



# ***LIFE Integrated projects 2019***

## **Stage 2 – FULL PROPOSAL**

### **Technical application forms**

#### **Part B – technical summary and overall context of the project**

## SUMMARY DESCRIPTION OF THE PROJECT (English version)

### 1. Overall context/background/geographical scope

IP itself:

This LIFE Integrated Project (IP) aims to implement the Netherlands' PAF<sup>1</sup> by restoring and optimizing habitat specific biodiversity in Natura 2000 areas through relieving current threats and pressure factors related to land use of surrounding areas (such as eutrophication, desiccation, acidification, pollution and fragmentation, see also cPAF pp.17-18 / nPAF section E.2 p.39), in cooperation with all land users and other relevant stakeholders. To achieve this, an integrated approach will be developed for cooperation between managers of Natura 2000 areas and the users of surrounding areas such as the agricultural sector, public bodies responsible for infrastructure and other relevant land users. Close cooperation between responsible governmental organisations, nature organisations, farmers organisations, businesses, scientific institutes and other relevant stakeholders is a pre-requisite for the success of the project.

**Why:** The Netherlands' Natura 2000 sites are heavily influenced by activity in adjacent areas. Biodiversity is still in decline in Natura 2000 sites, particularly because of threats related to the management of surrounding areas such as atmospheric nitrogen deposition, desiccation and acidification (nPAF, section E.2) and despite many actions of groups of farmers and active nature conservation programmes. Consequently, reaching biodiversity targets in the Netherlands critically depends on the integration of management within and around Natura 2000 sites (nPAF sections A.4.3, E.1).

**How:** A shared, broadly supported approach will be developed and implemented for management of Natura 2000 sites and the surrounding land uses affecting these sites, focusing on restoring biodiversity. For instance, hydrological changes, reductions of use of agrochemicals and nitrogen emissions are required, which requires close cooperation with users of adjacent areas, pre-dominantly (but not exclusively) the agricultural sector. The integrated approach is centred on the recognition that nature conservation must be based on the creation of mutual benefits and new business models, ensuring that enhancing biodiversity becomes a leading principle in developing management plans for rural areas.

The IP builds further upon an already existing cooperation between a broad societal coalition of nature, agricultural, science and business organisations initiated in 2018 to restore biodiversity in the Netherlands ('Delta Plan Biodiversity Recovery'). In this IP the Netherlands' government will implement the PAF in close cooperation with the partners of the Delta Plan Biodiversity Recovery. The approach is based on the five success factors defined for the Delta Plan Biodiversity Recovery (pp.10-11), see also sections 2 and 3 below. Monitoring (see section 3, D-actions) of results and learning by doing will be an intrinsic part of the approach.

**What:** The actions proposed in this IP focus on improving overall ecosystem health, which should be reflected by targeted indicator species that play an important functional role, such as soil communities and invertebrates, including soil dwelling detritivores (e.g.

<sup>1</sup> The current PAF covers the period 2014-2020, the new PAF for the period 2021-2027 is currently in its final approval stage (formal adoption expected May 2020). The new PAF builds strongly upon the previous version, with enhanced focus on agricultural- and other areas surrounding N2000-sites. In this proposal, references to both PAFs are provided: "cPAF" refers to the current PAF, "nPAF" to the new PAF. The latter are generally more detailed, since the project is mainly aligned with the new PAF.

earthworms), pollinators (e.g. wild bees and hoverflies) and predatory insects (e.g. ground beetles and lacewings).

Improving ecosystem health will have positive impacts on (other) target species of the Birds and Habitats directive, including meadow birds for which the Netherlands has an important position (cPAF p.30/nPAF A.4.3 p.19, E2.4 p.58), such as A156 *Limosa limosa*, A142 *Vanellus vanellus*, A130 *Haematopus ostralegus*, A056 *Anas clypeata* and A153 *Gallinago gallinago*. In addition, other target bird species (including A084 *Circus pygargus*, A276 *Saxicola torquata*, A338 *Lanius collurio*, A222 *Asio flammeus*), and amphibians (*H1166 Triturus cristatus*, *H1193 Bombina variegata*) will benefit.

Key habitat types targeted are the following:

H3110 Oligotrophic waters containing very few minerals of sandy plains

H3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*

H3260 Water courses with the *Ranunculion fluitantis* and *Callitriche*- *Batrachion* vegetation

H4010 Northern Atlantic wet heaths with *Erica tetralix*

H4030 European dry heaths

H6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)

H6230 Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas

Please refer to Table 4 on p.6 for an overview of all targeted habitat types.

As a result, climate resilience will significantly be improved: as stressed inter alia in the EU Biodiversity strategy, only robust nature reserves will be able to cope with the added pressures posed by climate change.

**Where:** The impacts of adapting the management of these areas are expected to reach far beyond the targeted Natura 2000 sites and positively affect biodiversity in the Netherlands as a whole (PAF p.30). The integrated approach is developed in the first phase in 15 areas, in the second phase extended to 44 areas and ultimately reproduceable to all the Natura 2000 areas in the Netherlands. Therefore, it is aimed to be self-sustaining and replicable to other sites in the Netherlands and in other EU countries.

The geographic areas selected for this LIFE IP (see also below under C.1) are linked to the Interbestuurlijk Programma (IBP) that has recently been launched in the Netherlands, in particular the pilot areas 'Vitaal Platteland'. The IBP aims to improve coordination between different governmental bodies (national government, provinces, municipalities and water boards) and involves cooperation with the agricultural sector and other rural land users, which are key success factors for the proposed LIFE IP. The geographic areas selected for this LIFE IP (see also action C.1) are therefore linked to IBP pilot areas. As part of the complementary actions, replication of the approach in other areas will be achieved.

### **Complementary actions**

This LIFE IP is linked to:

- The initiative '[Groene Cirkel Kaas en Bodemdaling](#)' in which the Province Zuid-Holland cooperates with the Water Board Rijnland, knowledge partners and the private sector to implement sustainable land use (Province Zuid-Holland, budget € 222.000,- (2019)).
- The [Interbestuurlijk Programma IBP](#) (Intergovernmental Programme) of the national government, provinces, municipalities and water boards to improve cooperation on large societal challenges such as climate adaptation (in particular the pilot areas '[Vitaal Platteland](#)' / 'Vital rural areas'). National government, budget: 40 M€).
- [Uitvoeringsagenda Kringlooplandbouw](#) (Circular Agriculture). (Ministry of LNV, 135 M€).
- [Living Labs for Biodiversity](#), in which land users in 3 regions will cooperate to restore biodiversity and in which progress will be monitored by a scientific monitoring protocol (Dutch Research Council NWO and LNV, 4.5 M€).

- European Rural Development Fund, in particular relevant initiatives financed under the [POP-programme](#) sustainable innovation in agriculture (7 M€, for the Province Zuid-Holland)
- European Agricultural Fund for Rural Development, in particular the '[Agrarisch Natuur- en Landschapsbeheer](#)' programme (ANLb, 23.7 M€ Province Zuid-Holland).
- [Regio Deal Natuurinclusieve Landbouw](#) (financing from the national government to improve the balance between agriculture, nature and environment in the northern provinces Drenthe, Groningen and Friesland). (LNV, 10 M€).

In addition, the [Klimaatakkoord](#) (National Climate Agreement) includes budget allocations to 'Peatland meadows' and 'Extensification of dairy farming near Natura 2000 areas' (national government, budget 200 M€ in total for these 2 budget allocations), these budget allocations are expected to be mobilised within the coming months.

## 2. Project objectives:

IP itself:

To achieve the goals of Natura 2000 by implementing an integrated approach for the management of terrestrial Natura 2000 sites, taking into account the management of the sites themselves as well as the surrounding land uses affecting these sites, in close cooperation with the users of these areas.

The specific objectives of the project are based on the five success factors of the Deltaplan Biodiversity Recovery and are to:

1. Create **shared values** among all stakeholders with regard to biodiversity recovery.
2. Optimise **collaboration on the regional landscape level** with a view to aligning management practices of Natura 2000 sites and adjacent areas.
3. Develop **business models** that turn protection and recovery of biodiversity from a cost item into a source of income for all land users involved.
4. Ensure that relevant **laws and regulations are consistent** and in support of contributing to biodiversity.
5. Successfully address **gaps in knowledge** of biodiversity, how it functions and how to restore and strengthen it.

Main objectives of the complementary actions:

- Groene Cirkels: establishing cooperation in the food value chain aimed at enhancing nature values in general and biodiversity in particular.
- Interbestuurlijk Programma: improved cooperation, alignment and knowledge exchange between governmental bodies in the field of nature management, replication in other areas when the pilots 'Vital rural areas' are successfully finalised.
- Uitvoeringsagenda Kringlooplandbouw (Circular Agriculture): ensuring biodiversity is an integral part of decision-making when fostering circularity in agriculture.
- RDF (POP) funded activities: funding specific projects contributing to biodiversity and nature development in rural areas.
- ANLB-programme (Agrarisch Natuur- en Landschapsbeheer) programme: activities conducted by farmers contributing to sound management of nature and landscapes and promoting biodiversity.
- Living Labs for Biodiversity: developing and testing a monitoring protocol to evaluate and continuously enhance the impact of measures to protect and promote biodiversity
- Regio Deal Natuurinclusieve Landbouw: improve the balance between agriculture, nature and environment in the northern provinces Drenthe, Groningen and Friesland.

Tbc: Klimaatakkoord: 'peatland meadows': preventing further desiccation of peatland, which causes methane emissions. 'Extensification of dairy farming Natura 2000 areas': reducing pressure on Natura 2000 areas caused by nitrogen deposits of dairy farms. At a

more general level: ensuring that enhancing biodiversity is integrated in the aims of climate funding.

### 3. Actions and means involved:

IP itself:

Actions financed by LIFE:

#### **A. Preparatory actions (management plans, obtaining licences and permits, etc.),**

##### A.1 Developing and conducting a stress and opportunities test for Natura 2000 areas in the focal areas to assess pressures, involved stakeholders and actions needed to improve the realization of Natura 2000 goals

- Development of a 'stress and opportunities test' for Natura 2000 areas, aimed to gain insight in stress factors, opportunities to relieve these factors and stakeholders to be involved in this process. The test will focus on pressures on the ecosystem and the extent to which land use of adjacent areas has an impact on achieving management objectives (this is likely to be different depending on the impact, e.g. water management is locally organised, whereas other impacts may be a result of activities in a larger geographical area). This will be a coordinated action for various nature conservation, governmental and scientific organisations.
- The test will subsequently be conducted in the selected Natura 2000 sites (see table 4) and will include an assessment of regulatory barriers. A 'quick-scan' approach will be applied, allowing the test to be carried out in 2-3 expert working days for each Natura 2000-site in the focal areas. As a result, opportunities to improve the conditions in each site are identified, which will provide input for the overall governance structure (A.2) and the area specific implementation activities (C.1).
- Aligning and ensuring knowledge exchange with relevant national and regional policy initiatives such as the 'Natuurwinstplan' ('Nature gain plan'), the project 'Hoger Doelbereik' and the provincial nature policies.

