Strategy Initiatives

## Biodiversity Theme





## Nederland Zoemt (The Netherlands buzzes)

Initiative owners: Stichting Natuur & Milieu and IVN

### Objective

To make structural improvements to the food supply and nesting sites for wild bees in the Netherlands so as to improve biodiversity. The focus is on education (e.g. teaching packages for landscaper study programmes to improve site management), as well as awareness-raising (e.g. through consumer campaigns) and encouraging managers to make sites more suitable for wild bees (e.g. working with municipalities).

### Partners

LandschappenNL, Naturalis, Wellantcollege, GDO, Groene Cirkels, Rijkswaterstaat

### Status/current situation

Ongoing initiative

### Duration

2017–2019

### Milestones

- December 2017: award of the prize for the most pollinator-rich municipality, repeated annually.
- 21 and 22 April 2018: Bee Count Day, repeated annually.
- Various consumer campaigns through retail partners, including Intratuin, Dille & Kamille and others, from March to October inclusive.

## Wilde Bijenlinie (Wild Beeline, part of Nederland Zoemt)

Initiative owner: LandschappenNL

### Objective

To strengthen and structurally expand the nesting and food network for the wild bee by linking existing wild bee sites and creating new ones, in order to increase awareness that the wild bee is indispensable for the Dutch ecosystem.

### Partners

Natuur en Milieu, Naturalis and IVN as part of the collaboration with Nederland Zoemt. This component of LandschappenNL is working in collaboration with Dutch Butterfly Conservation, NEV, the provincial nature and environment federations, and the Bee Foundation. The National Postcode Lottery is an overall partner.

### Status/current situation

Ongoing initiative

### Duration

2017–2019

### Milestones

Delivering the Wilde Bijenlinie initiatives map, setting up and organising a Bee Working Day on 9/10 March 2018 in collaboration with NLDoet (organiser of National Volunteer Days), creating 300 wild bee sites in collaboration with local and provincial authorities, residents and social partners, helping to develop and implement a pollinator-friendly management programme for municipalities, developing a course for volunteers on pollinator-friendly management of wild bee sites and monitoring, supporting citizen science in collaboration with Naturalis, contributing to raising awareness of the importance of the wild bee through all manner of activities.

## Bee oases, food for bees, bumblebees and butterflies

Initiative owner: Bee Foundation

### Objective

- To create a sense of wonder, awareness and knowledge regarding bees’ connection with us by holding 250 Bee Events, providing education on managed and wild bees, nutrient-rich vegetation, and the relationship between agriculture and nature with a view to providing a perspective for action.
- To build bee oases and connection routes for bees, bumblebees and butterflies with a clean and varied source of food from spring to autumn.
- To create a bee oasis covering at least 1,000 hectares and planted with perennial native herbs, shrubs and trees.
- To provide education courses related to pollinator-friendly management for 250 biotope managers.



### Partners

Radboud University Medical Centre (Radboudumc), the Hoorn-Medemblik Heritage Railway, The Pollinators, De Bijenkorf and others

### Status/current situation

Ongoing initiative

### Duration

2015–2025

### Milestones

- Education: Symposium on Bees, Verges and Biodiversity, Bij-bewust Betuwe, 500 primary school children.
- Creation of bee oases: Arnhem (2), Houten, the Hoorn-Medemblik Heritage Railway, Radboud University Medical Centre, The Pollinators, De Bijenkorf.

## Business parks for wild bees

Initiative owner: Naturalis Biodiversity Center

### Objective

To improve habitats for and knowledge of wild bees in business parks.

We are achieving this objective by:

- **identifying and listing the need and possibilities for pollinator-friendly management** at business parks. ParkTrust manages dozens of parks and is setting up BIZ (Business Investment Zones) structures. Companies occupying a business park in a BIZ jointly determine how the area is managed, including maintenance of the outdoor area;
- **setting up a pilot for a couple of parks** (e.g. around Dordrecht, Leiden and Gouda). The pilot will comprise discussions on needs and possibilities, implementation from the perspective of biodiversity (bees and pollinators), supplemented with input from other services (water storage, recreation, and so on), preparing a plan based on biodiversity models as well as the opportunities and needs of bees and people;
- **monitoring and evaluating:** measuring the increase/decline in numbers and diversity of bees and pollinators as a result of the measures. This process could be performed in a number of ways, including using citizen science where employees and citizens could monitor pollinators.

### Partners

Naturalis Biodiversity Center (knowledge partner); ParkTrust (manager of business parks), Wageningen Economic Research (WER; knowledge partner)

#### *Status/current situation*

Start-up phase

#### *Duration*

2018–to be determined

#### *Milestones*

- End of 2017: selecting pilot sites in South Holland and exploration of subsidy possibilities.
- 2018: carrying out pilot for one or two sites (taking control measures, predicting the occurrence of wild bees and drawing up an inventory, considering possibilities to embed the site in the surrounding landscape, exploring possibilities for outreach and citizen science (e.g. as part of the Postcode Lottery project for NL Zoemt).
- 2018: working out a plan for a broad approach aimed at making business parks pollinator-friendly.
- 2018: realising contracts and subsidy acquisition for further roll-out.

## Op weg naar een Bijvriendelijk Zeeland (Heading towards a bee-friendly Zeeland)

Initiative owner: Platform Bijvriendelijk Zeeland

#### *Objective*

To inform municipal authorities and citizens, and to provide guidelines for activities that can be undertaken to benefit bees. To make it clear that a great deal can be achieved with a little effort. Examples include planting choices, cutting management within municipalities and opting for more plants or flowers in gardens instead of ornamental paving slabs.

#### *Partners*

Poldernatuur Zeeland, the Southern Agriculture and Horticulture Organisation (ZLTO), the Dutch Beekeepers' Association (NBV), Dutch Fruit Growers' Organisation (Nederlandse Fruitteeltorganisatie, NFO), University College Roosevelt (UCR), the Zeeland Landscape Foundation (Stichting Landschapsbeheer Zeeland, SLZ), Scheldestromen and Velt Water Authority



#### *Status/current situation*

Ongoing initiative

#### *Duration*

2017–2021

#### *Milestones*

2017:

- Preparation and delivery of the “Vision of the Platform Bijvriendelijk Zeeland” was realised.
- Preparation of a Memorandum on the Threats, Opportunities and Measures for Bees in Zeeland was realised.
- A highly successful provincial Bee Symposium was held on 12 May 2017, attracting an audience of more than 120 interested parties.
- As a result, the Vision was presented to the Greenery and Space Provincial Committee (Provinciale Commissie Groen en Ruimte, PCGR) on 22 June 2017 at the provincial government building (Abbey) in Middelburg.
- Rinus van 't Westeinde (Chair of Poldernatuur Zeeland) presented the Vision to Provincial Executive member Carla Schönknecht (Nature and Landscape) of the province of Zeeland.
- An enthusiastic “start-up group” has been transformed into a compact project and steering group which will be able to function for several years, in part because of the very limited budget available.

2018:

- Preparation of a long-term plan, which should cover the vision but must also result in operational initiatives aimed at benefiting bees and other insects.

## Green Circle Bee Landscape (Groen Cirkel Bijenlandschap)

Initiative owner: Province of South Holland

### Objective

To reduce the decline of the wild bee and the death rate in winter of the honeybee to below 10%. This objective will be achieved by:

- creating a social network based on shared inspiration and ambition;
- creating an ecological network (“bee landscape”) through the social network;
- raising awareness and providing a perspective for action;
- developing knowledge, monitoring and evaluating.

The core area is formed by the territory of Leiden, Leiderdorp, Zoeterwoude, Alphen aan den Rijn and Zoetermeer.



### Partners

Leiden, Leiderdorp, Alphen aan den Rijn, Zoeterwoude, Zoetermeer, Naturalis, Stichting EIS, Wageningen Environmental Research, Dutch Butterfly Conservation, De Groene Klaver, the Rijnland Water Board (Hoogheemraadschap Rijnland), Rijkswaterstaat, Heineken, Grote Polder Business Park, AkzoNobel, Archeon, South Holland Landscape Foundation (Stichting Zuid-Hollands Landschap), the national forestry management agency in the Netherlands (Staatsbosbeheer), beekeepers, citizens and Fonds 1818.

### Status/current situation

Ongoing initiative

### Duration

2016–2030

### Milestones

Programmatic approach of Groene Cirkel Bijenlandschap (Dec 2017, annual update); approved management plan and performance report on Verified Conservation Area (Dec 2017 or annually); projects performed (on an ongoing basis); monitoring the bee population (biennially). Among other things, this initiative will specifically result in Bed & Breakfast areas, a connecting landscape, idylls for bees and butterflies, a help desk designed to provide pollinator-friendly advice, a pamphlet containing examples of pollinator-friendly management, alternatives to pesticides, and knowledge sharing during meetings.

## Wild bees and pollination at Landal GreenParks sites

Initiative owner: Landal GreenParks (LGP)

### Objective

To encourage and help bees and other pollinators at Landal GreenParks sites.

Landal guests will be informed about and involved in matters pertaining to bees and other pollinators.

What is the situation as regards bees and pollinators? What can citizens do to encourage and help bees and pollinators?

We can achieve this objective by:

- planting plants that are attractive to bees at a selection of LGP sites;
- monitoring bees and pollination at LGP sites;
- involving LGP visitors in surveys and monitoring;
- informing LGP visitors about bees and other pollinators, their role in nature and agriculture, and what people can do at home for bees.

#### Partners

Naturalis

#### Status/current situation

Definition–start-up phase

#### Duration

2018–to be determined

#### Milestones

- October 2017: action plan.
- November 2017: coordination, agreements, details, elaboration.
- December 2017/April 2018: operational preparation.
- End of April 2018: start.

## Idylls: flowers for butterflies, bees and people

Initiative owner: Dutch Butterfly Conservation

#### Objective

Butterflies and bees need flowers so they can gather the nectar and pollen needed to survive. For this reason, Dutch Butterfly Conservation is creating idylls at flower-rich spots for butterflies, bees and people.

The objective is to create more habitats for bees and butterflies, as well as encouraging people to become more involved in matters relating to bees and butterflies.

#### Partners

Many local partners and lots of volunteers, plus provinces, municipal authorities, funds and companies, suppliers of organic native seeds and contractors. This initiative was sponsored by the National Postcode Lottery.

#### Status/current situation

With the support of the National Postcode Lottery, Dutch Butterfly Conservation has in recent years been helping people to set up and manage idylls with many native flowers which are attractive to butterflies, bees and people. Local people are actively involved in the planning, execution, management and monitoring processes. In addition to residents, divisions of the Institute for Nature Education and Sustainability (IVN) or the Royal Dutch Society for Natural History (KNNV), beekeeper associations, gardening clubs and numerous others can become actively involved. The programme has been very successful and has produced excellent results. Dutch Butterfly Conservation has been asked by the provinces of North Brabant and South Holland as well as by Fonds 1818 to create a further 40 idylls in those provinces. We are collaborating here with Green Circle Bee Landscape, De Groene Motor and the Institute for Nature Education and Sustainability IVN, among other parties. We are also encouraging residents in other provinces to start working on similar initiatives themselves.

#### Duration

Started in 2013 and will definitely run until 2021

#### Milestones

- 2017: 60 idylls created.
- 2018-2021: 20 new idylls each year.
- The ultimate dream is for every municipality to have its own idyll.



Source: De Vlinderstichting

## Green Deal Infranatuur (Green Deal Infra Nature)

Initiative owner: Dutch Butterfly Conservation

### *Objective*

To expand awareness-raising on biodiversity in relation to the Dutch infrastructure. To eliminate obstacles preventing the promotion of biodiversity for infrastructure.

### *Partners*

Among other parties, Vallei and Veluwe, Aa and Maas, Rivierenland and Rijn en IJssel Water Authorities, Hollands Noorderkwartier and Rijnland Water Boards, the provinces of North Holland and North Brabant, Tilburg municipality, ProRail, N.V. Nederlandse Gasunie, TenneT Holding, Vitens, ENGIE Infra & Mobility, Heijmans, Arcadis and Sweco.