##### A.2 Developing an integrated governance model for the coordinated management of nature areas and surrounding land use to achieve the Natura 2000 objectives

- Building an appropriate governance model for enhanced cooperation between land users, governments, farmers' organisations, NGO's and market actors at landscape level, including Key Performance Indicators (KPIs) to measure success and based on learning by doing. The model will closely connect to the IBP initiative aimed to align governance levels and will serve as a template aimed to be made area-specific for each site on basis of local specificities.
- Improving the quality of nature management within Natura 2000 areas by developing a governance structure for joint management plans focused on shared, area specific biodiversity goals, thereby improving cooperation between site management organisations.
- Development of a national and provincial governance structure to identify good practices of cooperation and knowledge exchange between stakeholders around Natura 2000 areas.

##### A.3 Assessing the knowledge base, defining the research agenda and setting education priorities

- Inventory of existing initiatives and identification of knowledge gaps in integrated (governance) approaches of Natura 2000 sites and surrounding areas. Interact with relevant current initiatives (including the ongoing LIFE IP Delta Nature to facilitate efficient knowledge exchange).
- Defining research needs in terms of measuring and assessing biodiversity impacts of measures taken in view of the management of Natura 2000 and surrounding areas.
- Based on the above: definition and implementation of research agenda.

- Assessment of knowledge and innovation investments and funds at national and EU-level focusing on the extent to which they could support integrated landscape approaches (ecological, economic, social) to realise Natura 2000 goals, and identify funding gaps.
- Assess to what extent the Spatial Adaptation for Climate initiative (entailing measures to counter flooding, drought and heat stress) can be aligned with biodiversity goals, in close cooperation with the proposed LIFE IP focusing on the national climate adaptation strategy, if both projects are funded.
- Explore options to develop a public-private fund and long-term governance structure to support actions of land users that contribute to an enhanced realization of Natura 2000 goals.

### **C. Concrete (conservation/implementation) actions**

The concrete implementation actions envisaged to be financed by the LIFE IP are divided in accordance with the main themes on basis of the success factors defined for the Delta plan Biodiversity Recovery (see also under section 2). The success factor 'Shared values and broad support' is included below under the dissemination actions (E.1).

#### C.1 Collaboration at the regional landscape level

*Biodiversity benefits most if all land users in a region collaborate and align their management practices. By focusing on cohesion within a landscape, fragmentation of efforts is prevented. As a result, biodiversity will successfully increase on a regional level, while efforts will gradually be scaled up to a national level.*

- Developing site specific approaches and governance models to enhance cooperation between land users and other relevant stakeholders in selected prototype landscapes for targeted species and dissemination of lessons learned to scale up.

For the first phase of the project (the project is subdivided into three phases of two years), the approach will be piloted in 15 Natura 2000-sites (pre-dominantly in IBP-areas) and surrounding areas. In phase 2 of the project, the approach will be further developed and demonstrated in 44 (the initial 15 and 29 new sites) Natura 2000-sites. In phase 3 the approach will be replicated to all remaining N2000 sites, finally covering all 167 N2000-sites within the duration of the LIFE IP.

*Table 1 Global phasing of LIFE IP-actions*

<b>Phase 1 (2020-2022)</b>	<b>Phase 2 (2022-2024)</b>	<b>Phase 3 (2024-2026)</b>
A-actions, C-actions pilot in 15 N2000-sites	Refinement A-actions, C-actions upscaled to 44 N2000-sites	Replication to all 167 N2000-sites (E.2)
D-action overall monitoring plan, start of monitoring	Continuous monitoring	Monitoring/ final evaluation, ex-post
Horizontal Actions E: communication / dissemination and F: project management		

#### C.2 Developing business models supporting biodiversity

*Creating proper incentives for land users will accelerate the increase of biodiversity. This can be achieved by developing innovative business models, e.g. through result-based payments or rebates for strengthening biodiversity, thus transforming the protection and recovery of biodiversity from a cost item to a source of income. In addition, public funds available for agriculture and rural development need to be geared towards contributing (also) to nature development. The administrative burden related to these funds needs to be reduced, thereby increasing accessibility of finance by farmers and other land users. A commonly agreed upon monitoring tool, based on an integrated set of Key Performance Indicators (KPIs) will allow farmers to receive benefits from multiple sources, and make actions that strengthen biodiversity more attractive (C4).*

Concrete implementation actions include:

- Assess the availability of funding options for measures that can contribute to biodiversity in the selected areas.
- Joint development of new business models for farmers in selected areas to accelerate actions that decrease pressure on Natura 2000 sites and enhance biodiversity inside and outside Natura 2000 sites. The stress and opportunities test of action A.1 will identify sites in which the development of new business models provides an opportunity to achieve this.

### C.3 Optimising the regulatory framework

*Optimising the regulatory framework requires a shift from specific measures to overarching goals and comprehensive policy regarding different environmental themes like biodiversity, nitrogen deposition, climate change, water quality, etc. In addition, a further shift is required from mitigating impacts to addressing the root causes of the respective issues. The framework needs to be fully coherent and integrated across governing bodies and governance levels in full width of the framework. Thus creating a regulatory framework that rewards innovators and closes loopholes for those who seek not to comply.*

Concrete implementation actions include:

- Development of proposals in a multi-stakeholder process to improve policy coherency regarding the realisation of Natura 2000 goals, based on regulatory barriers identified in the selected areas (as part of action A.1).
- Assessment of the applicability of the proposals to other areas: to what extent are these area-specific and compliant with (inter-) national objectives of the regulatory framework.

### C.4 Knowledge, innovation and education

*By starting from the existing knowledge and by continuous evaluating and improving, the 'learning by doing' principle is embodied. The LIFE IP will make full use of available expertise gathered in numerous ongoing and previous initiatives and by means of developing living labs knowledge is actively gathered and shared. Thus gaps in current knowledge are gradually filled, whilst continuing to restore and strengthen biodiversity.*

Concrete implementation actions include:

- As part of the site-specific measures and tools, the development and execution of experiments in which farmers apply Integrated Crop Management that enhances functional biodiversity with potential positive spill-over effects on surrounding Natura 2000 sites.
- Development of a curriculum on biodiversity for education institutes (in relevant fields such as agriculture, green infrastructure and spatial planning) to enhance understanding of the positive relation between biodiversity, agriculture and other forms of land use.
- Training for agricultural service and product suppliers (including contractors) to provide practical guidelines to enhance biodiversity on agricultural lands surrounding Natura 2000 sites.
- Conduct an inventory of radically different agricultural systems (e.g. saline agriculture, pixel farming, agroforestry / food forests) that support the realisation of Natura 2000 goals and that can serve as an inspiration catalogue and example for scaling up.
- Testing in the selected areas how an integrated set of KPIs on biodiversity, climate and environment can support the realization of Natura 2000 goals by farmers (dairy and arable), infrastructure and building companies, local governments and other landowners/users. This will include dissemination of the learnings and the scaling up of local initiatives. This integrated set of KPIs will also form the basis for the development of new business models (see action C.2).
- Assessing the effects of climate change - and vice versa, effect of increased biodiversity on effects of climate change - on biodiversity in road margins and dissemination of results to other public authorities that manage public space.

### **D. Monitoring of the impact of the project actions**

Monitoring of results and learning by doing will be an intrinsic part of the approach. Monitoring efforts will focus on progress made in implementing management measures

(including quantitative indicators, e.g. number of sites and surface area included in the LIFE IP cooperation model) as well as on the impacts of these measures on indicator species. Measurable effects on insect populations are expected within three years after the start of the project.

#### D.1 Setting up a system to monitor the results of the integrated approach

- Developing a framework for the assessment of biodiversity impacts in Natura 2000 areas of integrated project actions in and around these areas.
- Defining indicators, monitoring protocols, evaluation and feedback procedures, reporting formats to be used in the monitoring framework (in alignment with the monitoring system developed in the 'Living labs for biodiversity' project, see also Complementary Actions).
- Combining framework, indicators and protocols in a monitoring plan, in which responsible organisations / persons and schedule are outlined.

#### D.2 Monitoring

- Monitoring of impact of the project actions on Natura 2000 target species, habitats and supporting biodiversity at large (baseline and impact measurements)
- Feedback, on the basis of the monitoring, for improvement of IP activities and Complementary Actions.
- Annual consultation meeting with all organisations that have monitoring (/reporting) responsibilities in relation to Natura 2000 / nature areas.

### **E. Public awareness and dissemination actions**

#### E.1 Shared values and broad support:

*The partners participating in the LIFE IP have initiated their cooperation based on shared values and function as a core group. Acting as ambassadors for the Delta Plan philosophy to actively mobilise other stakeholders around the common vision. Thus creating a broadening momentum amongst stakeholders to participate and take action on improving biodiversity.*

Concrete implementation actions include:

- Developing an awareness campaign for regional government officials in charge of Natura 2000 areas across the Netherlands on how to achieve Natura 2000 goals through collaboration with land-users of surrounding areas and other stakeholders.
- Developing an awareness campaign for farmers, their suppliers and advisors on the value of biodiversity to enhance the support for the realization of Natura 2000 goals.
- Developing an awareness campaign for public and private land users on the value of biodiversity to enhance the support for the realization of Natura 2000 goals.

#### E.2 Replication and scaling-up of results and lessons learned

- Provide insight in the results of the implementation actions conducted in the selected areas, and ensure that these are communicated to relevant target audiences in an appealing manner (e.g. development of a toolbox), ensuring further scaling up and replication of results in other areas.
- This will be done at three levels: (1) exchange of knowledge and lessons learned between the selected areas, (2) knowledge transfer to areas that are comparable in terms of nature values and economic activity and (3) broad dissemination to stakeholders / decision makers at national and EU-level.