### *Status/current situation*

The aforementioned organisations signed the Green Deal Infranatuur on 1 April 2016 with the objective of expanding awareness-raising on biodiversity in relation to the Dutch infrastructure. Together, the organisations are using their experience and knowledge to make biodiversity in their own operating areas much more a matter of course. This way, infrastructure may acquire major significance in that it will create a more sustainable living environment from which people and nature will both benefit.

### *Duration*

2016–2019

### *Milestones*

- 2018: increasing flexibility for investments outside the core activities pertaining to biodiversity.
- 2018–2019: automatically linking biodiversity to infrastructure-related projects, among other things by issuing guidelines for invitations to tender, developing business models and developing a quality mark for verge management.
- 2019: implementing a quality mark for verge management for infrastructure managers.



Source: De Vlinderstichting

## Mijn berm bloeit! (My verge is blooming!)

Initiative owners: FLORON and Dutch Butterfly Conservation

### Objective

Verges are an important habitat for plants and butterflies. Since many people know this fact, FLORON has received many disquieting reports in recent years about the rapid decline of characteristic plants on barren verges. With the “My verge is blooming!” project, FLORON and Dutch Butterfly Conservation hope to inform managers and citizens about the state of verges and what they might be able to do to help. Needless to say, blooming verges are also an important habitat for other pollinating insects, including bees and hoverflies.

### Partners

Alongside FLORON and Dutch Butterfly Conservation, lots of volunteers – including many plant experts who gather information about the wealth of herbs on verges – as well as insect lovers who pass on details of the butterflies and bees that they see on verges.

### Status/current situation

Started in May 2017; information on more than 1,000 verges has now been gathered, including details of a verge’s “nectar index”.



### Duration

- 2017–2020

### Milestones

- End of 2017: nectar index calculated for more than 1,000 verges.
- End of 2018: nectar index calculated for more than 2,500 verges.
- End of 2018: 1,000 verges assessed (good/reasonable/poor) by the general public.

Source: De Vlinderstichting

## De Levende Tuin (The Living Garden)

Initiative owners: NL Greenlabel and the Association of Landscaping Companies (Vereniging van Hoveniers en Groenvoorzieners, VHG)

### Objective

The initiators of De Levende Tuin encourage people to bring their surroundings to life by having fewer surfaced areas and more flowers, plants and other greenery. Greenery is priceless: it provides inspiration, pleasure and relaxation, purifies the air, is good for your health and helps to protect us from flooding. Greenery increases our quality of life and improves the environment. It provides additional habitats for bees, butterflies and other animals, facilitates climate-proof design and greater engagement on the part of people with a nature-friendly garden.

de  
levende  
tuin.

#### Partners

De Levende Tuin is an initiative run by several organisations which have signed the Manifesto on the living garden (Manifest De Levende Tuin). They include both garden organisations (e.g. Tuinbranche Nederland and Groei&Bloei), landscapers and advisers (e.g. VHG and NL Greenlabel), as well as nature organisations (e.g. the Netherlands Society for the Protection of Birds (Vogelbescherming) and Dutch Butterfly Conservation) and lots of volunteers. Added to the above are provinces, municipal authorities, funds and companies, suppliers of organic native seeds and contractors.

#### Status/current situation

The various partners are contributing towards the objective in numerous different ways. One concrete example is that the concept has been embraced by garden centres. They use five themes: water, birds, butterflies, bees and the edible garden. Every year, each of those themes receives one month's special attention at the garden centre.

#### Duration

On 7 October 2015, the Manifesto on the living garden was signed with the first ten parties, including the then Ministry of Economic Affairs. New parties join and sign up on a regular basis. De Levende Tuin is a movement which makes us think differently about surfaced areas, drainage, animals and planting. It is something in which anyone can take part. Small things can make a large difference. All actions combined will bring about a substantial, real change: a better balance between the city and the natural environment.

## National Monitoring Network on Butterflies

Initiative owner: Dutch Butterfly Conservation

#### Objective

To gather up-to-date information on changes in the butterfly population so as to monitor the progress or decline of the population in general and of the different species. This information enables us to analyse the causes of progress and decline. The trends provide a sound initial indication of the situation with regard to insects in the Netherlands.

#### Partners

The Ecological Monitoring Network (Netwerk Ecologische Monitoring), the Ministry of Agriculture, Nature and Food Quality, Statistics Netherlands (CBS), 1,000 volunteers

#### Status/current situation

Ongoing initiative since 1990

#### Duration

On an ongoing basis

#### Milestones

The Annual Report on “Vlinders en libellen geteld” (Butterflies and dragonflies counted); basis for the Assessment of the Human Environment (the Netherlands Environmental Assessment Agency, PBL), the Living Planet Report (World Wide Fund for Nature), and many other publications and reports.



Source: De Vlinderstichting

## National monitoring of bees and pollinators

Initiative owners: The EIS Insect Knowledge Centre and Dutch Butterfly Conservation

### Objective

To roll out the further monitoring of bees through the combined efforts of volunteers and specialists. The goal is to determine national and provincial trends for bees as well as the impact of the various control measures. We intend to achieve this goal by setting up a network of volunteers in order to monitor readily identifiable species (including bumblebees) and to carry out targeted monitoring through specialists.

### Partners

Naturalis, WUR and Statistics Netherlands (CBS)

### Status/current situation

Ongoing initiative

### Duration

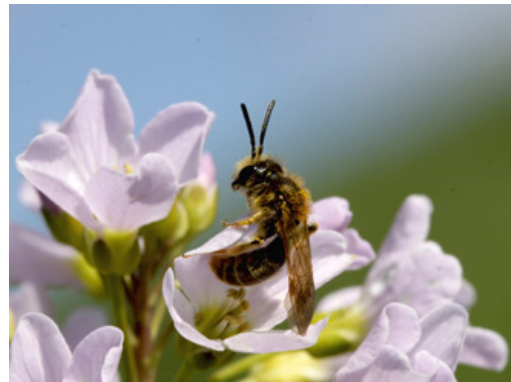
2018–2023

### Milestones

2018: Methods for national monitoring established and included within the Ecological Monitoring Network.

2020: Volunteer network to monitor the Netherlands in its entirety.

2023: First round of national monitoring fully completed and initial trends available.



Source: De Vlinderstichting

## Bee symposia

Initiative owner: Citaverde College together with a municipal authority from Limburg (as from 1 January 2018), on a rotating basis, starting with Venray en Horst aan de Maas in 2018

### Objective

To draw up a declaration, and to make people interested in signing the covenant and then implementing it in the interest of bee health within Limburg. Twenty-one parties signed a covenant and thus expressed their intention of implementing it at the first Bee Symposium held in October 2015.

### Partners

CITAVERDE College, Horst aan de Maas Beekeepers' Association, Toverland amusement park, BTL Nederland, Landschap Horst aan de Maas, the province of Limburg, Mertens, and the Nature and Habitat Knowledge Centre (Kenniscentrum Natuur en Leefomgeving, KCNL).

### Status/current situation

An annual event has been held in Limburg since 2015 with municipal authorities running the initiative on a rotating basis.

### Duration

Continuous (one day a year)

### Milestones

An annual Bee Symposium.

## Bee health at Toverland amusement park

Initiative owner: Citaverde College and the Nature and Habitat Knowledge Centre (KCNL)

### Objective

How can I improve biodiversity and raise the attractiveness of my amusement park without visitors being troubled by stinging insects? What is the best mix of flowers that I should sow if I want a long flowering season? To conduct a biodiversity study at Toverland amusement park in order to identify possibilities for pollinators and bees to obtain food year-round. To prepare a recommendation for improvements based on that analysis and a plan to implement the recommendation in a specific situation at Toverland amusement park.

### Partners

Toverland amusement park and the BTL Advies consultancy firm

### Status/current situation

Ongoing initiative

### Duration

2016–

### Milestones

- Report and plan delivered.
- Toverland is set to use the recommendations when it implements the planned expansion of the amusement park in 2017-2018. It now has a project where the 70,000 m<sup>2</sup> expansion will be carried out with particular attention paid to the flowering season for pollinators and bees in the form of Bed & Breakfast.

## Bee Health in Limburg Covenant

Initiative owner: Citaverde College

### Objective

To draw up a declaration and to make people interested in signing the covenant and then implementing it in the interest of bee health within Limburg. Twenty-one parties signed a covenant and thus expressed their intention of implementing it at the first Bee Symposium held in October 2015.

### Partners

Imkervereniging Horst e.o., the province of Limburg, and the Nature and Habitat Knowledge Centre (KCNL)

### Status/current situation

Ongoing initiative

### Duration

2015 onwards

### Milestones

- Twenty-one Limburg-based partners have signed the document.
- Every year, a Bee Symposium is organised at which each covenant partner gives an account of the results produced within the covenant.

## Bee Deals

Initiative owner: CLM Onderzoek en Advies consultancy firm

### Objective

To have supply chain parties and regional parties enter into mutual agreements (deals) on specific pollinator-friendly measures involving the provision of food year-round, the provision of nesting sites and the use of plant protection products in a pollinator-friendly manner.

### Partners

Jumbo Supermarkets, The Greenery, Jansen-Dongen, the municipal authorities of Oss, Deventer and Alphen aan den Rijn, the Kromme Rijnlandschap Steering Group, the Water Authorities of De Dommel, Brabantse Delta, Aa en Maas, Rijnland, Stichtse Rijnlanden, Rivierenland, Drents Overijsselse Delta and Scheldestromen, Brabant Water, Dunea, the province of Brabant, the province of South Holland, the Van der Hucht de Beukelaar Foundation and the Triodos Foundation.

### Status

Ongoing initiative

### Duration

2014–2018 (and possibly beyond)

### Milestones

- 2015: Five Bee Deals concluded, one of which in a supply chain context and four in a regional context.
- 2017: Ten Bee Deals concluded, two of which in a food supply chain context and eight in a regional context.

## Buulder Aa Bee Deal

Initiative owner: Brabant Water, facilitated by CLM and Food4Bees

### Objective

To improve the living environment for bees and other wild pollinators, including by making agreements for the design of field borders and nature areas alongside the Buulder Aa through bee hotels, flowering mixes, and trees and shrubs.

### Partners

Brabant Water, De Dommel Water Authority, Cranendonck municipality, 't Wilgenroosje Beekeepers' Association, Land van Cranendonck agricultural nature association, and several arable farmers and agricultural contractors.

### Status/current situation

Ongoing initiative

### Duration

2016 onwards

### Milestones

Brabant Water's “Buulderbroek” drinking water area has been sown with flower-rich seed mixtures, notwithstanding the very wet ground in the catchment area. The site is also home to species such as the white willow, blackcurrant and the bird cherry, which blossom in early spring and provide food for bees.



## Bommelerwaard Bee Deal

Initiative owner: Dunea, facilitated by CLM and Food4Bees

### Objective

To help improve the habitat of bees by taking measures as to the food supply for bees, their nesting sites and the prudent use of plant protection products in Gelderland's Bommelerwaard district. Specifically, this initiative results in agreements being made on pollinator-friendly dyke management, verge management, new locations for beekeepers, flower-rich site management and communication to the general public, among other things.



### Partners

Dunea, Rivierenland Water Authority, the municipal authorities of Maasdriel and Zaltbommel, the Bommelerwaard Beekeepers' Association and a group of fruit growers in the Bommelerwaard district.

### Status/current situation

Ongoing initiative

### Duration

2016 onwards

### Milestones

The planting at the Dunea site of a small-leaved lime, a true “bee tree”, was the first joint and symbolic pollinator-friendly action.

## Oss Bee Deal

Initiative owner: Brabant Water, facilitated by CLM and Food4Bees

### Objective

To improve the biotope of bees and honeybees by means of agreements on sowing flower mixtures, installing bee hotels and hive boxes, and the prudent and pollinator-friendly use of plant protection products. Some cattle farmers are also experimenting with red clover in their grassland.

### Partners

Brabant Water, Aa en Maas Water Authority, the municipal authority of Oss and growers in the area surrounding the Lith groundwater protection area.