#### E.3 Dissemination actions

- Annual LIFE IP conferences including 'result workshops' and progress updates.
- Monthly newsletter for a broad audience.
- Communication multimedia campaign to engage large audiences on the value of biodiversity and the important role of land users in biodiversity restoration.
- Setting up local stakeholder platforms: bringing together stakeholder groups to foster an integrated approach at landscape scale. Important elements of these stakeholder



platforms are to create awareness and understanding for each other's objectives, finding synergies and learning from previous experiences.

- Setting up a national stakeholder platform to ensure knowledge exchange between the local platforms, and consolidation of lessons learned – used as input for actions A.2/A.3.

#### E.4 Networking and knowledge exchange with other projects

- This action will include intensive cooperation and knowledge exchange with the ongoing LIFE15 IPE NL016 Delta Nature, which focuses on wet Natura 2000 areas.
- Cooperation with relevant LIFE IP's that are currently under development, including an IP on the topic 'Sustainable conservation of the Black-tailed Godwit in meadow bird core areas' (Niedersachsen, Germany), and the IP that is being developed by the Netherlands Ministry of I&W on climate change adaptation LIFE IPC NL-NASCELLERATE;
- Cooperation with relevant 'traditional' LIFE projects, including LIFE17 CCA/NL/093 Farming the Future – Building Rural Networks for Climate-Adaptive Agriculture.
- Identifying other projects in the EU working on similar topics, establishing contacts and setting up a knowledge exchange programme.

### **F. Project management and monitoring of project progress**

#### F.1 Overall coordination and knowledge exchange

- A management structure will be set up including an overall project management team and dedicated project teams, responsible for the implementation of specific actions of the LIFE IP, composed of representatives of the relevant project partners. Activities will include the organisation of regular project meetings to discuss progress, ensure coordination between the aforementioned actions and to take corrective measures where necessary in case actions are not leading to the expected results. This action also includes evaluating overall progress at the end of each phase of the project and using the outcome as input to plan the activities for the next phase in detail.
- Connecting with and supporting project management of individual regional action programmes.

#### F.2 Monitoring progress of the project actions and reporting to the EU

- A management structure will be set up allowing the monitoring of progress, facilitating the above coordination process and providing input at a broader level for reporting to the EU. Detailed progress updates for these reports will be provided by the person in charge of the respective action.
- Annual evaluation of regional and local initiatives, living labs and projects of research institutes.

#### F.3 After-LIFE plan

At the end of the project, a plan will be authored describing which actions will be undertaken after the end-date to achieve full implementation of the PAF.

Complementary actions:

*Groene Cirkels*: development of new business models fostering biodiversity.

*Interbestuurlijk Programma*: development of area-specific approaches concerning vital rural areas in close cooperation between all governmental bodies involved.

*Uitvoeringsagenda Kringlooplandbouw*: broad range of measures to close nutrients, material, energy and water cycles, to improve soil quality and prevent emissions from agriculture.

*POP*: financing of rural development projects contributing to nature / biodiversity objectives.

*EARDF*: ANLb financing for farming practices contributing to nature / biodiversity objectives.

*Living Labs for Biodiversity*: development of a monitoring protocol to measure biodiversity.

*Regio Deal Natuurinclusieve Landbouw*: replication of the approach in other areas.

At a later stage - *Klimaatakkoord*: 'peatland meadows': adaptation of water management; 'Extensification of dairy farming Natura 2000 areas': restructuring of agricultural activity around Natura 2000 area.

#### 4. Expected results (main outputs and achievements, qualitative and quantitative):

Linked to Actions of LIFE IP (short and long term):

- A self-sustaining approach has been developed for the integrated management of Natura 2000 sites and surrounding areas, which is broadly supported and jointly implemented by all land-users and relevant other stakeholders.
- This approach has successfully been demonstrated in a number of concrete implementation actions, applying an area specific approach based on a stress and opportunities test in each Natura 2000 site.
- A model and best practices showing how conservation in N2000 sites can be integrated in land-use surrounding these sites to minimize negative externalities that can inspire conservation action in other densely populated parts of Europe.
- As a result of the above: crucial contributions to the implementation of the Netherlands' PAF with regard to restoring biodiversity in terrestrial Natura 2000 sites (see also section 6 below).

Linked to complementary actions (short and long term):

*Groene Cirkels*: replicable business models with a positive impact on nature and biodiversity.

*Interbestuurlijk Programma*: model for area-specific governmental cooperation will enhance actions to restore biodiversity.

*Uitvoeringsagenda Kringlooplandbouw*: improvement of water and soil quality.

*Living Labs for Biodiversity*: improved monitoring of biodiversity and hence improved, more targeted action to improve biodiversity at the level of landscapes, habitats and species.

*Regio Deal Natuurinclusieve Landbouw*: replicable approach for 'nature-inclusive farming'.

(*Klimaatakkoord*: 'peatland meadows': improved water management preventing methane emissions and fostering biodiversity; 'Extensification of dairy farming Natura 2000 areas': drastically reduced nitrogen deposits in Natura 2000 areas.

#### 5. Expected contribution of the project to the implementation of the target plan/strategy

LIFE IP:

Table 2 Expected contribution of LIFE IP to the current PAF

PAF priority	Expected contribution LIFE IP
I. More robust and resilient N2000 areas	<b>High</b> – the LIFE IP aims at restoring biodiversity and will as a consequence result in more robust, climate resilient nature
II. Strengthen N2000 species within and outside of N2000 areas	<b>Very high</b> – the LIFE IP focuses on developing an integrated approach for the management of N2000 sites and surrounding areas.
III. Agricultural nature management in and around N2000 areas	<b>Very high</b> – the LIFE IP is targeted at intensive cooperation with agricultural- and other land users in order alleviate current pressures on N2000 areas
IV. Natural entrepreneurship	<b>Very high</b> – development of business models aimed at improving biodiversity is a key element of the LIFE IP
V. Conducting studies / stakeholder processes management plan marine areas	<b>Medium</b> – the LIFE IP focuses on terrestrial N2000 sites, however a positive impact and replication possibilities are expected on other areas
VI. Implementing N2000 in conjunction with water safety / quality, freshwater provision and climate resilience	<b>Medium</b> – hydrology and water quality are key aspects that are to be addressed in the area specific actions of the LIFE IP, there is a strong link between increased biodiversity and climate resilience.

The PAF for the period 2021-2027 is built around the same priorities, with an increased focus on external pressures on Natura 2000 areas, in particular nitrogen deposition.

Complementary actions:

*Groene Cirkels*: contributes mainly to priority IV; *Interbestuurlijk Programma*: expected positive impacts on all priorities through better alignment; *Uitvoeringsagenda Kringlooplandbouw* contributes mainly to II, III and VI; *Living Labs for Biodiversity*: contributes mainly to priority I, II and III; *Regio Deal Natuurinclusieve Landbouw*: contributes mainly to priority III, *Klimaatakkoord*: contributes mainly to priority VI.

## **6. Main stakeholders involved in the project:**

Involving all stakeholders with an interest in the management of Natura 2000 sites and adjacent areas is of vital importance to achieving the objectives of this Integrated Project. Adaptations to the management of both the terrestrial Natura 2000 sites and surrounding areas are required and need to be well coordinated. Stakeholders to be involved may vary between sites, depending on the organisation managing the site and the current land use of the surroundings – as far as they affect the site. In most cases however, cooperation with (local) farmers organisations is likely to be of importance, in addition cooperation with representatives of other economic interests (e.g. recreation) may be required.

Main stakeholders include:

- Provinces: the governmental bodies with the overall responsibility for Natura 2000 implementation (represented in the IP by the Provinces of Zuid-Holland, Noord-Brabant, Limburg, Friesland and Gelderland, other provinces are contacted and will be actively engaged at a later stage – phase 2 and 3 of the project).
- Ministry of LNV: responsible for the PAF / national nature policy.
- Agriculture sector: individual companies, cooperatives and associations are vital cooperation partners to implement management measures with a positive impact on biodiversity (represented in the IP by LTO - Dutch Organisation for Agriculture and Horticulture and BoerenNatuur, and Rabobank as a co-financer. Other important stakeholders include Agrifirm and Sustainable Dairy Chain).
- Nature conservation organisations: responsible for implementation of management measures in Natura 2000 areas and adjacent areas in cooperation with other relevant land users (all main organisations are represented in the IP: Staatsbosbeheer, Natuurmonumenten and Vogelbescherming, Landschappen NL and Nature and Environment Federations as part of Deltaplan, and WNF as co-financer).
- Knowledge institutes: capable of generating the ecological, economic and social sciences knowledge needed to support and implement the LIFE IP, and to monitor and evaluate the project (represented in the IP are the universities of Wageningen, Groningen, Nijmegen and Utrecht, Louis Bolk Institute, Netherlands Institute for Ecological Research, Naturalis).
- Ministry of Infrastructure and Water Management - Rijkswaterstaat (MinlenW): responsible for developing water related Natura 2000 management plans (thereby providing a strong connection to the ongoing LIFE15 IPE NL016 Delta Nature), and is in addition responsible for the management of embankments, road-, canal- and riversides which form important connections as part of the Netherlands' National Nature Network (NNN).

## **7. Long term sustainability (including capacity building)**

The project is aimed to lead to a self-sustaining system in which improved coordination and cooperation between actors active in and around Natura 2000 sites, including nature conservation organisations, agriculture and other sectors forms an integrated part of the approach of the management of these areas. The main driver for long-term sustainability is the creation of business models that are beneficial for all stakeholders with an interest in a

certain area. By creating business models that promote improved biodiversity, stakeholders will be able to structurally combine their economic interests with management measures that are fostering Natura 2000 implementation.