### Status/current situation

Ongoing initiative

### Duration

2015 onwards

### Milestones

A survey conducted at a dairy farm shows that bumblebees thrive on grassland sown with clover. This finding is very promising, because it is often very difficult for bees to find food and nesting sites on land where monoculture is practised. Grass-clover may offer a solution. At a “Wild bee, herbs and livestock farming” workshop held in the summer of 2016 and organised by CLM, livestock farmers were told how they could help the wild bee by planting herb-rich grassland, among other things.

## Food4Bees Citizens’ Initiative

Initiative owner: Food4Bees Foundation (Stichting Food4Bees)

### Objective

To develop and support activities aimed at conserving and expanding natural habitats for pollen- and nectar-foraging insects.

### Partners and ambassadors

Dutch Butterfly Conservation, De Dommel Water Authority, the Brabant Environment Federation (Brabantse Milieufederatie), the province of North Brabant, the Southern Agriculture and Horticulture Organisation (ZLTO), HAS University of Applied Sciences and the Netherlands Bee Association (Nederlandse BijenVereniging).

### Status/current situation

Food4Bees works on a unit multiplication basis. A unit that launches local initiatives is set up for each region. Once a region has sufficient organisational power, the Foundation helps it to set up a new circle (<http://www.food4bees.com/PROJECTEN>).

### Duration

Ongoing initiative

## Encouraging parties to design and manage their own sites in a more pollinator-friendly manner

Initiative owner: De Dommel Water Authority

### Objective

To strengthen biodiversity and raise awareness among the Water Authority’s employees.

- When an wildlife corridor is created, account is taken of planting in order to improve food supply throughout the bees’ flying period (February to October).
- To sow herb-rich and flowering grassland alongside water courses or uncultivated areas and at sewage treatment sites (approximately five hectares annually).
- Adjusted cutting management system (after seed setting; the management system is tailored to accommodate flowers or similar, and is laid down in Management and Maintenance Plans for sewage treatment sites).
- To monitoring sown field borders and verges. A monitoring survey involving 50 location was carried out in the summer of 2016 to establish the effectiveness of flower-rich bee mixtures.
- To install bee hotels (Soerendonk sewage treatment site, Biest Houtakker, Boxtel open-plan office and North Tilburg sewage treatment site (at the planning stage).
- To plant the Den Food Bosch food forest and construct the Boxtel open-plan office (at the planning stage).

### Status/current situation

Ongoing initiative

### Duration

2013–

### Milestones

- 2018: installation of an insect hotel at the North Tilburg site/energy factory.
- Winter 2017-2018: planting of the food forest.

## Flower-rich dyke

Initiative owner: De Dommel Water Authority

### *Objective*

The general objective of the award is to promote flower-rich dykes in the Netherlands. Chair of the Water Authority Board, Peter Glas, hopes to see an increasing number of dykes covered with flower-rich vegetation in spring and summer for the years ahead. The “Flowerpower Dyke” or “Flower-rich Dyke” should be promoted. To realise this ambition, Peter Glas has come up with the Pro Flora et Securitate award. Several dykes and/or water authorities have so far been honoured with this award.

### *Partners*

Award recipients include Stichtse Rijnland, Wetterskip Friesland and Aa en Maas

### *Status/current situation*

Ongoing initiative

### *Duration*

Annually from 2016–

## Bijenimpuls voor Brabant Meerjarenprogramma (Bee Impulse for Brabant Long-Term Programme)

Initiative owner: The province of North Brabant

### *Objective*

The objective of the Long-Term Programme is to improve bees’ habitats and develop knowledge. This process will strengthen the economic and ecological role played by bees.

### *Partners*

BMF, Brabant landscape (Brabants Landschap), Brabant private land ownership (Brabants Particulier Grondbezit), Brabant Water Authorities (Brabantse Waterschappen), HAS University of Applied Sciences Den Bosch, the Dutch Bee Association, the Province of North Brabant, the Food4Bees Foundation, Dutch Butterfly Conservation and the Southern Agriculture and Horticulture Organisation (ZLTO).

### *Status/current situation*

A broad coalition of parties which have endorsed the Long-Term Programme are responsible for its implementation, while a working group comprising those partners will monitor progress and annual performances. In this programme, the water authorities have placed the emphasis on Pillar 1 (reducing the use of plant protection products through the ongoing “Clean Water for Brabant” programme) and Pillar 3 (food supply and biodiversity).

### *Duration*

2015 to 2018

### *Milestones*

The implementation of the Bijenimpuls voor Brabant Long-Term Programme required an investment by the province amount to a total of € 750,000.

## Hive boxes at the Oasen site

Initiative owner: Oasen

### Objective

To promote biodiversity by making the area at the rear of the Gouda office available for a beekeeper in order to make the site as nature-friendly as possible.

### Partners

Oasen and beekeeper  
Ms Bruinsma

### Status/current situation

Ongoing initiative

### Duration

2015 onwards

### Milestones

Four hive boxes used by four colonies have been installed since the start of the project. A bee colony comprises one queen, between 30,000 and 70,000 worker bees, and 500 to 900 drones.



## Prachtlint (Beautiful Ribbon)

Initiative owner: The Blauwzaam Foundation  
(Stichting Blauwzaam)

### Objective

To ensure that a ribbon for butterflies and bees is formed by flower-rich embankments and verges running from Alblasserdam to Leerdam in order to improve biodiversity, e.g. by means of plots designed in a bee-friendly and butterfly-friendly manner. In addition to biodiversity-related objectives, Prachtlint also hopes to make people realise that they can contribute to creating and managing a natural environment in their living environment.



### Partners

Many participating parties, including Oasen, the Rivierenland Water Authority, the province of South Holland, and the collaborating municipal authorities of Alblasserwaard and Vijfheerenlanden

### Status/current situation

Ongoing initiative

### Duration

2015 (management covenant signed) onwards, preceded by pilot projects

### Milestones

The assigning of five nature areas to Prachtlint by Oasen, including De Steeg at the purification plant in Langerak.

## The Bijenimpuls Project in Limburg

Initiative owners: The province of Limburg and Plattelandscoöperatie

### Objective

To create 60 bee oases/bee meadows. To create an oasis or hot spot for every village which draws attention to biodiversity, managed or wild bees and butterflies as species forming a point of reference, and which prompts people to take action of their own together with “quite different target groups”. As well as creating an oasis in the village, to nominate or identify people as standard-bearers of the principles behind the Bee Oasis; in other words, to bring people, schools and farmers together, and spur them on to do more for bees and biodiversity.

### Partners

Plattelandscoöperatie (guidance and support), village councils, beekeepers, farmers and the province of Limburg

### Status/current situation

Ongoing initiative (Phase 2)

### Duration

2016–2018

### Milestones

- Phase 1: the creation of ten bee oases has been completed.
- Sixty bee oases have been created in sixty places.



## Bulbs for bees

Initiative owner: Royal General Bulb Growers' Association (Koninklijke Algemene Vereniging voor Bloembollencultuur, KAVB)

### Objective

To provide a year-round, varied supply of food in urban and rural areas by encouraging the planting of pollinator-friendly flower bulb mixtures in gardens and public spaces.

### Partners

The KAVB and its members actively trading in flower bulbs; initiatives with various social organisations.

### Status/current situation

Ongoing initiative

### Duration

2012–2030



#### *Milestones*

- 2012: launch of the first pollinator-friendly flower bulb mix by the flower bulb company JUB Holland in cooperation with the Dutch Beekeepers’ Association.
- 2015: planting of Parkbos de Haar by the KAVB and the Society for the Preservation of Nature in the Netherlands.
- 2017: planting a bee ribbon in Almere under TenneT’s power lines by the KAVB and the municipal authorities of Almere.
- 2018: onwards: annual planting campaign run by the KAVB and a social partner.

## Ecological roadside verge management

Initiative owner: The province of Limburg

#### *Objective*

The province of Limburg and a number of municipal authorities are applying a roadside verge management system aimed at increasing the number of flowers. This process is gradually yielding results and creating awareness, which means that others will also see an example of a more extensive and pollinator-friendly way of managing cutting.

#### *Partners*

The province of Limburg and municipal authorities

#### *Status/current situation*

Ongoing initiative since 2016, as an elaboration of the Limburg Bee Covenant

#### *Duration*

On an ongoing basis

#### *Milestones*

First review of cutting policy is scheduled for 2017; this review may reveal many more opportunities to perfect the policy in terms of its effect on bees.

## Various measures taken by municipal authorities

Initiative owners: Local green organisations

#### *Objective*

Apart from a more ecological and pollinator-friendly roadside verge management system, other objectives include:

- to sow fallow areas with flower mixes;
- to encourage the pollinator-friendly management of green spaces and planting in communal gardens, borders, lawns,
- parks and so on;
- to manage nature areas pollinator-friendly;
- to install bee and insect hotels at schools and in public spaces;
- to create additional nesting sites (e.g. old walls);
- to encourage consultation and collaboration;
- to provide education/information services (guest lectures, notice boards, excursions, and so on);
- to contribute to research.

#### *Partners*

Municipal authorities, the Institute for Nature Education and Sustainability IVN, the Centre for Nature and Environment Education (Centrum voor Natuur en Milieu Educatie), Landschap Horst aan de Maas, the Groengroep Sevenum Foundation (Stichting Groengroep Sevenum), beekeepers, schools and other parties.

*Status/current situation*

Ongoing initiative

*Duration*

On an ongoing basis

*Milestones*

Many sites are being sown annually.

## Pesticide-free by 2020

**Initiative owner: Velt Association for Ecological Living and Gardening**

*Objective*

With a five-year campaign in the Netherlands and Belgium, Velt’s aim is to realise a drastic reduction in the use of pesticides by private individuals in order to ensure that as many neighbourhoods as possible are pesticide-free, have started to become healthier places in which to live and can support greater biodiversity by 2020. Bees and other pollinators will no longer be poisoned through the indiscriminate use of pesticides.

There are three lines of action in this campaign:

- The website [www.2020pesticidevrij.nu](http://www.2020pesticidevrij.nu) and other communication material call on the general public to change its behaviour and offer a wealth of information on alternatives to pesticides. Visitors to the website can volunteer to help work on “Europe’s largest pesticide-free garden” and apply for an “I garden with respect for plants and animals” sign.
- We are asking garden centres to stop selling pesticides and to offer alternatives instead.
- We have asked the government to ban the sale of pesticides to and their use by private individuals.

*Partners*

In the Netherlands: the Brabant Environment Federation, De Dommel, Aa en Maas, Brabantse Delta and Scheldestromen Water Authorities, Schoon Water Zeeland, RIWA-Meuse (association of drinking water companies in the Netherlands and Belgium) and the Ministry of Infrastructure and Water Management

*Status/current situation*

Ongoing initiative

*Duration*

2016–2020

*Milestones*

- Velt eco-garden days, first weekend of June:
  - in 2018, 75 ecological gardens will display the results of their pesticide-free management.
- Campaign themes
  - 2016: general awareness-raising;
  - 2017: weeds;
  - 2018: lawn.
- Communication materials:
  - 2017: free pamphlet;
- 2018: Garden talent (Tuintalent) app.

## Ensuring that the many wild bee species nesting in the ground find sites

Initiative owner: The national forestry management agency in the Netherlands (Staatsbosbeheer)

### Objective

As most wild bee species nest in the ground, bare or virtually bare ground is essential for them. The rare silver sand bee can even burrow down into sand to build a nest and later find it again. The national forestry management agency in the Netherlands is taking action to restore and maintain areas of bare ground. Unmade hiking trails or bridleways, especially their verges, can be important nesting sites. Alongside bees, grasshoppers also benefit as they have somewhere to lay their eggs, while butterflies enjoy basking there as well.



### Partners

Restoring the natural ecosystem, nature development and the Integrated Approach to Nitrogen (PAS) measures provide opportunities for establishing links and for creating and restoring nesting sites for wild bees.

### Status/current situation

Ongoing initiative

### Duration

On an ongoing basis

### Milestones

- 2018: the upcoming revision of the Red List should show whether the restoration of the natural ecosystem over recent years has also worked out well for wild bees. The national forestry management agency in the Netherlands will use this list as a basis to determine whether any guidelines can be provided for a possible linkage with the recently launched PAS measures.
- 2018: organisation of a field work site for ground-nesting species

## Coalition of the Willing on Pollinators (15 countries)

Initiative owner: Ministry of Agriculture, Nature and Food Quality

### Objective

To transform the Coalition of the Willing into an international learning network, resulting in national pollinator strategies through learning from each other and through sharing knowledge. The Netherlands is the initiator and is providing support for the network in the start-up phase.