## 8. Expected major constraints and risks

Table 3 Anticipated risks and related mitigation measures

Risk	Likelihood	Impact	Mitigation measure
<i>IP itself</i>			
Implemented measures have lower impact on biodiversity	Medium	High	The approach based on indicator species provides an 'early warning system' that enables refining/redirecting activities within the timeframe of the LIFE IP, with a view to enhancing biodiversity impacts.
Alignment of relevant governmental bodies/levels takes more time than foreseen.	Medium	Medium-high	As part of developing the LIFE IP, a clear commitment and task/responsibility alignment between relevant governmental organisations is developed, resulting in a solid basis for cooperation and decision-making.
Interests of different stakeholders can not sufficiently be addressed simultaneously	Medium	Medium-high	The composition of the consortium is already proof of the willingness of the different stakeholders.
Stakeholders with economic interest have slower transitions	Medium	Medium-high	The goal of this project is to make the new business models attractive for all stakeholders. This will lower the risks involved with transitioning to a new business model and will thereby accelerate the transition.
Risks in planning, budget and definition of the actions	Medium	Low	A 6-month buffer period is already implemented and the LIFE IP approach is based upon a project cycle in which actions are evaluated after each 2.5 year period and a detailed planning for the next period is made.
Challenges with Dutch nitrogen emission policies	Medium	Low	Ensuring regular reporting on the progress of implementation, on the outcomes of the stakeholder consultations and on the arising problems to relevant management levels of public bodies and ministerial cabinets. A transparent flow of information will create the ownership needed to ensure continued support and financial commitment.
The management structure is not in all cases structurally applied	Low - medium	Medium	The approach includes development of new earning models for all land-users involved, thereby creating incentives for durable and structural implementation.
Licenses, permits, environmental impact assessment	Low	High	All the responsible authorities are partners and stakeholders in the project
Management structure is not supported by all stakeholders	Low	Medium-high	A solid basis for cooperation has been established as part of the Deltaplan Biodiversity recovery. This cooperation is further strengthened during the process of developing (and implementing) the LIFE IP)
Ongoing or planned development projects threatening actions	Low	Low	We are not aware of any (planned) interfering development projects

9. a) Is your project significantly climate related? Yes  No

b) Is your project significantly biodiversity-related? Yes  No

If you consider your project to be significantly climate or biodiversity-related (you marked 'yes'), please explain why:

There are important interrelations between biodiversity and climate related issues: as an example, vegetation with a high biodiversity is more climate resilient than vegetation with a low biodiversity, which tend to be more vulnerable to climate change related impacts such as drought and extreme temperatures / temperature changes. In addition, measures aimed at improving biodiversity generally have a positive impact on CO<sub>2</sub> capture. Another specific example is the improvement of water management in bog areas in cooperation with the agricultural sector, this generally enhances biodiversity and can prevent significant emissions of methane, which has a much larger climate change impact than carbon dioxide.

## GENERAL DESCRIPTION OF THE AREA(S) TARGETED BY THE PROJECT

### **Name(s)/Definition of the project area(s):**

This LIFE IP aims to improve biodiversity in all Natura 2000 areas in the Netherlands by targeting their surrounding regions and land users. The first phase focuses on 15 Natura 2000 sites in representative pilot areas.

### **Comments:**

In the first phase of the project concrete implementation actions will take place in 15 different Natura 2000 areas (see Table 4 below). This selection of Natura 2000 areas represents a broad variety of habitats, target species and external pressure factors. These areas will form the basis for the methodology development in the first phase of the project.

In the second phase the methodology will be scaled up to 29 Natura 2000 areas as part of action C1.7, bringing the total to 44 (see Table 5 on p.16). In the third phase the methodology will be scaled up and disseminated to all other Dutch Natura 2000 areas.

The impacts of adapting the management of these areas are expected to reach far beyond the targeted Natura 2000 sites and positively affect biodiversity in the Netherlands as a whole (PAF p.30). The integrated approach is aimed to be self-sustaining and replicable to other sites in the Netherlands and other EU countries.

The geographic areas selected for this LIFE IP are partly linked to the Interbestuurlijk Programma (IBP) (intergovernmental programme) that has recently been launched in the Netherlands, in particular the pilot areas 'Vitaal Platteland' (healthy countryside). The IBP aims to improve coordination between different governmental bodies (national government, provinces, municipalities and water boards) and involves cooperation with the agricultural sector and other rural land users, which are key success factors for the proposed LIFE IP. The geographic areas selected for this LIFE IP (see also action C.1) are therefore linked to IBP pilot areas.

*Table 4 The geographical focus in the first phase (actions C1.1 to C1.6) of the LIFE IP consists of 15 Natura 2000 areas*

<b>Action</b>	<b>Natura 2000 area</b>	<b>IBP-area</b>	<b>Managers and agricultural collectives</b>	<b>Habitats</b>
C1.1	Province of Limburg: 153 Bunder- en Elsloërbos, 157 Geuldal	Heuvel- land	SBB, individuals, NM, Limburgs Landschap, Cooperatie Natuurrijk Limburg	Grasslands, peat and forests (H6110, H6130, H6210, H6230, H7220, H7230, H9110, H9120, H9160, H91E0)
C1.2	Province of Noord-Brabant 129 Ulvenhoutsebos 130 Langstraat 131 Loonse en Drunense Duinen & Leemkuilen 132 Vlijmens Ven, Moerputten & Bossche Broek 133 Kampina & Oisterwijkse Vennen 134 Regte Heide en Riels Laag 135 kempenland-West	Van Gogh Nationa l Park	Natuurmonumenten, Brabants landschap, individuals, Collectief Midden- Brabant/Duinboeren	Heather and scrubs, freshwater habitats, grasslands and forests (H2310, H2330, H3130, H4010, H4030, H6410, H9160, H9190, H91E0)
C1.3	Province of Gelderland 58 Brummen	Food Valley	NM, Cooperatief Agrarisch collectief Veluwe UA	Freshwater habitats, heather and scrubs, grasslands, peat and forests (H3130, H4010, H6230, H6410, H7150, H7230, H9120, H9160, H91E0)
C1.4	Province of Gelderland 38 Rijntakken	N/A	Waterschap Vallei en Veluwe, Gemeente Hatterm; Gemeente Heerde; RWS, Stichting Geldersch Landschap en Kasteelen. Agrarisch collectief Veluwe	Rivers and freshwater habitats, grasslands (H3150, H6120, H6510, H91F0)
C1.5	Province of Friesland: 6 Schiermonnikoog Dunes, 4 Terschelling Dunes, 5 Ameland Dunes	N/A	NMM, RWS, individuals, ANV Waddenvogels	Dunes (H2120, H2130, H2140, H2170, H2180A, H2190, H6230, H6410)
C1.6	Province of Zuid-Holland 107 Donkse Laagten	Hol-Ut Veen- weiden	SBB, individuals, Collectief Alblasserwaard Vijfheerenlanden	Grasslands and peat (H6410)

*Table 5 Geographical focus in the second phase (action C1.7) of the LIFE IP is expanded to 29 additional Natura 2000 sites, making a total of 44. The table also includes phase 1 areas (in italics).*

<b>Prov.</b>	<b>Natura 2000 area</b>	<b>IBP-area</b>	<b>Habitats</b>
LI	<i>153 Bunder- en Elslöerbos</i> <i>157 Geuldal</i>	Heuvelland	Grasslands, peats and forests (H6110, H6130, H6210, H6230, H7220, H7230, H9110, H9120, H9160, H91E0)
NB	<i>129 Ulvenhoutsebos</i> <i>130 Langstraat</i> <i>131 Loonse en Drunense Duinen...</i> <i>132 Vlijmens Ven, Moerputten...</i> <i>133 Kampina &amp; Oisterwijkse Vennen</i> <i>134 Regte Heide en Riels Laag</i> <i>135 Kempenland-West</i>	Van Gogh National Park	Heather and scrubs, freshwater habitats, grasslands, peats and forests (H2310, H3110, H3130, H3160, H4010, H4030, H6410, H7150, H7210, H91E0)
NB, LI	136 Leenderbos, Groote Heide 137 Strabrechtse Heide en Beuven 138 Weerter- en Budelerbergen 139 Deurnsche Peel & Mariapeel 140 Groote Peel 141 Oeffelter Meent 142 Sint-Jansberg 143 Zeldersche Driessen 144 Boschhuizerbergen 145 Maasduinen 146 Sarsven en De Banen 147 Leudal 148 Swalmdal	Zuid-oostelijke Zandgronden	Heather and scrubs, freshwater habitats (H2310, H3110, H3130)
GD	<i>57 Veluwe</i> <i>58 Brummen</i>	Food Valley	Heather and scrubs, freshwater habitats, grasslands, peats and forests (H2310, H2330, H3130, H3160, H3260, H4010, H4030, H5130, H6230, H6410, H7110, H7140A, H7150, H7210, H7230, H9120, H9160, H9190, H91E0)
GD	60 Stelkampsveld 61 Korenburgerveen 62 Willinks Weust 63 Bekendelle 64 Wooldse Veen	Achterhoek	Freshwater habitats, heather and scrubs, grasslands, peats and forests (H3130, H4010, H5130, H6230, H6410, H7120, H7210, H9120, H9160, H91D0, H91E0)
GD	<i>38 Rijntakken</i>	N/A	Rivers and freshwater habitats, grasslands
FR	9 Groote Wielen 12 Sneekermeergebied 14 De Deelen 15 Van Oordt's Mersken 16 Wijnjeterper Schar 17 Bakkeveense Duinen 18 Rottige Meenthe en brandermeer 23 Fochtelooerveen	Fries Veenweidegebied	Freshwater habitats, heather and scrubs, grasslands, peats and forests (H3130, H3150, H4010, H6410, H7140, H7210, H91D0)
FR	<i>6 Schiermonnikoog Dunes,</i> <i>4 Terschelling Dunes,</i> <i>5 Ameland Dunes</i>	N/A	Dunes (H2120, H2130, H2140, H2170, H2180A, H2190, H6230, H6410)
ZH, UT	104 Broekvelden, Vetterbroek ... <i>107 Donkse Laagten (ZH)</i>	Veenweiden	Grasslands (H6410, H6430, H6510)
ZH, ZE	110 Oudeland van Strijen (ZH)	ZW Delta	Grasslands (Only bird guidelines)

In the following paragraphs, a short description is provided of the 15 Natura 2000 areas targeted in phase 1 of the project:



### Province of Limburg

- Main pressure factors: nitrogen run-off has an impact on various BHD target species, including *Salamandra ssp. terrestris*.
- PAF landscape types: E2.6 Forest areas, E2.3 Fens and other water habitats

#### *Bunder- en Elslooërbos (153)*

The Natura 2000 area Bunderbos and Elslooërbos comprises a series of forests on the steep, eastern slope of the Meuse valley between Elsloo and Bunde, namely the Hoge and Lage Bos at Elsloo, the Geulderbos at Geulle and the Armenbos and the Bunderbos at Bunde. The northern forests contain numerous limestone springs and brooks and are considered to be the most beautiful spring forests in the Netherlands. The area is also home to the only example of limestone tuff springs in our country.

#### *Geuldal (157)*

The Geuldal is one of the largest Natura 2000 areas in our country, covering an area of almost 2500 hectares. The area is characterised large differences in altitude for Dutch standards and is therefore particularly rich in gradients. In the valley there are relatively nutrient-rich and wet to humid soils with an alternation of meadows and various forest communities. The higher, dry slopes are more calcareous and nutrient-poor with occasional limestone outcropping (in quarries). The grasslands and forests that are found here include orchid-rich slope forests, limestone grasslands, heathery grasslands and rocky edge vegetation. In the southeast, the plateau is home to extensive beech forests of which the Veldbies-Beukenbossen (*Luzulo-Fagetum*) are, by Dutch standards, special. The Geuldal is important for the *Myotis emarginatus* (H1321) and *Myotis myotis* (H1324), as well as the *Lucanus cervus* (H1083), *Bombina variegata* (H1193) and the *Callimorpha quadripunctaria* (H1078, priority species).

### Province of Noord-Brabant

- Main pressure factors: Nitrogen deposition leads to acidification and unbalance in available nutrients
- PAF landscape types: E2.2 heath scrubs, dry sandy areas; E.2.2. Heathlands and shrubs; E.2.3. Bogs, mires, fens and other wetlands; E.2.4. Grasslands; E.2.5 Other agroecosystems (incl. croplands); E.2.6. Woodlands and forests; E.2.7. Rocky habitats, dunes & sparsely vegetated lands.

#### *Van Gogh National Park (129 - 135)*

This is the birthplace of the master painter Vincent van Gogh where he became obsessed with the countryside and peasant life.

- The Ulvenhoutse Bos (129) is one of the oldest forests in the Netherlands and consist of both Carr and oak-hornbeam forests. This diversity is a result of relief and the appearance of seep. The sizes of fields with wood anemone have declined over the last years. Moreover, the quality and size of some of the forest types are affected by eutrophication, acidification and desiccation.
- The Langstraat (130, H3130 and H6410) is an old ribbon farm landscape with long narrow parcels, bordered by alders, situated on the 'Naad van Brabant', where sandy soils and clay meet creating a special hydrological and geological situation, including seeps.
- The Loonse and Drunense Duinen (131) is a large area of inland dunes (H2330) overgrown with forest, but logging and overgrazing allowed the sand to drift again. The dunes are surrounded by extensive coniferous and oak forests, a brook valley with alluvial forests, marshes and fens.
- Vlijmens Ven, Moerputten & Bossche Broek (132) merge into the peat bog area of the 'Naad van Brabant'. Due to its location in this transitional zone, the area is home to base-loving water, marsh and grassland vegetation. The grasslands are the habitat of two very rare butterflies, the *Maculinea teleius* and the *Phengaris nausithous*.

- Kampina & Oisterwijkse Vennen (133) is an alternating semi-natural Kempens heath landscape, with dry and moist heathland vegetation, fields, meandering brooks, nutrient-poor fens and *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils. In the riparian zones of some fens there is still peat bog formation, in the south there are heath fields.
- Regte Heide en Riels Laag (134) is a high-altitude heathland with natural dystrophic lakes and ponds (H3160) that merge into a stream valley with oligo-mesotrophic waters and alluvial forests. The area suffers from desiccation. The inland dunes with open *Corynephorus* and *Agrostis* grasslands (H2330) are under pressure.
- Kempenland-West (135) consists of almost 2000 hectares of dry-, moist- and wet heathlands, oligo-mesotrophic waters, stream valleys and alluvial forest. Northern Atlantic wet heaths with *Erica tetralix* (H4010A), European dry heaths (H4030) and dry sand heaths with *Calluna* and *Genista* (H2310), are declining in surface and affected in their quality.

### Province of Gelderland

#### *Landgoederen Brummen (58)*

- Main pressure factors: desiccation / water table level, eutrophication
- PAF landscape types: E2.5 agricultural ecosystems

Landgoederen Brummen consists of the subareas Leusveld, Landgoed Voorstonden and the Empesche en Tondensche Heide. These areas on the transition from the ice pushed ridge of the Veluwe to the IJssel Valley owe their special ecological quality to seepage and spring water. In the past, there has been an extensive presence of *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinia caerulea*, H6410) here. Although the influence of groundwater has been greatly reduced, the special geohydrological conditions, in combination with the management of the area, have ensured that the area still forms a refugium for plants and animals that have disappeared elsewhere. An extension of their suitable habitat is foreseen as part of the planned regional restoration measures. One of the most important species here is the *Triturus cristatus* (H1166), which finds a suitable habitat in the estates in the area and on the banks of the IJssel valley.

#### *Rijntakken (38)*

- PAF landscape types: E2.8 Fresh water habitats (rivers and lakes)

#### Sub-areas:

- Uiterwaarden IJssel: the system of the river IJssel, the adjoining bank walls and the floodplains. The IJssel is a branch of the Rhine and runs from Arnhem to the IJsselmeer. The landscape was created at a time when the river provided a much larger part of the water discharge and the estuary was still a real delta.
- Uiterwaarden Neder-Rijn: the floodplains of the Lower Rhine between Heteren and Wijk bij Duurstede. The river forms a dynamic system, an interplay between natural processes and human intervention.
- Gelderse Poort: Beginning of the Rhine delta, the Rhine flows here through a moraine into the Netherlands. It is a river landscape with many gradients between the German border and the cities of Arnhem and Nijmegen.
- Waal: the winter bed of the Waal and thus all floodplain areas on the north and south banks of the Waal from Nijmegen to Zaltbommel. The river forms a dynamic system, an interplay between natural processes and human intervention.

### Province of Fryslân

- Main pressure factors: eutrophication, adjacent land-use unfavourable for pasture birds, pressure from tourism and invasive species such as *Crassula helmsii* (Wadden Islands)
- PAF landscape types: E2.1 Marine and coastal habitats

*The Wadden: Terschelling (4), Ameland (5) and Schiermonnikoog dunes (6)*

In short, the Wadden Islands Terschelling, Ameland and Schiermonnikoog all consist of beaches, a dune area, a polder with residential areas and salt marshes. The dune areas form a varied landscape with dunes, dune valleys, dune heath and forests. The dunes of Terschelling are one of the oldest in the Wadden area and vary greatly in height. The dunes of Ameland are relatively flatter and form large continuous sloping dunes. The dunes of Schiermonnikoog are the most calcareous in the Wadden area and this can also be seen in the vegetation in the dunes and the forests with for example many hawthorns. Dunes contain a variety of habitat types such as calcareous dune valleys with fixed coastal dunes with herbaceous vegetation (H2130), shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes", H2120) and humid dune slacks (H2190). Also, local dune *Molinia* meadows (drier and more acidic forms of *Molinia* meadows H6410, at Hertenbos and Kapenglop) and heirloom grasslands (with matgrass, etc.) can be found in the area. In the past, coniferous forests were planted in the western and central part. The forest area naturally expanded to a considerable area (deciduous forest). Some parts are a rare type of forest part of habitat type wooded dunes (H2180). In addition, characteristic breeding birds have been identified as target species such as the *Circus cyaneus*, *Asio flammeus* and *Oenanthe oenanthe*.

Province of Zuid-Holland

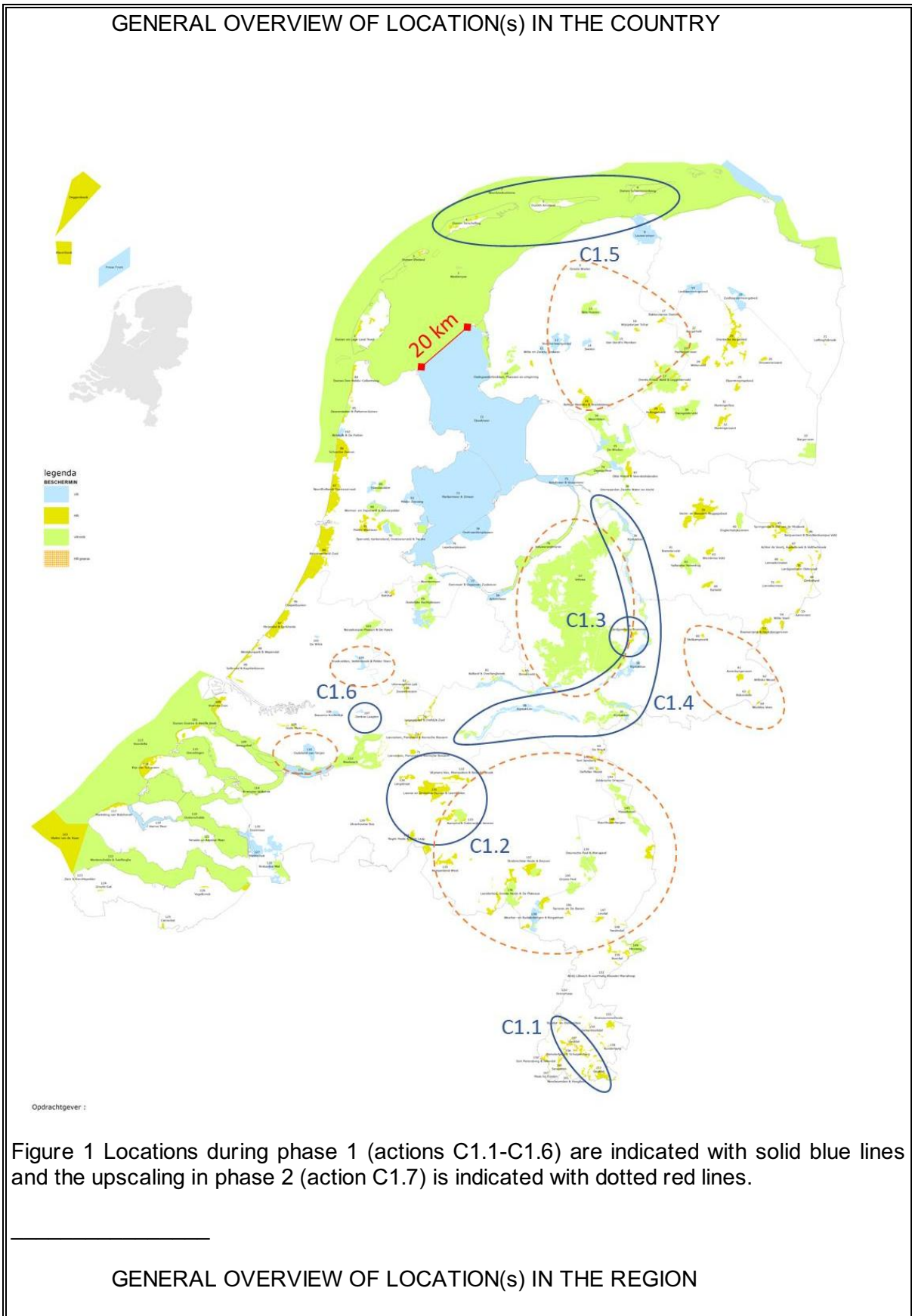
- Main pressure factors: eutrophication, pressure from adjacent land-use, challenge of creating alternative business models
- PAF landscape types: E2.4 grasslands, E2.3 Fens and other water areas

*Donkse Laagten (107)*

The Donkse Laagten area consists of *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinia caerulea*, H6410), located in the Langenbroek polder and in a part of the Kortenbroek polder, in the vicinity of a rive dune (donk). The grasslands are intersected by a polder canal (Grote of Achterwaterschap). The site is of importance as a nesting area for many bird species including *Anas clypeata* (A056), *Limosa limosa* (A156) and *Tringa totanus* (A162). As foraging and sleeping area it is of importance for *Anser albifrons* (A041).