### Partners

Fifteen countries from the Coalition of the Willing on Pollinators: Austria, Belgium, Denmark, Ethiopia, Finland, France, Germany, Luxembourg, the Netherlands, Peru, Slovakia, Slovenia, Spain, Uruguay, and the United Kingdom

### Status/current situation

Start-up phase

*Duration*

Start-up phase from January 2018 to June 2019, when the network will be functioning (one-and-a-half years)

*Milestones*

- Medellín, March: outlining the shape that the collaboration will take, setting out the main features of communication outreach, signing up more countries.
- CBD COP 18, November: establishing the office’s supporting role, expanding further and celebrating.

## Facilitating the implementation of the NL Pollinator Strategy

Initiative owner: Ministry of Agriculture, Nature and Food Quality

*Objective*

After the NL Pollinator Strategy has been signed and presented on 22 January 2018, the initiative owners and partners will set to work or continue to work on their initiatives and activities for pollinators in order to achieve the objective. In the years running up to 2023, meetings concerning the “Current Situation of the NL Pollinator Strategy” will be held at least once a year in order to discuss progress and exchange experiences. All the initiatives proposed, the results of the pollinator survey, advances at the international level and the part of the CAP pertaining to pollinators will be covered.

*Partners*

All partners presently involved in the NL Pollinator Strategy and potentially new partners in future.

*Status/current situation*

Ongoing initiative

*Duration*

2017–2030

*Milestones*

- Generating knowledge; for example, through the Investment Impulse – Pollinators.
- Mobilising parties and generating awareness of pollinators (including at other government authorities).
- Facilitating (e.g. developing knowledge, organising events and providing overviews).
- Liaising (bringing together parties and processes).
- Providing clarity and managing expectations (what we will and will not be doing).
- Displaying efforts on the international “stage”, within the EU and globally.





# NL Pollinator Strategy Initiatives

## Theme – Agriculture-Nature Interaction



## Bayer Forward Farming

Initiative owner: Bayer

### Objective

Bayer Forward Farming has as its stated aim to make agriculture more sustainable, and to enter into a dialogue with farmers and the public on this issue. The main focus is to develop integrated farming (prevention, diagnosis, cure) and responsible working (safe products, low emissions and consideration for the environment). We are keen to exploit the opportunities that knowledge and innovation offer in this context. In the Netherlands, our areas for attention include offering practical tools for conserving and protecting biodiversity, working with nature in agriculture (soil health, pollination and natural pest control), and improving the quality of the environment by reducing emissions from farm and field. With the help of Bayer BeeCare, we demonstrate knowledge and technology for the health of honey bees.



### Partners

Forward Farming presents itself as a sustainability platform that puts sustainability into practice, enters into a dialogue with farmers and the public, and seeks to collaborate with a wide range of partners including businesses, knowledge institutions, government authorities and social organisations.

### Status/current situation

In 2017, Bayer Forward Farming officially launched its arable ForwardFarm “Het Groene Hart” (The Green Heart) in the village of Abbenes. We hope to expand the initiative to include fruit farming in 2018.

### Duration

This project has no end date.

### Milestones

Our aim is to present 1,500 Forward Farm visitors annually with a wide range of perspectives for action to sustainability. Through specific training courses and general spray licensing meetings, we also intend to provide a minimum of 2,000 farmers and others who work in the agricultural sector with practical information about sustainability on an annual basis.

## Meer natuur voor Pittig Fruit (greater biodiversity on seed-bearing fruit farms)

Initiative owner: Natuurrijk Limburg

### Objective

To improve biodiversity and economic security in areas with a high intensity of fruit farms, particularly through the reintroduction of wild bees by fruit farmers using a wide range of habitat-related and bee-friendly measures (Interreg project, Netherlands and Belgium).

### Partners

Regional natural environment authorities of Zuid-Hageland, Noord-Hageland and Haspengouw en Voeren, the Province of Flemish Brabant, the fruit research institute Proefcentrum Fruitteelt (Belgium), the Southern Agriculture and Horticulture Organisation ZLTO, the Zeeland nature foundation (Stichting Landschapsbeheer Zeeland), fruit farmers, Limburg Agricultural and Horticultural Association (LLTB) and the Province of Limburg.



### Status/current situation

Ongoing initiative

#### Duration

2016–2018

#### Milestones

More than 100 fruit farmers are involved in the project and more than 500 ha with measures (by the end of 2017). Pollinator plans have been drawn up for a number of local authorities and areas, local authorities are signing a pollinator charter, there is a campaign to raise awareness among the public encouraging them to make their gardens bee-friendly, fruit farmers are making their orchards attractive to wild bees by offering food and nesting sites.

### Bij Bewust Betuwe (Bee Aware Betuwe)

Initiative owner: Biodiversity Working Group of Beekeeper Associations Eck en Wiel e.o. and West-Betuwe

#### Objective

To make people who live in the Betuwe region aware of the importance of bees, the ultimate goal being a Bee-friendly Betuwe: a safe place for bees with sufficient food and shelter within flight range. Bee Aware Betuwe is an information campaign. We provide information to local authorities, land owners, schoolchildren and the public to encourage them to improve the habitat for bees.

#### Partners

Rabobank West-Betuwe, the nature management association for the Province of Gelderland (Stichting Landschapsbeheer Gelderland), the Bee Foundation (Bijenstichting), the Dutch beekeepers' association (NBV), the environmental education centre (NME) for the Betuwe region, Culemborg environmental education hub (Steunpunt NME Culemborg), Sustainable Rivierenland (Duurzaam Rivierenland), the circular fruit farming association Stichting de Fruitmotor, the cultural hub Stroomhuis Neerijnen, the multifunctional space De Pluk Geldermalsen, the farm stewardship association ANV Lingestreek and the sustainable agriculture association VANL TCW.

#### Status/current situation

Ongoing initiative

#### Duration

2017–2018 (and beyond?)

#### Milestones

- 31 March 2017: Declaration of Intent for Bee Aware Betuwe, signed by seven local authorities in the Betuwe region, the water authority for the Rivierenland region, the nature management association for the Province of Gelderland and the two beekeepers' associations.
- April 2017: 18,000 bags of sunflower seeds distributed to all primary schools in the seven local authorities.
- June 2017: 20 school playgrounds enriched with crates and trees, guest speakers and apiary visit.
- 7 October 2017: Harvest event to share and celebrate the achievements of 2017.
- 9 November 2017: Bee trees (*Tetradium daniellii*) planted by the signatories to the Declaration of Intent.



## Ambitie Plantgezondheid 2030 (Phytosanitary Ambition for 2030)

Initiative owner: LTO Nederland (Dutch Federation of Agricultural and Horticultural Organisations)

### Objective

The Dutch agricultural and horticultural sector will lead the way internationally in terms of quality and sustainability by 2030. Task: Key tasks for the achievement of this objective include healthy plants, a healthy living environment for people and animals, and a healthy market. Implementation occurs through sectoral action plans.



### Partners

The aim is to produce a joint product between LTO Nederland and the sector organisations LTO Glaskracht, NFO and KAVB. They are actively seeking collaboration with and commitment from the government, research, business community and the public.

### Status/current situation

Ongoing initiative

### Duration

2017–2030

### Milestones of Phytosanitary Ambition initiative

- Healthy plants: by 2030, farming based on sustainable principles will be standard practice. A sustainability indicator (2020) will help growers with this process and will help monitor and justify the plant protection strategy in the long term (2025).
- Healthy living environment: by 2030, plant-based production will clearly be making a positive contribution to biodiversity. This effort requires an effective benchmark (2020). The sector is also working towards zero emissions from plant protection products to ground and surface water by 2030.
- Healthy market: by 2030, the Dutch agricultural and horticultural sector will lead the way both nationally and internationally in terms of its sustainable production methods. The principle of sustainability will go above and beyond statutory requirements (2020), and growers will improve their position in the chain as a result (2025).

## De BIJenBLOEM (The Flowers and the Bees)

Initiative owner: Louis Bolk Institute

### Objective

Farmers assess the bee-friendliness of their farms and the immediate vicinity on the basis of seven aspects. They use the results of this assessment to make their farms more bee-friendly. If the correct measures are to be taken, an understanding of insects is crucial. The aim is to encourage farmers to take greater account of flowers, the environmental impact of plant protection products and the diversification of crop rotation in their business plans. In other words, this initiative includes not only the uncultivated areas of the farm but also what goes on in the field. It is also important when and how often shrubs are pruned or verges are cut, as well as whether the measures implemented on the farm are coordinated with the immediate vicinity of the farm (environmental context). Last but not least, contact with e.g. water boards, the nature conservation charity IVN and other local initiatives is important in order to ensure public engagement and enable other farmers to follow the example that has been set.

### Partners

Louis Bolk Institute, Odin Apiary, Odin

### Status/current situation

Ongoing initiative



#### Duration

April 2014–ongoing

#### Milestones

The BIJenBLOEM initiative was launched at the end of 2016 following completion of the Bij Boer & Burger (Bee, Farmer and Citizen) project. The BIJenBLOEM initiative is unique in that it has been developed in conjunction with a group of organic farmers who have bee colonies on their farms under an initiative launched by the Odin cooperative. Over the next few years, the BIJenBLOEM initiative will be developed further with a group of farmers in Limburg, specifically for a number of wild bee species and insects that help with natural pest control. We are also keen to include this innovative method in new projects.

## Fruit cooperative De Fruitmotor works towards a Bee-friendly Betuwe

Initiative owner: De Coöperatieve Betuwse Fruitmotor

#### Objective

The fruit cooperative De Fruitmotor is promoting sustainable fruit farming in the Betuwe region by integrating nature into fruit farms. In conjunction with a number of different partners, De Fruitmotor aims to make the Betuwe region an area in which wild bees are sustainably promoted and conserved. How? By improving the supply of food and the nesting sites for wild bees in the orchards of the Betuwe region and the wider landscape around the farms themselves. This approach will improve biodiversity and make the countryside more attractive.

#### Partners

Fruit farmers in the Betuwe region, Wageningen Environmental Research, local authorities including Buren, Culemborg and Geldermalsen, the Region of Rivierenland, the Province of Gelderland, Bij Bewust Betuwe (Bee Aware Betuwe) and Aeres University of Applied Sciences.

#### Status/current situation

The initiative has been under way since 2016

#### Duration

Minimum of five years

#### Milestones

On 16 September 2017, Gelderland member of the Provincial Executive Jan Jacob van Dijk planted the first bee bushes in the hedge of the first fruit farm; by 8 December 2017, 200 enthusiastic members had already joined the Cooperative; in spring 2018, the orchards of four fruit farmers will be enriched with bee hedges and flower borders.



## Goed Bee-zig 2.0 (Bee BuZZy 2.0)

Initiative owner: Cultus (consultancy and research)/  
Boomteeltstudieclub Horst aan de Maas (arboricultural  
association)



### Objective

To ensure that bees and other beneficial insects have sufficient food and shelter in the immediate vicinity of agricultural land and, at the same time, to increase the presence of natural predators in order to reduce the need for the use of plant protection products. This project aims, through research and examples in the field, to raise awareness among farmers and to encourage them to become involved by sowing field borders that encourage biodiversity (FAB borders) themselves.

### Partners

The rural innovation association Vereniging Innovatief Platteland; the sustainable farming association Plattelandscoöperatie and Cultus Advies (consultants).

### Status/current situation

Ongoing initiative

### Duration

2017–2018

### Milestones

A mini symposium saw a great deal of interest in this issue from the sector. Six participants have allowed the flower borders that they have sown to be analysed in terms of their added value for the products in the field and are expanding this process to the surrounding area.

## Bees, protein crops and the CAP

Initiative owner: ZLTO (Southern Agriculture and Horticulture Organisation) and CLM Onderzoek en Advies (research and advice on sustainable farming)

### Objective:

To encourage farmers to opt for a further greening of the CAP, in which the growing of protein crops plays a key role: good for bees.

### Partners

Province of North Brabant, participating farmers

### Status

Ongoing initiative

### Duration

2016–2017

### Milestones

- 2016: information on greening opportunities for bees.
- 2017: upscaling to groups of farmers; information sheet on protein crops.

## Clean water for Brabant (Schoon Water voor Brabant) initiative - expanded to include Bees and spraying licence module

Initiative owner: CLM Onderzoek en Advies and ZLTO

### Objective

To develop a module on bee-friendly measures as part of the spraying licence course, to deliver courses on this matter and to anchor it through intermediaries.

### Partners

Province of North Brabant, participating farmers

### Status

Ongoing initiative

### Duration

2016–2019

### Milestones

- 2016: development of course presentation; course delivery.
- 2017: course module for various sectors; deliver course.
- 2018-19: training of partners delivering the course, so bee module becomes a standard part of the spraying licence course.

## Knowledge and quality impulse – agri-environmental management

Initiative owner: Natuurrijk Limburg

### Objective

Natuurrijk Limburg (agri-environment authority) wants its 1,000+ participating members to be more involved in the management of their farms. Guidance meetings encourage members to work consciously towards more environmentally friendly results; in

a nutshell, management that strives for greater biodiversity. The aim is to raise awareness, put members in contact with each other, collaborate and transfer management knowledge/expertise to members.



### Partners

Natuurrijk Limburg, Natuurrijk Limburg members, Plattelandscoöperatie, Innovatief Platteland, Boeren met Natuur and Natuurrijk Limburg Zuid

### Status

Ongoing initiative

### Duration

2016–ongoing

### Milestones

- A chain of more than 600 ha of meadow orchards in which no pesticides are used and in which Natuurrijk Limburg encourages owners to manage grassland in an insect-friendly way (structure, flowers and herbs).
- Conversion of traditional hedges to flowering shrub hedges.
- Flower-rich fields and field margins (minimum of 9 metres wide!).
- Manage grasslands for insects in a far more systematic way.

## Flower-rich field borders

Initiative owner: Plattelandscoöperatie

### Objective

Every year, members of the sustainable farming association Plattelandscoöperatie and others are offered flower seed for a small charge, which they can sow, tend and hopefully leave out over the winter. The aim is to make around 23 ha available for sowing annually, in conjunction with local authorities in north/central Limburg that contribute to the project.

### Partners

Local authorities of Peel en Maas, Maasgouw, Weert and Leudal

### Status/current situation

The project has been running for 18 years and around 23 ha has been sown each year.

### Duration

2000–ongoing

### Milestones

Raising awareness among the many people involved in this field.



## Spray- and fertiliser-free zones to become flower borders

Initiative owner: Limburg Water Board

### Objective

In conjunction with Limburg Water Board, to make flower seed available (through the sustainable farming association Plattelandscoöperatie) which farmers sow on areas that are unused because they are in spray-/fertiliser-free zones, thereby contributing to biodiversity. Good, easily accessible result. To make around 6 ha available for sowing annually, in conjunction with the Water Board, which contributes to this project.

### Partners

Plattelandscoöperatie, Limburg Water Board

### Status

The project has already been running for two years and six ha have been sown annually.

### Duration

2016–ongoing

### Milestones

Around ten participants each year sowing flower seed.



## Bee Proof certification for agricultural farms in Venray

Initiative owner: Vereniging Innovatief Platteland

### Objective

The aim is to encourage farmers in the town of Venray to engage actively with bees and biodiversity, by creating a number of demonstration farms and offering farmers a tool which incorporates measures that they can take both on the farm itself and within their business. In conjunction with the local authority, Limburg Agricultural and Horticultural Association (LLTB), and the sustainable farming association Plattelandscoöperatie, an action plan is drawn up for each business. Once most of the actions in the plan have been implemented, the participant will be certified as Bee Proof.



### Partners

Venray local authority, Limburg Agricultural and Horticultural Association (LLTB), Plattelandscoöperatie

### Status

Initiative launched in July 2017

### Duration

2017–2018

### Milestones

First demonstration farm running by the end of 2017.



## Fruit Quality Concept

Initiative owner: Syngenta

### Objective

The stated aim of the Fruit Quality Concept (FQC) is to make farming more sustainable and to improve market opportunities in conjunction with participating fruit farmers (apples and pears). The FQC encompasses the following aspects:

- integrated pest control – fewer chemicals and more natural predators;
- greater biodiversity (planting of flower borders);
- elimination and minimisation of residues in fruit;
- improvement in plant resilience through the use of biostimulants;
- prevention of contamination of surface water (reduction in emissions through technology and prevention of farm emissions).

### Partners

FruitNL and Centrale Adviesdienst Fruitteelt (CAF, advisory service for fruit farmers)

*Status/current situation*

Ongoing initiative

*Duration*

2015–2023

*Milestones*

Year	number of participants	number of hectares
2015	16	700 ha
2016	25	1,000 ha
2017	31	1,100 ha
2020	36	1,600 ha
2023	43	2,000 ha

**The farmyard; the place to bee**

Initiative owner: LTO Nederland (Dutch Federation of Agricultural and Horticultural Organisations)

*Objective*

To create a better habitat for wild pollinators (particularly bees) on a minimum of 500 farms across the Netherlands through bee-friendly vegetation, bee hotels, and so on. In this way, the project helps to create a sustainable and attractive landscape for people and animals, and leads to interaction between farmers and the public.

*Partners*

Naturalis biodiversity centre, Van Hall Larenstein University of Applied Sciences, the national natural environment authority LandschappenNL, the environmental organisation Natuur & Milieu, the Dutch Beekeepers' Association, the national association of agricultural collectives BoerenNatuur, EIS Insect Education Centre and the horticultural association Tuinbranche Nederland.

*Status/current situation*

Project plan is ready, the project can get under way as soon as funding has been obtained. Contribution from the primary sector has already been promised, finding the necessary co-finance from other sources is proving difficult.

*Duration*

The project will start in 2018 and will run for two years.

*Milestones**1<sup>st</sup> year:*

- design(s) for bee-friendly farms;
- recommendation tool for farmers and market gardeners;
- recruitment of 24 ambassadors/demonstration farms.

*1<sup>st</sup> year and 2<sup>nd</sup> year:*

- roll-out across a minimum of 500 farms in different regions and agricultural sectors;
- monitoring of bee species on bee-friendly farms;
- information and communication campaign.



## Promotion of agricultural farm stewardship

Initiative owner: Collectief Midden Brabant (collective for the Central Brabant region)

### Objective

Increase in biodiversity and reduction in pesticide use/drift. The water board is working proactively with farmers to create field borders along watercourses ([website ANLBbrabant.nl](http://website.ANLBbrabant.nl)). Blue (water-related) services include the creation of buffer zones (three to six metres wide) along watercourses to restrict leaching of fertilisers and drifting of pesticides to the surface water. As a result, blue services help to improve biodiversity and water quality in agricultural areas.

### Partners

7 environmental cooperatives in the form of a Collective, Province of North Brabant and De Dommel Water Authority.

### Status/current situation

From 2016, five-year management packages for field borders have been agreed on over 80 ha. Knowledge is also shared at information evenings and a border management course is delivered by ANV Kempenland.

### Duration

CAP period 2020

### Milestones

Expansion of management packages, e.g. more flower-rich seed mixes and soil packages.

## Insights into the contributions made by managed and wild pollinators to plant pollination

**Initiative owner: Koppert Biological Systems**

### Objective

The aim of the research is to develop a recommendation tool for sustainable plant pollination. The site, the surrounding area and the existing biodiversity will be analysed in terms of their ability to attract wild pollinators in sufficient numbers. It will be investigated whether the composition of the landscape affects the frequency of visits by managed and wild pollinators. The relationship between the effectiveness of the visit by the pollinator(s) and the crop yield will also be investigated, after which a minimum visit frequency will be determined that results in a maximum yield. It will also be investigated whether a mix of pollinators and potential differences in pollination efficiency improve the setting and quality of fruit.



### Partners

WUR (Wageningen University and Research), different soft fruit companies in areas with different types of biodiversity.

### Status/current situation

In 2017, a literature review was carried out on the basis of public and internal (non-public) information. The available knowledge was then clustered. A PhD application for 2017/2018 was rejected; this application will be resubmitted for 2018/2019 following a review and the resolution of any issues.

### Duration

2018–2020

#### Milestones

- 2018–2019: Approval of PhD.
- 2019: Interim Report Year 1.
- 2020: Interim Report Year 2.
- 2020: Delivery of PhD report with findings and answers to the questions/sub-questions asked.

### Groene Linten Bijenlandschap (green ribbons bee habitat)

Initiative owner: De Groene Klaver Cooperative

#### Objective

Some fifty farmers in the Leiden area are trying to improve the habitat for wild bees and other pollinators. With this aim in mind, they are establishing over 20 ha of bee habitat in various corners and borders on their farms. A second objective is to raise awareness among farmers, and those living in and around the city of Leiden, of the importance to society of a healthy bee fauna and to get them more involved.



#### Partners

This agricultural project fits seamlessly with other bee projects in the Leiden area and in the Land van Wijk en Wouden region, where the public, schools, businesses, academia and public authorities are all contributing towards the same goal. These partners are all working closely together under the banner of the Groene Cirkel Bijenlandschap (green circle bee habitat). For more information, see [www.bijenlandschap.nl](http://www.bijenlandschap.nl). The project is being implemented by Projecten LTO Noord.

#### Status

Ongoing initiative

#### Duration

2016–2022



### Operation Pollinator

Initiative owner: Syngenta

#### Objective

To encourage pollinators by boosting nectar and pollen, as well as other useful insects that can feed on the field border and lay eggs in the adjacent crops, thereby contributing to integrated plant protection.

#### Partners

Flevoland Agricultural Collective, Hoeksche Waard nature and landscape management association, Waadrane Agricultural Collective, Noord-Holland Zuid Agricultural Collective, Limburg Agricultural Collective, In Goede Aarde Agricultural Nature Association (ZH) and McCain.

*Status/current situation*

Ongoing initiative

*Duration*

2012–2023

*Milestones*

Year	Total sown through partners (in ha)	Impact on the surrounding area and neighbouring crops (in ha)	Conversion to a 6-m-wide flower border (in km)
2016	240 ha	8,000 ha	400 km
2017	392 ha	13,065 ha	650 km
2020	500 ha	>16,000 ha	>800 km
2023	700 ha	>23,000 ha	>1,100 km

**Vitale Teelt Bloembollen (sustainable cultivation of flower bulbs)**

Initiative owner: Royal General Bulb Growers’ Association (KAVB)

*Objective*

To promote nature-based production in the cultivation of flower bulbs with a view to providing a better habitat for pollinators, butterflies and birds. The aims of the Vitale Teelt sustainable cultivation project were announced in September 2017 (see: <https://assets.kavb.nl/docs/0a8d50e9-dd10-4854-b4b6-b47e05245844.pdf>).

*Partners*

KAVB, Wageningen University &amp; Research, Greenport Noord-Holland Noord, Greenport Duin- en Bollenstreek

*Status/current situation*

Ongoing initiative

*Duration*

2017–2030

*Milestones*

Delivery in mid-2018 of a research and implementation programme for all Vitale Teelt themes, including nature-based production.

**Sustainability certification of flower bulbs**

Initiative owner: Royal General Bulb Growers’ Association (KAVB)

*Objective*

To encourage flower bulb growers and traders to certify their products under the Milieukeur/PlanetProof and Bio (Organic) quality labels, which pay specific attention to functional agricultural biodiversity and bee health in light of the cultivation of flower bulbs and bulb flowers.

*Partners*

SMK, Bionext

*Status/current situation*

Ongoing initiative

*Duration*

2014–2025

#### Milestones

- 2015: Delivery of Milieukeur Bloembollen (flower bulb ecolabel) certification scheme.
- 2016: Certification of first businesses under flower bulb ecolabel.
- 2016: First study day for Organic Flower Bulbs by KAVB and Bionext.
- 2017: Delivery of Milieukeur Bolbloemen (bulb flower ecolabel) certification scheme.
- 2017: Setting up of KAVB Expert Group on Organic Flower Bulbs.
- 2018: Certification of first businesses under bulb flower ecolabel.
- 2025: 20% of flower bulb cultivation area is Milieukeur/PlanetProof or Bio (Organic) certified.