MAPS OF THE GENERAL LOCATION OF THE PROJECT AREAS

GENERAL OVERVIEW OF LOCATION(S) IN THE COUNTRY



## DESCRIPTION OF THE STRATEGY FOR THE IMPLEMENTATION OF THE OVERALL PLAN

In the past months nature policy has become a prominent topic on the political agenda in Netherlands, after it became broadly known that the Netherlands has so far failed to implement effective policies, regulations and measures to protect its nature areas. In fact, it has become evident that under prevailing regulations not enough effort has been made to safeguard (let alone improve) the quality and conservation status of Dutch Natura 2000 areas<sup>2</sup>.

The Raad van State (Council of State) in the Netherlands has ruled in May 2019 that the national programme restricting nitrogen emissions ('Programma Aanpak Stikstof') is contrary to EU-regulations (since future reductions in nitrogen emissions were already counted in new permits) and can no longer be applied as a basis to approve economic activity in rural areas if there is a chance that it will cause nitrogen emissions. As a consequence, the approval of approximately 18.000 construction and agricultural projects were put on hold, leading to massive protests from the respective sectors. The urgency of reducing pressure factors on Natura 2000 areas has hence gained considerable momentum. The Netherlands' government has proposed a range of short-term measures that aim to alleviate the pressure on Natura 2000 areas, including reduced speed limits on highways and buying out farmers that voluntary want to stop their activities.

The partners and stakeholders of the LIFE IP aim to face the challenge of providing sustainable long-term solutions for this urgent issue by developing cooperation and business models that improve the conservation status of Natura 2000 habitats and species and are beneficial for all land users involved and support social cohesion and sustainable economic development. The LIFE IP builds further upon an already existing cooperation between a broad societal coalition of nature, agricultural, science and business organisations that was initiated in 2018 to restore biodiversity in the Netherlands ('Delta Plan Biodiversity Recovery'<sup>3</sup>). This cooperation has become an important focal point in the search for solutions for the apparent impasse in policies affecting nature and rural areas.

The LIFE IP will develop and implement a common approach for management of Natura 2000 sites and the surrounding land uses affecting these sites, focusing on restoring biodiversity. Apart from reductions of nitrogen emissions (a prominent pressure factor in many Natura 2000 sites), also hydrological changes, improving soil quality and reductions of use of agrochemicals are required. This approach entails close cooperation with land users of adjacent areas, pre-dominantly (but not exclusively) the agricultural sector. The integrated approach is centred on the recognition that nature conservation must be based on the creation of mutual benefits and new business models, ensuring that enhancing biodiversity and transitioning towards new agricultural business models become a leading principle in developing management plans for rural areas.

In this IP the Netherlands' government will implement the PAF in close cooperation with the partners of the Delta Plan Biodiversity Recovery. The approach is based on the five success factors defined for the Delta Plan Biodiversity Recovery (pp.10-11), which are briefly described below:

<sup>2</sup> <https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/state-of-nature-2020>

<sup>3</sup> <https://www.samenvoorbiodiversiteit.nl>

1. Create shared values among all stakeholders with regard to biodiversity recovery:  
The partners participating in the LIFE IP have initiated their cooperation based on shared values and function as a core group. Acting as ambassadors for the Delta Plan philosophy to actively mobilise other stakeholders around the common vision: "In 2030, the green spaces of the Netherlands support a rich biodiversity of soil life, plants, insects and farmland birds. The landscape sparkles with diversity and people enjoy the quality of life, work and recreation. Regional landscapes are recognizable by their vegetation and people identify with and are proud of their region".
2. Optimise collaboration on the regional landscape level with a view to aligning management practices of Natura 2000 sites and adjacent areas:  
Biodiversity benefits most if all land users in a region collaborate and align their management practices. By focusing on cohesion within a landscape, fragmentation of efforts is prevented, and synergies can be created. As a result, biodiversity will successfully increase at a regional level, while efforts will gradually be scaled up to a national level.
3. Develop business models that turn protection and recovery of biodiversity from a cost item into a source of income for all land users involved:  
Creating proper incentives for land users will accelerate the increase of biodiversity. This can be achieved by developing innovative business models, e.g. through result-based payments or rebates for strengthening biodiversity, thus transforming the protection and recovery of biodiversity from a cost item to a source of income. Results are measured with an integrated set of key performance indicators (KPIs) on biodiversity-based performance within the span of control of land users. This common set of KPIs allows for benefits and rewards from a variety of stakeholders to be stacked, further incentivizing positive action by land users while keeping administrative burden at a minimum. In addition, public funds available for agriculture and rural development need to be geared towards contributing (also) to nature development.  
  
Business models are in this respect thus to be seen in a broad sense, involving a range of activities and measures that contribute to profitability / cost reduction of protection and recovery of biodiversity. The stress test that will be conducted (see also Part C, action A.1) will identify pressure factors for biodiversity that are to be addressed specifically for each Natura 2000 area. The costs of the activities addressing these pressure factors need to be incorporated in sustainable business models of the land users involved, in order to assure that these activities will continue in a self-sufficient manner after the end of the project.  
Measures to reduce costs and/or create benefits for activities supporting biodiversity may include charging lower interest rates on loans, lower rental fees on agricultural land leases (that are charged by e.g. nature conservation organizations, investment firms and municipalities), lower administrative burden related to permit processes, tax instruments and subsidies based on the biodiversity performance of land users. Specific measures will vary per area depending on the pressure factors to be addressed and land users and other stakeholders involved.
4. Ensure that relevant laws and regulations are consistent and in support of contributing to biodiversity;  
Optimising the regulatory framework requires a shift from specific measures to overarching goals. The framework needs to be fully coherent and integrated across governing bodies and governance levels in full width of the framework. Thus creating a regulatory framework that rewards innovators and closes loopholes for those who seek not to comply. This is not only about nature protection but also about regulations promoting circular agriculture and other biodiversity promoting practices from water boards and other local governments.

5. Successfully address gaps in knowledge of biodiversity, how it functions and how to restore and strengthen it:

By fully integrating existing knowledge and through continuous learning, the 'learning by doing' principle is embodied. The LIFE IP will make full use of available expertise gathered in numerous ongoing and previous initiatives and developing living labs, knowledge is actively gathered and shared. Thus gaps in current knowledge are gradually filled, whilst continuing to restore and strengthen biodiversity.

Monitoring (see also Part C, D-actions) of results and learning by doing will be an intrinsic part of the approach.

**Short term (phase 1, first 2 years):**

In the first 2 years of the project, the methodology will be developed and tested in the first 7 locations as described in section B2a. In this phase, measures will be implemented in a diverse selection of Natura 2000-sites (in terms of types of habitats, pressure factors, adjacent land use and related stakeholders) thereby covering all elements required to develop an approach to eventually address all Natura 2000-sites in the Netherlands.

In the first (and second, see below) phase, the selected Natura 2000 sites are predominantly part of the pilot areas Vitaal Platteland of the Interbestuurlijk Programma (IBP). The IBP aims to improve coordination between different governmental bodies (national government, provinces, municipalities and water boards) and involves cooperation with the agricultural sector and other rural land users, which are key success factors for the proposed LIFE IP. The Natura 2000 sites selected in phase 1 (year 1-2) and 2 (see below) of the project are therefore linked to the IBP pilot areas. Exceptions are the pilots in the Wadden-area (the Islands of Terschelling, Ameland and Schiermonnikoog) and the Rijntakken, which are not part of an IBP Vitaal Platteland area. These pilots have been added to ensure all relevant types of habitats including coastal, marine and rivers/floodplain habitats are included in the LIFE IP.

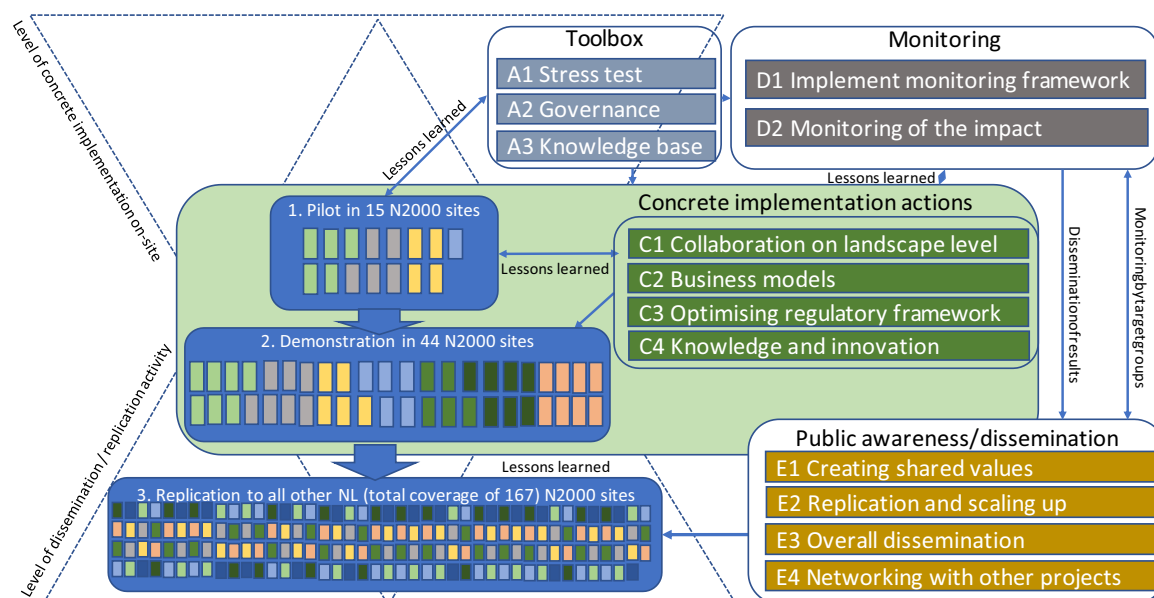


Figure 2: Overall approach and phasing of the LIFE IP All4Biodiversity.