## Five modules in senior secondary vocational education (MBO) and Lifelong Learning

### 1) Insect pollination for the farming sector

Initiative owner: Citaverde College and the Centre of Excellence for Nature and Living Environment (KCNL)

#### Objective

To develop modules for senior secondary vocational education (MBO) and company employees on pollinators and beekeepers in order to improve knowledge of beekeeping. The module relates to the use of pollinating insects (among others, bees, bumblebees, solitary bees, flies) in the farming sector. Pollination is a significant part of the growing process. The junior professional supports the grower with advice and deploys pollinating insects.

#### Partners

The Dutch Beekeepers' Association and the training organisation Stichting Beroepsonderwijs Bedrijfsleven

#### Status/current situation

Ongoing initiative, approved by the training organisation Stichting Beroepsonderwijs Bedrijfsleven on 26 October 2017

#### Duration

2017–2018

#### Milestones

The plan is to offer the module as an elective in the senior secondary vocational (MBO) courses of Citaverde College from 1 August 2018. Other educational institutions can do the same as per 1 August 2018. Until then, Citaverde will coordinate the development of the associated learning materials in collaboration with the education sector, business community and Naturalis biodiversity centre.

### 2) Pollinator specialisation module – perspective for action

Initiative owner: Centre of Excellence for Nature and Living Environment (KCNL)

#### Objective

Senior secondary vocational education (MBO) Pollinator specialisation module: learning materials currently derived from apiculture, expanded to include companies operating in the field, Bayer, LTO and other food production companies through an integrated, broad approach.

#### Partners

Citaverde College, Van Hall Larenstein University of Applied Sciences/Bee Research Group, Bayer and LTO Nederland

#### Status

Ongoing initiative, approved by the training organisation Stichting Beroepsonderwijs Bedrijfsleven on 26 October 2017

*Duration*

2017–2018

*Milestones*

Specify points to deliver activities up to 2030 (ongoing delivery as part of curriculum).

### 3) Breeding and managing insects

Initiative owner: Citaverde College

*Objective*

This module relates to the growing and managing of insects for two different purposes. The first goal is to use the live insects in order to pollinate crops as a natural predator in crop management, for scientific research purposes or for the collection of bee-related products such as honey, wax, propolis, pollen, royal jelly, and so on. The other goal is to grow insects as ingredients for food, feed or for pharmaceutical purposes.

*Partners*

Centre of Excellence for Nature and Living Environment (KCNL)

*Status/current situation*

Ongoing initiative, approved by the training organisation Stichting Beroepsonderwijs Bedrijfsleven on 26 October 2017

*Duration*

2017–2018

*Milestones*

The plan is to offer the module as an elective in the senior secondary vocational (MBO) courses of Citaverde College from 1 August 2018.

### 4) Breeding and managing insects – perspective for action

Initiative owner: Centre of Excellence for Nature and Living Environment (KCNL)

*Objective*

Senior secondary vocational education (MBO) module on Breeding and managing insects. Learning materials are currently derived from apiculture but should take a more integrated approach in due course, with input from companies in the food industry.

*Partners*

Citaverde College and Van Hall Larenstein University of Applied Sciences/Bee Research Group

*Status/current situation*

Ongoing initiative, approved by the training organisation Stichting Beroepsonderwijs Bedrijfsleven on 26 October 2017

*Duration*

2017–2018

*Milestones*

Specify points to deliver activities up to 2030 (ongoing delivery as part of curriculum).

## 5) Organisation of outdoor space for biodiversity

Initiative owner: Centre of Excellence for Nature and Living Environment (KCNL)

### *Objective*

Private land and the adjoining public space are currently managed separately. This effort could/should be coordinated to make a link between a) nature, b) green space and c) the agricultural production sector. Current KCNL initiatives are a) broader and more integrated approach and b) upscaling.

### *Partners*

Agricultural businesses for plots, local authorities for verges, nature and land owners for verges. Citaverde College, collaboration with WUR and business community, Dutch Beekeepers Association. New activities with local authorities, agricultural sector, chemicals industry (BASF, BAYER, and so on), Naturalis and the Dutch bird conservation charity Vogelbescherming Nederland.

### *Status/current situation*

Ongoing initiative

### *Duration*

2017–2018

### *Milestones*

The Organisation of outdoor space for biodiversity module has been approved and learning materials for the modules have been developed. Specify points to continue delivery of activities up to 2030 (ongoing delivery as part of the curriculum up to 2030).

## Bees, pollinators and plant protection

Initiative owner: Citaverde College

### *Objective*

Professional users of plant protection products must attend information meetings in order to keep their licence valid. An information meeting on the impact of using plant protection products on wild bees and pollinators, as well as on the specific measures that can be taken when planning, preparing and implementing plant protection to keep their habitat and health in optimum condition, has been developed specifically for the primary sectors of livestock, horticulture and contract work.

### *Partners*

Mertens and the Centre of Excellence for Nature and Living Environment (KCNL)

### *Status/current situation*

Ongoing initiative

### *Duration*

Up to and including 2018

### *Milestones*

Specific focus on bees and pollinators in information meetings on plant protection. Objective of >500 participants annually.

## Biodiversity monitor for arable farming

Initiative owner: Stichting Veldleeuwerik (sustainable crop production foundation)

### Objective

To develop, run a pilot for and validate a functional and practical biodiversity monitoring system for arable farmers.

A monitoring system helps to raise awareness and develop knowledge of pollinators and other beneficial insects both within the agricultural sector and beyond. This initiative will lead to an increase in beneficial insects and other biodiversity, and make them more readily identifiable.

### Partners

NGOs such as WWF and Natuur en Milieu, partners such as Bayer and Bejo Zaden. Louis Bolk, Rabobank.

### Status/current situation

We are in the initiation phase: which partners and what finance?

### Duration

2017–2020

### Milestones

- 2017: project plan.
- 2018: development and presentation.
- 2019: run pilots.
- 2020: initial results and roll-out.



## Improve knowledge of pollinators and beneficial insects at the national level

Initiative owner: Stichting Veldleeuwerik (sustainable crop production foundation)

### Objective

The level of knowledge in the Netherlands as regards the recognition, benefits, and dos and don'ts of pollinators and other beneficial insects is limited. Veldleeuwerik growers have a significant need for this knowledge, as it would have a positive impact on their decision-making regarding the use of chemicals and would make them less dependent on advice from external parties. As a result, they can work in a more efficient and environmentally friendly way. However, we have also noticed that the public and consumers have a very low level of knowledge. This situation leads, among other things, to the use of undesirable products to control such issues as weeds and mosses.

### Partners

Education sector, NGOs such as WWF and Natuur en Milieu, Louis Bolk, Rabobank, supply chain partners.

### Status/current situation

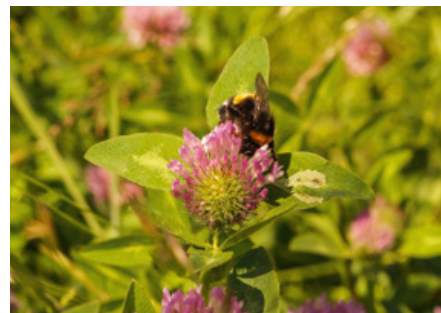
We are in the initiation phase: which partners and what finance?

### Duration

2017–2022

### Milestones

- 2017: project plan.
- 2018–2019: development of courses and alarm system.
- 2019: run pilots and results.
- 2022: communication and roll-out at the national level.



## Biodiverse green manure in arable farming

Initiative owners: Greenport NH and Stichting Veldleeuwerik

### Objective

To develop scientifically substantiated practical knowledge about the use of biodiverse green manures. To study the effect on soil, pest control, attracting and providing shelter for pollinators and other beneficial insects, with the ultimate aim of reducing the use of chemical products.



### Partners

EFRO evergreen project, Veldleeuwerik growers, Greenport NH, Proeftuin Zwaagdijk research centre, NLG, UvA.

### Status/current situation

Ongoing initiative

### Duration

2017–2019

### Milestones

- Early 2018: initial results of small-scale trial.
- After the 2018 harvest: roll-out of large-scale trial with various companies (groundwork).
- 2019: results of long-term trial (national communication).

## Monitoring of Hoeksche Waard Field Borders

Initiative owner: SOHW (Collaborative body for the island of Hoeksche Waard)

### Objective

The objective of this project is to determine how field borders contribute to biodiversity on the island of Hoeksche Waard and its value in the form of ecosystem services delivered to farmers. Four research questions have been formulated:

- What is the value of a field border for natural predators of pests?
- What is the value of a field border for pollinators?
- What is the value of a field border for water fauna?
- What is the added value of a field border in a green/blue network?



Source: CCHW

### Partners

Stichting Veldleeuwerik, the natural environment authority for the island of Hoeksche Waard, Hoeksewaards Landschap (HWL), the Ministry of Infrastructure and Water Management, the insect education centre Stichting EIS/Naturalis biodiversity centre, IBED/University of Amsterdam, Westmaas plant research centre/WUR, with the cooperation of Hoeksche Waard nature and landscape management association (CCHW).

### Status/current situation

Ongoing initiative

#### Duration

Three years (preparation 2016, implementation 2017–2018)

#### Milestones

- Interim report November 2017.
- Assessment of the value of the ecosystem services that field borders deliver.

### Title: Levend bijennetwerk (Living bee network)

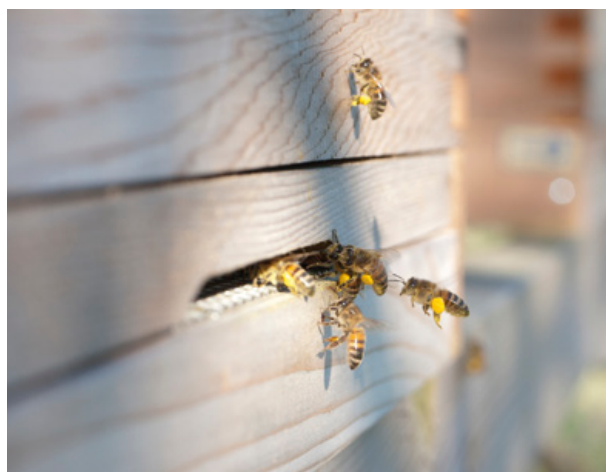
Initiative owner: ANOG (Agricultural Nature Association for the Region of East Groningen)

#### Objective

To exchange knowledge and information, coordination of bee-related ideas and initiatives at the provincial level.

#### Partners

This Groningen-based platform comprises representatives from the Province of Groningen, agricultural collectives, the landscape management organisation for the Groningen region Landschapsbeheer Groningen, beekeepers, the beekeepers’ association, Groningen Seaports, B-Rhapsodie, local authorities, the nature conservation charity IVN, the natural heritage organisation Natuurmonumenten, soft fruit growers, the natural environment authority for the Groningen region Groninger Landschap and LTO North. It is a forum for discussion of bee-related ideas and projects.



#### Status/current situation

Ongoing initiative

#### Duration

2017–beyond

#### Milestones

- 2018: roll-out of the first joint projects in the province.
- The joint venture has already produced a number of specific proposals for joint projects, including a follow-up to the “Bloeiend Bedrijf” (Flower borders) project and the “Akkerranden als bloeiende verbindingen” (Field margins as flower-rich links) project.

### Biodiversity scan – Odoorn breeding site

Initiative owner: BASF

#### Objective

To attract pollinators to the breeding site in Odoorn by establishing flower-rich field margins with species from the local Dutch fauna. The field margins are laid out in such a way as to create an uninterrupted system of margins which enables maximum migration between fields, woods and other natural features.

#### Partners

Stichting Veldleeuwrik, the butterfly conservation association De Vlinderstichting and Mts. De Jong (breeding site). Collaboration with the Province of Drenthe, Odoorn local authority, the forestry management agency Staatsbosbeheer and Vechtstromen Water Board is being investigated.



*Status/current situation*

Project proposal in final phase. The field borders are due to be sown in November.

*Duration*

Three years initially; may be extended depending on outcome.

*Milestones*

Every year, four counts are made (throughout the year) in the field borders and the untreated reference field borders. At the end of each season, a report on the year is produced and the year is evaluated.

## Knowledge Impulse – Pollinators

Initiative owner: Ministry of Agriculture, Nature and Food Quality

*Objective*

Over the next few years (2017 through 2021), the Ministry of Agriculture, Nature and Food Quality will invest in the knowledge provision on pollinators and pollination services. In this context, four specific project objectives have been set:

- to help the target groups formulate their contribution to the conservation and promotion of pollinators efficiently through targeted knowledge transfer;
- to learn from both the many existing initiatives for pollinators and new initiatives by analysing which factors lead to success and how current problems can be resolved;
- to make a contribution to assessing the extent to which new initiatives actually result in improvements for pollinators;
- to gain further insight into the extent to which generic measures for pollinators can and do help to protect rarer species.

*Partners*

WUR, Naturalis, EIS

*Status/current situation*

Ongoing initiative

*Duration*

2017–2022 (five years)

#### *Milestones*

- 2017: start of project; clarification to intended partners of the NL Pollinator Strategy.
- April–December 2017: contribution to set-up and substantiation of the objectives of the NL Pollinator Strategy.
- September 2017: presentation of the first activities to the intended partners.
- 2018–2021: annual review and discussion meeting with partners.
- 2022: analysis of results of Knowledge Impulse – Pollinators.

### Using the CAP to promote pollinators

Initiative owner: Ministry of Agriculture, Nature and Food Quality

#### *Objective*

To develop and apply bee-friendly greening measures and agri-environmental measures within the CAP in order to improve the habitat for pollinators, thereby making a contribution to the NL Pollinator Strategy in the context of the CAP. The Netherlands believes that a post-2020 CAP should focus more on targeted payments to farmers in order to make agriculture more sustainable.

#### *Partners*

European Commission, EU Member States, agricultural sector, WUR

#### *Status/current situation*

Ongoing initiative

#### *Duration*

2018–2020: working towards a new CAP (negotiations).

2021–2027: term of new CAP (implementation of new policy).

#### *Milestones*

- Publication of 29 November 2017: European Commission guidelines.
- December 2017: Knowledge analysis – bee-friendly greening measures within the CAP.
- Mid-2018 (estimated): European Commission legislative proposals.





# NL Pollinator Strategy Initiatives

## Theme – Honey bees



## All municipalities Bee-friendly

Initiative owner: Dutch Beekeepers' Association (NBV)

### Objective

All municipalities have a generally positive attitude towards honeybees, solitary bees, bee colonies and beekeepers, and act accordingly. This fact applies to their attitude towards the public and the handling of complaints, as well as to their facilitation of the establishment of bee colonies by beekeepers and the setting up/amending of municipal by-laws. Local authorities strive to increase biodiversity by improving the environment and planting more flowers for the benefit of insects that feed on pollen and nectar, such as honeybees, solitary bees and bumblebees. Management is such that the objectives achieved can be conserved in the long term.



### Partners

Potentially the Association of Dutch Municipalities (VNG) and representatives from all 200 divisions of the Dutch Beekeepers' Association (NBV).

### Status/current situation

New project to start in 2018.

### Duration

2018–end of 2023

### Milestones

- All municipalities with an NBV division meet the agreed objective.
- All municipalities are bee-friendly.

## Project Heideboerderij (heathland farm project)

Initiative owner: Federatie van Heideboerderijen Nederland i.o. (Dutch heathland farm federation in formation)

### Objective

The Heideboerderij (heathland farm) concept starts by establishing a number of pilots in the Netherlands. As an area-specific vision, the organic Heideboerderij heathland farm involves restoring and revitalising the extensive, circular heathland system of days gone by. The biodiversity of the Dutch heathland agricultural ecosystem, and the associated cultural landscape, derives its strength from grazing by sheep, deep stable manure and pollination by bees. Bees are not yet included at an early stage as an essential component of the heathland ecosystem, although bees – just as sheep – are one of the key pillars of such a system. Sheep rejuvenate heathland and open spaces where plants can germinate. Bees pollinate the heath and seed, rejuvenate and renew the heathland landscape. This pollination is carried out by wild, solitary bees and by honeybees that produce the highly prized, traditional heather honey. The innovative aspect of the heathland farm is that the system reverts to a close relationship between nature, culture and extensive farming. Its aim is to discover/rediscovers a balance and optimum agricultural biodiversity within the heathland ecosystem. The heathland farm would have to provide sufficient food for wild bee populations, the rare Dutch black bee and other honeybees year-round. If a balance is to be achieved between heathland ecology and economics, independent scientific monitoring of species diversity (grazing, vegetation, field herbs, insects, birds, reptiles) and competition for food between wild bees and honeybees is crucial.



*Partners*

Ministry of Agriculture, Nature and Food Quality (Ministry of Economic Affairs decision on Heideboerderij pilots of 13 October 2016), the Dutch Rare Breed Survival Trust (SZH), the natural heritage organisation Natuurmonumenten, the national natural environment authority Landschappen, various local authorities and provinces, the sustainable food company Herenboeren, Van Akker naar Bos (from field to fork) and the forestry management agency Staatsbosbeheer as an intended partner, to name but a few.

*Status/current situation*

Ongoing initiative

*Duration*

2016–2025 and beyond

*Milestones*

- The first heathland farm pilots in the Netherlands will start mid-2018.
- The duration of the pilots is five to ten years.

## BEEP Bee health monitoring

Initiative owner: Stichting BEEP (BEEP foundation)

*Objective*

BEEP is a registration platform for colony data on honeybees and bumblebees, complemented by automatic monitoring via sensors. The system helps beekeepers to monitor the health of their bees closely, make well-informed choices and share information. In addition, bee researchers can collect data on the health of bees as influenced by environmental factors. An extensive taxonomy of international bee data is used for this purpose. BEEP shares and uses open source software and hardware, and participates in international initiatives.

*Partners*

Naturalis Biodiversity Centre, Iconize, the bee education and research foundation Stichting Beelease, Stadsimkerij Tilburg (Tilburg city apiary) and Hiveeyes. Sponsors help to keep the system and the measuring equipment financially accessible to beekeepers. This important innovation is coordinated by the BEEP foundation.

*Status/current situation*

The first version of the BEEP app has been in use since July 2017, made possible in part by a crowdfunding campaign among beekeepers. Feedback from users informs the further iterative development of BEEP. Research proposals and the bee data taxonomy are developed in conjunction with Naturalis. For more information, see <http://beep.nl>.



## Role of pollination beekeepers in green education

Initiative owner: Professional Association of Dutch Beekeepers (BVNI)

### Objective

To raise awareness, share knowledge of and train people in pollination and beekeeping.

Through the new educational structure for senior secondary vocational education (MBO), the government provides scope for the incorporation of specialisation. This specialisation can take the form of modules. For example, if students in an agricultural programme take the insect pollination module, it will be good for their professional profile and CV, while work placement companies can train employees in a more specific way. As applying for this module requires support, the sector, business community and educational field must emphasise the benefits of these modules.



### Partners

Groen ruimte (green space), Bijenmakelaar (bee ambassador) programme

### Status/current situation

Application submitted by Citaverde College Roermond

### Duration

April 2017–December 2018

### Milestones

To be defined.

## Mapping of professional bee stocks for pollination

Initiative owner: Professional Association of Dutch Beekeepers (BVNI)

### Objective

To identify areas where professional beekeepers and growers may encounter difficulties as a result of a potential transport ban in the context of infectious bee diseases/pests.

In the event of an outbreak of an infectious bee disease (American foulbrood, small hive beetle, and so on), the Food and Consumer Product Safety Authority (NVWA) will impose a transport ban. Growers that require bees at that time to pollinate their crops will be deprived of honeybees and their crops can be regarded as lost. By mapping prior to an outbreak of one of these diseases where supply and demand overlap (or otherwise), it is possible to identify potential areas to which only an entry exemption applies and the bees can leave their hives once again once the quarantine measure has been lifted.



### Partners

LTO, NVWA, BVNI, and the Ministry of Agriculture, Nature and Food Quality

### Status/current situation

In progress on the BVNI side

*Duration*

December 2017–March 2018

*Milestones*

- Dec 2017: bee stocks of BVNI members identified.
- Jan 2018: LTO member hotspots where bees are required.
- Feb 2018: meetings with partners.
- March 2018: scenario for transport ban for bee disease ready.

## Access to natural and nectar-rich spaces

Initiative owner: Professional Association of Dutch Beekeepers (BVNI)

*Objective*

To make large and medium-sized natural spaces accessible to beekeepers who use their bee colonies commercially for pollination (horticulture, fruit farming, seed production, agriculture), honey production or increasing of bee numbers. In the period following the use of bee colonies for the pollination of horticultural crops (under glass), recovery in areas where sufficient nectar and pollen are available is necessary. Beekeepers who devote their time to increasing of bee numbers also need access to these types of areas because there are not many locations in the Netherlands where beekeepers can keep bees on a large scale. In addition, the only areas in the Netherlands where honey can still be produced in reasonable quantities are old-growth forests, heathland areas, the Biesbosch region, and so on. These areas are in the hands of land management organisations that must give their consent before such access can be created.

*Partners*

BVNI, the forestry management agency Staatsbosbeheer, the Dutch water boards (Waterschappen) and the Ministry of Defence

*Status/current situation*

Not yet launched

*Duration*

January 2018–March 2018

*Milestones*

To be defined.



## Reintroduction of wild honeybees

Initiative owners: Inbuzz Extra and [bijen@wur](mailto:bijen@wur) (WUR Wageningen)

### Objective

To enable swarming and monitoring of varroa-resistant honeybees in an isolated area.

Since the advent of the Varroa mite, wild honeybee populations have disappeared from the countryside. In the meantime, work commissioned by the Ministry of Economic Affairs and Climate Policy as well as the Ministry of Agriculture, Nature and Food Quality to develop self-reliant bees has been going on for many years now, achieving a high degree of varroa resistance. The ultimate test of the bees’ self-reliance is their ability to survive in the wild. This project will encourage beekeepers to work with naturally varroa-resistant bees in the long term. Although the circumstances in the Netherlands are extremely variable, this project offers the opportunity to re-establish wild honeybees and to gauge beekeepers’ success in establishing future varroa-resistant swarms.

### Partners

Landowners/managers

### Status/current situation

Ongoing initiative. Thanks to an anonymous donation and enthusiastic partners, this project can run for four years. It is crucial to monitor the population of wild bees and any related effects on the environment.

The donation does not cover this aspect.

We are currently talking to a number of different landowners. The next step is to acquire suitable nest boxes, which can be populated by swarms from the resistant populations of Inbuzz/[bijen@wur](mailto:bijen@wur) next spring.

### Duration

2018–2021, but “unlimited” if successful.

## Expansion of natural selection for varroa resistance to two or more new locations

Initiative owners: [Bijen@wur](mailto:Bijen@wur) and Bayer Bee Care Center

### Objective

In consultation with beekeepers in a minimum of two locations (one in the Netherlands and one in Germany), to select varroa resistance anew based on local bee colonies.



### Partners

The project is being implemented in partnership with Inbuzz Extra. In addition to the initiators/implementers of the project, WUR and BBCC, there is a great deal of interest internationally in this approach and various groups (researchers + beekeepers) are keen to join the project from 2018. This process is being coordinated by the Survivors task force of the honey bee research association Coloss.

### Status/current situation

Ongoing project. This project is fully funded by Bayer, but it builds on knowledge acquired from previous research funded by the Ministry of Economic Affairs and Climate Policy/the Ministry of Agriculture, Nature and Food Quality. An anonymous donation will provide additional funding from 2018 for expansion of the initiative by one location; however, additional funding will still be necessary. On both locations, the 30 “founding mothers” hives have now been placed on a stand.