The preparatory actions A.1, A.2 and A.3 provide a solid foundation and 'toolbox' for the pilots in the 15 Natura 2000 sites in phase 1. A key element of this toolbox is the stress test that will be conducted in each Natura 2000 site as part of the preparatory actions (Part C,

action A.1). The stress test aims to identify all relevant pressure factors for the particular Natura 2000 site and will form the basis of activities that will be conducted as part of the collaboration at the landscape level (Part C action C.1) and the development of business models in support of biodiversity (Part C action C.2). The second part of the toolbox (A.2) is the development of a governance structure enabling fruitful collaboration between all relevant stakeholders aimed at successfully addressing the identified pressure factors at the landscape level. The third and last element of the toolbox is the knowledge base, providing the scientific basis for the measures adopted at the landscape level (C.1). In addition to the development of business models supporting biodiversity, regulatory barriers and constraints may need to be addressed (Part C action C.3). In addition, specific knowledge sharing, and capacity building activities will be organised, and innovative methods and technologies will be developed and trialled (Part C action C.4).

The first phase of the project will comprise the development, testing, evaluation and refinement of the stress test as well as the concrete implementation of measures that are based on its outcome in the eight selected areas.

***Long term (phase 2 and 3):***

In the subsequent phases of the project, the methodology will first be expanded to 44 Natura 2000 areas in which the methodology developed during the pilot phase will be demonstrated. The additional sites will also be part of the IBP Vitaal Platteland pilot areas (phase 2, year 3 and 4 of the project).

In phase 3 (year 5-6), the methodology will be rolled out to all Natura 2000 sites in the Netherlands, by its incorporation in regular management planning cycles. The dissemination actions, in particular Action E.3 Replication and scaling up, will contribute to the implementation of the model in all 167 Dutch Natura 2000 sites. Good practices and lessons learned in the pilot sites will be made available, and the methodology developed in the LIFE IP will be actively promoted to form the basis of improvement of conservation status of habitats and species in all Natura 2000 areas.



## EU ADDED VALUE OF THE PROJECT AND ITS ACTIONS

### 1. Extent and quality of the contribution to the objectives of LIFE

This LIFE IP aims to implement the Netherlands' PAF by restoring and optimizing habitat specific biodiversity in Natura 2000 areas through relieving current threats and pressure factors related to land use of surrounding areas such as eutrophication, desiccation, acidification, pollution and fragmentation (see also PAF pp.17-18). These processes are particularly important in regions where the average size of conservation sites is small, such as in Europe where 77% of Nationally Protected Areas is smaller than 100ha (Gaston et al. 2008, EEA 2012), and surrounding land-use may therefore more strongly negatively affect conservation success in protected areas than in regions with large protected areas. Therefore it is essential that the surroundings are also targeted when aiming for the objectives of Natura 2000. To achieve this, an integrated approach will be developed for cooperation between managers of Natura 2000 areas and the users of surroundings such as the agricultural sector, public bodies responsible for infrastructure and other relevant land users.

The Netherlands has one of the highest population densities in Europe and agriculture is intensive. Many parts of Europe are moving in the same direction which makes nature conservation in these dense areas an urgent topic. The Netherlands can be a great testing ground in this regard.

The integrated approach will provide guidance and increase capacity for the implementation of Natura 2000 areas. The implementation will be strengthened thanks to the delivery of tools and demonstration of best practices. Capacity building within the beneficiary's organisations and other stakeholders will further boost the implementation of the PAF and as a result also the EU nature directives and objectives of LIFE+.

Also, tools will be developed such that integrated monitoring will become possible (actions D1 and D2). This will be based on Key Performance Indicators (KPIs) and will not only include the impacts on biodiversity but also impacts on governance and business models. Existing, ongoing monitoring systems and networks (as described in the PAF, chapter H) will be utilised as much as possible and will be coordinated by the Delta Plan Biodiversity Recovery. Where possible this will be complemented with citizen science monitoring networks, which are well developed in The Netherlands. In addition, we will connect with other LIFE IPs to learn from them and mutually set-up monitoring systems.

#### ***Contribution to other EU environmental policies***

##### EU Biodiversity Action Plan/Biodiversity strategy to 2020

This project contributes to the implementation of the Biodiversity Strategy, in particular to target 1 (implementation of the Birds and the Habitats Directives), target 2 (maintaining, enhancing and restoring the ecosystems and their services), target 3 (increasing the contribution of agriculture and forestry to maintaining and enhancing biodiversity) and target 6 (by 2020, the EU has stepped up its contribution to averting global biodiversity loss).

The following table provides insight in the foreseen contributions of the C-actions to the targets of the Biodiversity Strategy.

*Table 6 Expected contributions to the EU 2020 Biodiversity Strategy*

<b>Actions</b>	<b>Expected contributions to the EU 2020 Biodiversity Strategy</b>
<b>C.1</b>	<b>Collaboration on the regional landscape level</b>
	Action C.1 is the core of the project by implementing the results of actions C.2 and C.3. Species and habitats are protected (target 1) and ecosystems are restored (target 2) by reducing pressure factors of the surroundings of Natura 2000 areas. Cooperation between land users and other stakeholders will be key and site specific approaches will be developed with farmers and forestry practices (target 3). The goal is that the implemented measures are transferable to other areas and thereby helping to stop global biodiversity loss (target 6).
<b>C.2</b>	<b>Developing business models supporting biodiversity</b>
	Action C.2 will focus on developing business models for land users which support instead of degrade biodiversity. The protection and recovery of biodiversity can be transformed to a source of income with innovative earning models, e.g. result-based payments or rebates. Action C.2 will contribute primarily to target 3, but indirectly also to target 1, 2 and 6.
<b>C.3</b>	<b>Optimizing the regulatory framework</b>
	Optimizing the regulatory framework will focus on the surrounding land-users of Natura 2000 areas and therefor mainly contribute to target 3, more sustainable agriculture and forestry. Indirectly these measures will also contribute to target 1, 2 and 6.
<b>C.4</b>	<b>Knowledge, innovation and education</b>
	By fully integrating existing knowledge and through continuous learning, the 'learning by doing' principle is embodied. The LIFE IP will make full use of available expertise gathered in numerous ongoing and previous initiatives and developing living labs, knowledge is actively gathered and shared. This will be the basis for all actions and therefor indirectly contribute to targets 1, 2, 3 and 6.

### European Green Deal

The European Green Deal, which was launched in October 2019 stresses the importance of biodiversity: "Biodiversity conservation – an important concern for a majority of citizens – is a pressing challenge. The first global assessment of the state of nature, released by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in May 2019, points to an unprecedented and accelerating decline. It warns that human activity, responsible for significant alteration of 75 % of the land-based and about 66 % of the marine environment, is driving one million species to extinction. In October 2020, the conference of the parties to the UN Convention on Biological Diversity (including the EU) is expected to adopt the post-2020 global biodiversity framework, with conservation goals for the next decade. In this context, the Commission could put forward a successor to the EU biodiversity strategy, reflecting developments at international level."

### EU Strategy on Green Infrastructure - Enhancing Europe's Natural Capital)

Green Infrastructure is a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services. The Natura 2000 network constitutes the backbone of the EU green infrastructure.

This LIFE IP aims to restore and optimise habitat specific biodiversity in Natura 2000 areas through relieving current threats and pressure factors related to land use of surrounding areas (such as eutrophication, aridification, acidification, pollution and fragmentation, see also PAF pp.17-18), in cooperation with all land users and other relevant stakeholders. In doing so these actions will improve delivery of ecosystem services and therefore contribute

to the natural capital. Publicising the results of such activities will help to illustrate multi-functionality of natural areas and promote more actions for integrating nature conservation on a broader scale into land-use practices and measures thereby contributing to the Green Infrastructure strategy and enhancing our natural capital.

#### Water Framework Directive (WFD)

The Water Framework Directive commits EU member states to achieve good qualitative and quantitative status of all water bodies

This project contributes to various objectives of the WFD as included Natura 2000 sites have water dependent habitat types and species for which water quality and quantity issues have to be solved to improve their conservation status.

#### EU Nitrates directive (ND)

Consultation and cooperation with the agricultural sector directly contributes to the Nitrates Directive (1991), which aims to protect water quality across Europe by preventing nitrates from agricultural sources polluting ground and surface waters and by promoting the use of good farming practices.

#### EU Climate Adaptation and Mitigation Strategies

In this LIFE IP climate resilience will significantly be improved: as stressed inter alia in the EU Biodiversity strategy, only robust nature reserves will be able to cope with the added pressures posed by climate change. Healthy ecosystems can better mitigate floods, draughts, extreme temperatures and have a better performance in sequestering CO<sub>2</sub> and filtering the air.

#### EU 7th Environment Action Programme

The 7th Environment Action Programme (EAP) is guiding European environmental policy until 2020, but also includes a long-term vision until 2050. All contributions named above contribute to the related objectives integrated in the EU 7th Environment Action Programme. Especially on the objectives of the Biodiversity Strategy for 2020 and maintaining and managing our Natural Capital, improving implementation and governance, enhancing integrated and participatory approaches.

The Council called upon the Commission to come with a proposal for the 8<sup>th</sup> EAP early 2020. Among others the Council underlines the need for additional action to protect and restore biodiversity, and for ambitious biodiversity targets in the 8th EAP.

#### Common Agriculture Policy (CAP)

Over the years, the CAP has played an increasingly important role in maintaining and/or supporting the development of sustainable agriculture across the EU by promoting environmentally and climate friendly practices. Member states must allocate 30% of their direct payment allocation to this greening payment. Direct payments currently consist of 41 billion euros per year. This LIFE IP is contributing to the sustainability efforts of the CAP.