### Duration

2017–2021

## Sustainable control of the Varroa mite in Dutch apiculture

Initiative owner: Bee Health Research Group/Van Hall Larenstein University of Applied Sciences, RAAK-Pro project



### Objective

The consortium is keen to identify Varroa-Sensitive Hygiene (VSH) genes and to set up a method for the detection of these genes in existing bee colonies. With genetic information on VSH in their colonies, beekeepers can make well-informed decisions in their day-to-day operations. As a result, VSH can quickly be incorporated into Dutch apiculture, making pest control no longer necessary and pollination simpler.

### Partners

Van Hall Larenstein University of Applied Sciences, InHolland University of Applied Sciences, Arista Bee Research, BEJO zaden BV, WUR genetics laboratory, the beekeepers associations BVNI, NBV, VCI and BBV.

### Status/current situation

Ongoing initiative

### Duration

2017–2020

### Milestones

Selection of VSH colonies, observation methodology for individual VSH behaviour, identification of VSH genes and markers, measuring and advising on VSH in the field.

## Citizen science – bumblebees and their habitat

Initiative owner: Bee Health Research Group/Van Hall Larenstein University of Applied Sciences, in conjunction with Silence of the Bees, Interreg EDR project

### Objective

To obtain information on and engage schoolchildren with pollinators in their own environment. Children make observations on bumblebees and flowering vegetation in their environment. These data are used to produce a scientific report on the relationship between bumblebee behaviour, the growth of the nest and its green environment, and the impact of the education on the children's behaviour. The project is part of a project that aims to raise awareness of bees and pollination. Bumblebee sounds will also be used, while students from the Academy of Popular Culture in Leeuwarden, the Institute of Music in Oldenburg and all the partners involved in the project will compose a Bumblebee Rhapsody which will be broadcast simultaneously on 21 June 2018 in Buitenpost, Oldenburg and Emden. In the sustainably designed Oratorio building, visitors will be immersed in music that is based on bumblebee sounds and behaviour. The buildings will be linked by touch screens in order to encourage the cross-border sharing of experiences between visitors and students.

### Partners

Kruidhof botanical gardens/Achtkarspelen local authority, Van Hall Larenstein University of Applied Sciences, Oldenburg Botanical Gardens/University, the Dutch Bee Research Centre, Ökowerk Emden environmental centre, the apiary IMME Bourtanger Moor, Leeuwarden Academy of Popular Culture, Oldenburg Institute of Music.

### Status/current situation

Ongoing initiative

*Duration*  
2017–2020

*Milestones*

- Annual symposiums on bees and pollination.
- 2018: Broadcasting of Bumblebee Rhapsody.
- Data from more than 100 schools used for report on the analysis of pollination environment and awareness raising.



# Notes on interconnections



## Knowledge Impulse – Pollinators

The point of departure for the NL Pollinator Strategy is a joint approach by social partners and government authorities to the setting up and implementation of initiatives that contribute to the main objective: by 2030, pollinators and pollination services in the Netherlands will be sustainably conserved and promoted.

A prerequisite for the achievement of this objective is the optimisation of the efficiency of the planned initiatives through the use of scientific knowledge. This involves targeted selection of measures and choices in terms of set-up and management, based on the local species community, the landscape type, the soil type and the designated use. Some of this knowledge is available from previous research but has not yet been adequately translated into concrete actions and guidance. On a number of levels, additional research is desired in order to gain a better understanding of what is required to conserve pollinators in a sustainable way.

Over the next few years (2017 through 2021), the Ministry of Agriculture, Nature and Food Quality will invest in this knowledge requirement on pollinators and pollination services through the *Knowledge Impulse – Pollinators* initiative. The key objective is to contribute, through knowledge development, knowledge distribution and awareness raising, to the conservation and promotion of pollinators so they can continue to fulfil their role in food production and natural ecosystems in the long term. In this context, the emphasis is on wild pollinating species (bumblebees, solitary bees and hoverflies). Target groups are all parties participating in the NL Pollinator Strategy. The programme also focuses on various scales that could make a direct or indirect contribution to the conservation and promotion of wild pollinators. This focus translates into four specific project objectives:

- to help the target groups formulate their contribution to the conservation and promotion of pollinators efficiently through targeted knowledge transfer;
- to learn from both the many existing initiatives for pollinators and from new initiatives by analysing which factors lead to success and how current problems can be resolved;
- to make a contribution to assessing the extent to which new initiatives actually result in improvements for pollinators;
- to gain further insight into the extent to which generic measures for pollinators can or do help to protect rarer species.

The *Knowledge Impulse – Pollinators* initiative is being implemented by Wageningen Environmental Research (formerly Alterra), in close consultation with Wageningen University, Wageningen Plant Research, Naturalis Biodiversity Centre and EIS Insect Education Centre. In order to ensure that the aforementioned project objectives can be achieved, a modular project set-up has been chosen within which a broad range of activities is implemented.

Central in this context are a number of practical networks in which initiative owners and scientists collaborate under the motto “*sharing knowledge, implementing and learning together*”. These practical networks at the farm level focus on the potential of measures in fruit farming (in terms of biodiversity and crop yield) and of CAP instruments to support pollinators on arable land, in addition to regional networks where multiple landowners make decisions together. Activities include knowledge transfer (targeted advice and sharing of results from other project components), knowledge gathering (practical experiences of initiative owners) and measuring the long-term impacts of the initiatives that have been implemented.

Knowledge is transferred to initiative holders outside of these networks via a help desk that offers targeted advice and the formulation of specific guidelines for the selection, establishment and management of landscape features which offer food and/or nesting sites for pollinators.

Additional research focuses, among other things, on identifying success factors and obstacles of initiatives for promoting pollinators, formulating specific guidance and prerequisites for the efficient establishment and management of new habitat for pollinators, and habitat use by rare species.

The *Knowledge Impulse – Pollinators* initiative will be implemented in close collaboration with the parallel *Knowledge Impulse – Green Plant Protection* initiative, which aims to redesign crop systems without the use of harmful plant protection products. This collaboration involves, among other things, the mutual use of facilities and networks (where possible and relevant), an advisory role within each other’s activities, and targeted additional research into interactions as well as synergy between measures for pollinators and measures for the greening of plant protection in agriculture.

## Ministry of Agriculture, Nature and Food Quality launches international Coalition of the Willing on Pollinators

Based on the premise that we must join forces at the international level as well, the Netherlands has taken the initiative to establish a coalition of countries to protect bees and other pollinators. Member countries include: Austria, Belgium, Denmark, Ethiopia, Finland, France, Germany, Luxembourg, the Netherlands, Peru, Slovakia, Slovenia, Spain, the United Kingdom and Uruguay.

The member countries all plan to establish a national pollinator strategy. This Coalition of the Willing on Pollinators enables the countries to learn from each other and inspire each other to roll out their strategies. The Netherlands is keen to ensure that the available knowledge reaches the right party, that experiences are shared, and that we inspire and encourage each other to establish and implement National Pollinator Strategies. In the end, the overarching objective is to ensure that bees and other pollinators are restored to good health. If we look after bees, we look after ourselves as well.

The Netherlands is keen for more countries to take part in the initiative and for each country to roll out a National Pollinator Strategy. To help the coalition with knowledge sharing and communication, the Netherlands has offered to establish an office with a secretarial function. This office will assist all the countries in the coalition by organising meetings of the coalition, establishing collaboration with the knowledge network Super-B, distributing knowledge in various different forms and promoting the coalition in countries which are not yet members.

The coalition's collaboration with Super-B currently focuses on the recommendations of the IPBES report on pollinators, pollination and food production<sup>9</sup> worldwide. Recommendations in this report are general in nature and precise knowledge is required if they are to be interpreted at the national level. A national version of this table that is practically applicable would help to guide the national pollinator strategies.

On 22 January 2018, countries from the coalition will attend the presentation of our NL Pollinator Strategy to share their stories with us. On 23 January, these countries will also take part in the side event, which involves translating the recommendations of the IPBES report. We are keen to reach a working format so all of the countries in the coalition can produce a practically applicable translation.

In March 2018, we will organise a side event in conjunction with the IPBES Secretariat during which we will continue the aforementioned activities. Moreover, Colombia and another five eastern European countries will also join the coalition. In mid-November 2018, a workshop will be delivered as a side event at the 14th CBD CoP (Conference of the Parties to the Convention on Biological Diversity) in Egypt.

## Ministry of Agriculture, Nature and Food Quality ambition: Common Agricultural Policy and bee-friendliness

Part of the NL Pollinator Strategy is to consider the extent to which the Common Agricultural Policy (CAP) can be used as a tool for specifically promoting bee-friendly habitats in and around farms. In this context, WUR/WER (formerly Alterra) published an exploratory memorandum on behalf of the then Ministry of Economic Affairs in autumn 2017<sup>10</sup>.

This memorandum indicates that the current CAP could contribute to the improvement of habitats for bees. Within the current CAP, this improvement could take place through generic greening measures (permanent grassland, crop diversification and ecological focus areas), which are linked to direct income support for farmers in Pillar 1 and/or to specific agri-environment measures (Agrarisch Natuur- en Landschapsbeheer, ANLb) for rural development in Pillar 2.

<sup>9</sup> The assessment report on POLLINATORS, POLLINATION AND FOOD PRODUCTION.

<sup>10</sup> Bee-friendliness of the Common Agricultural Policy: an exploration of the contribution of the current Common Agricultural Policy to the promotion of wild bees, Wageningen Environmental Research (formerly Alterra), Wageningen University, November 2017.

Within Pillar 1, it is mainly wooded landscape components and the field borders package (akkerbouwstrokenpakket) with equivalent agricultural practices that are valuable for wild bees. The measures within Pillar 2 (ANLb) also relate primarily to wooded landscape components and packages that aim to create flower-rich fields and field borders. In addition, according to the exploratory analysis of WUR/WER, the effectiveness of measures designed to create a bee-friendly habitat is dependent on appropriate management that is conducive to flower-rich vegetation. For example, phased cutting/harvesting can increase the number of flowers that are available to bees.

Within the current CAP, none of the measures in Pillars 1 and 2 is specifically aimed at promoting species-rich bee communities. According to WUR/WER, adjustments can be made within both Pillar 1 and Pillar 2 at the measure level in order to improve the alignment of the CAP with the NL Pollinator Strategy’s aim of sustainably promoting and conserving pollinators and pollination by 2030. For both Pillar 1 and Pillar 2, this process could involve imposing additional requirements on the management of greening measures. Reference should also be made to the exploratory memorandum of WUR/WER.

Among other things, the Dutch ambition for the CAP after 2020 (TK 28 625, No 247) focuses on making agriculture more sustainable, and greener, resulting in increased biodiversity. In this context, there should be less focus on direct income support and far more on targeted payments, also known as social services (investing in greening and sustainability).

When agricultural products are produced under a market-oriented CAP, the landscape, nature, biodiversity and the environment (climate, air, soil, water) are subject to undesirable external effects which are not reflected in the price of these products. The CAP must be used to correct this market failure by rewarding farmers for investments that benefit habitat and, as a result, biodiversity.

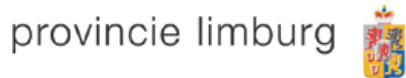
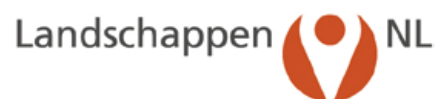
With this regard, the Dutch vision of a future CAP is fully in line with the NL Pollinator Strategy. In the negotiations with Brussels, however, specific attention must be paid to the creation of a bee-friendly CAP. The policy choices that are ultimately made, and the translation of these choices into national legislation in due course, will to a large extent be determined by the outcome of these negotiations.

Draft legislation for the CAP is expected in 2018. Given that a new European Parliament is to be elected in May 2019 and that there is to be a new European Commission after October 2019, the dialogues between the Council, the European Parliament and the European Commission are not expected to start until the end of 2019, so political agreement cannot be reached until 2020 at the earliest.

The review of the CAP is running in parallel with the negotiations for a new Multiannual Financial Framework (MFF) for the period from 2021 onwards. In the context of Brexit, the European Commission’s proposals for the new MFF will probably not be published until 2018. It is unlikely that a political agreement on the CAP can be reached until there is certainty over the funds available in the MFF.

## Partners NL Pollinator Strategy













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