#### EU tourism Strategy

Attractive sites already have proven to be an important asset for promoting tourism. Public access, organisation of guided visits and information on recreational opportunities included in site description and plans will promote recreational and educational use, thereby also contributing to nearby hospitality and tourism sector and local socio-economy in general. This also helps in strengthening the awareness of the natural values of Natura 2000 and of the importance to maintain and manage these values sustainably. In this context the implementation of the IP also contributes to objectives of the EU Tourism Strategy.

#### Sustainable development goals ('SDGs')

The EU has committed to implement the SDGs both in its internal and external policies. In Figure 3 an indication is provided on which of the SDGs the project is expected to have a positive impact (marked with "+", while "=" means that no impact is expected).

Figure 3 Expected impact of this LIFE IP on the Sustainable Development Goals

## 2. Extent and quality of the mobilisation of other funds

For the following complementary actions the funds are mobilised in accordance with the requirements of the LIFE programme (signed A8-forms have been enclosed with the proposal):

- The initiative 'Groene Cirkel Kaas en Bodemdaling' in which the Province Zuid-Holland cooperates with the Water Board Rijnland, knowledge partners and the private sector to implement sustainable land use (Province Zuid-Holland, budget € 222.000,- (2019)).
- The Interbestuurlijk Programma IBP (Intergovernmental Programme) of the national government, provinces, municipalities and water boards to improve cooperation on large societal challenges such as climate adaptation (in particular the pilot areas 'Vitaal Platteland' / 'Vital rural areas'). National government, budget: 40 M€).
- Uitvoeringsagenda Kringlooplandbouw (Circular Agriculture). (Ministry of LNV, 135 M€).
- Living Labs for Biodiversity, in which land users in 3 regions will cooperate to restore biodiversity and in which progress will be monitored by a scientific monitoring protocol (Dutch Research Council NWO and LNV, 4.5 M€).
- European Rural Development Fund, in particular relevant initiatives financed under the POP-programme sustainable innovation in agriculture (7 M€, for the Province Zuid-Holland)
- European Agricultural Fund for Rural Development, in particular the 'Agrarisch Natuur- en Landschapsbeheer' programme (ANLb, 23.7 M€ Province Zuid-Holland).
- Regio Deal Natuurinclusieve Landbouw (financing from the national government to improve the balance between agriculture, nature and environment in the northern provinces Drenthe, Groningen and Friesland). (LNV, 10 M€).

In addition, the LIFE IP will explore current relevant INTERREG projects to exchange knowledge and lessons learned in both ways. Three examples are:

- The Carbon Farming project in the Netherlands (2018-2021) about carbon sequestration in healthy soils.
- More nature for stronger fruit (*Meer natuur voor pittig fruit*) in Belgium and the Netherlands (2016-2019) about increasing biodiversity in fruit orchards.
- PARTRIDGE (Protecting the Area's Resources Through Researched Innovative Demonstration of Good Examples) in the UK, Germany, Belgium and the Netherlands (2016-2023) about increasing biodiversity and ecosystem services by 30%.

Finally, a number of research projects that are submitted or already funded under the Horizon 2020 are expected to be of great value for the project, in particular:

- The recently approved 'Showcase' project (H2020-SFS-2019-2 "Biodiversity in action: across farmland and the value chain" with a budget of € 8 million), coordinated by Wageningen University, which will study incentives that effectively motivate farmers to integrate biodiversity into daily farm management, and aims to produce evidence that biodiversity-based approaches lead to benefits for farmers in terms of key variables (yield, profit).
- SAFEGUARD is a proposal that has been submitted by Wageningen University to the second stage of the H2020 call 'Biodiversity in Action - part B (SFS-01-2018-2019-2020)' and aims to showcase synergies between agriculture, biodiversity and ecosystem services to help farmers capitalising on native biodiversity. If approved, the Dutch part of the project will be carried out in and around the Geuldal Natura 2000 site and contribute to the objectives of this LIFE IP project, in particular by addressing some of the key knowledge gaps on the ecological benefits of conservation management on farmland near Natura 2000 sites and with respect to the development of biodiversity-based business models.

Horizon Europe will succeed Horizon 2020 with a proposed budget of 94 billion Euro's for the period 2021-2027. High chances for mobilisation of funds (especially for target 2 and 3 of EU Biodiversity Strategy) is in the cluster 'Food, bioeconomy, natural resources, agriculture and environment' which will advance knowledge, expand capacities and deliver innovative solutions to accelerate the transition towards the sustainable management of natural resources (such as biodiversity, water and soils).

Actions will be coordinated, and lessons learned exchanged with relevant LIFE projects as described in action E.4.

### 3. Quality of multi-purpose mechanism, synergies and integration

Collateral benefits of Natura 2000 areas play a central role in this LIFE IP. Coherent regulations integrating targets for climate, environment and biodiversity are not in place yet – this sometimes leads to counteracting measures. Therefore optimizing the regulatory framework (action C.3) is a crucial part of this project. An integrated approach will be developed for cooperation between managers of Natura 2000 areas and the users of surroundings such as the agricultural sector, public bodies responsible for infrastructure and other relevant land users.

The integrated approach is centred on the recognition that nature conservation must be based on **the creation of mutual benefits and new business models** (action C.2), ensuring that enhancing biodiversity becomes a leading principle in developing management plans for rural areas.

An area specific approach will be developed, that is primarily aimed at achievement of nature related targets in and around N2000 sites, however this can only be successful if an integrated approach is applied that contributes to other policy goals simultaneously. An important factor is the area specific approach that needs to be developed in view of the reduction of nitrogen depositions, however measures at the area level will also need to have a positive impact on other challenges such as reduction of greenhouse gases, improvement of water- and air quality, reducing desiccation and climate adaptation. In the summer of 2019, the Dutch government launched the National Climate Agreement. The important contribution of agriculture and land-use to **climate adaptation and mitigation** was acknowledged because 100 million euros were specifically reserved to strengthen the nature value around Natura 2000 areas. Another 600 million euros were reserved for general measures to reduce nitrogen and CO2 emissions.

Attractive sites already have proven to be an important asset for promoting **tourism**. Public access, organisation of guided visits and information on recreational opportunities included in site description and plans will promote recreational and educational use, thereby also contributing to nearby hospitality and tourism sector and local socio-economy in general. This also helps in strengthening the awareness of the natural values of Natura 2000 and of the importance to maintain and manage these values sustainably.

#### **4. Replicability and transferability**

Adapting the management of the areas in this IP is expected to have an impact far beyond the targeted Natura 2000 sites and positively affect biodiversity in the Netherlands as a whole (PAF section A.4).

The main goal of this LIFE IP is to develop an integrated approach that is aimed to be self-sustaining and replicable to other sites in the Netherlands and in other EU countries. Therefore, the instruments and tools developed under the IP will be actively disseminated and supported when used at other sites by other stakeholders. The Netherlands is a very densely populated area with intensive agriculture and many other parts in the EU are developing in the same direction. Therefore finding successful practices in nature restoration in the Netherlands will become more and more important in other areas of the EU also.

By including networking activities with other LIFE projects across Europe (see Action E.4) we will also set out to exchange knowledge and insights on how to best manage Natura 2000 sites and surroundings. This will contribute to the replicability and transferability of the models and tools developed by this IP, but will also work the other way around, supplementing our own knowledge with developments from other European countries.

#### **5. Green procurement and uptake of research results:**

Part of this LIFE IP will be the development of business models with a positive impact on biodiversity. Green procurement will be one of the instruments taken into account in these models.

Beneficiaries of this IP will pursue ambitious green procurement to have a positive impact on biodiversity, the reduction of greenhouse gas emissions and social-economic aspects. For more details we refer to the paragraph about the projects' Carbon Footprint in B4. The EC Green Procurement Toolkit will be consulted.

Action A.3 specifically targets assessing current knowledge and innovation investments and funds at both national and EU level. This will ensure the uptake of results from EU financed research projects.

#### **6. Transnational approach**

This LIFE IP will develop and implement a common approach for management of Natura 2000 sites and the surrounding land uses affecting these sites, focusing on restoring biodiversity. This approach is intended to be also applicable in other Member States, in particular those facing similar challenges in achieving a sound cooperation between nature management organisations and users of surrounding areas. The project is about scalable solutions and intrinsically transnational.

During the proposal development stage, contacts have been established with two important initiatives in other Member States that are involved in / applying for funding under the LIFE programme:

- The Danish LIFE IP NATUREMAN – “The Farmer as a Manager of Nature: aiming at a favourable conservation status for Natura 2000 sites by making nature management a sound branch of farming”. In this IP that has started in 2018, a similar approach as regards to cooperating with agricultural enterprises in the vicinity of N2000 areas is applied. The project leader of All4Biodiversity intends to visit the LIFE Natureman project in the first year of the project to establish a sound basis for exchange of knowledge and experiences throughout the project.
- The German LIFE IPE Grasslandbreeders, to be submitted in 2020, focusing on farmland birds – associated beneficiary Province Fryslan participates in both LIFE IP’s and will ensure coordination of activities between the two initiatives.
- The Belgian LIFE IPC BREL (Belgian Resilience through Ecosystem based adaptation) project, which will also be submitted in 2020, focusing on nature-based solutions for climate adaptation in the urban (climate buffers) and rural environment (green-blue networks through agricultural areas, cooperation with farmers).

**BEST PRACTICE / INNOVATION / DEMONSTRATION CHARACTER OF THE PROJECT****BEST PRACTICE:**

The LIFE IP All4Biodiversity intends to gather and disseminate best practices in various ways, for instance by:

- **Conducting a stress and opportunities test in each Natura 2000 area:**

The test will, after trial in phase 1 of the project and demonstration in phase 2 of the project be fine-tuned and finalised. The test will include, based on the experiences gained during the project in identifying opportunities as part of the test, best practices in countering pressure factors obstructing a satisfactory conservation status. It is the intention of the project partners to develop a test that can be conducted by a team of experts in a relatively short time span ("quick scan" approach), with relatively limited resources.

The test will be one of the main tools of the project that can be easily replicated to other Member States. A standard version of the tool will be made available on the project website with an instruction document explaining the intentions and objectives of the tool, and the way it can be applied / adapted to the local situation in other Member States.

- **Developing an inventory of current governance models**

The overview and assessment of governance models will highlight critical success factors and barriers in cooperation and in governance structures. Best practices are expected to be identified in the form of areas in which novel governance models have been successfully experimented. It is expected that elements of these models can be incorporated in the All4Biodiversity governance approach.

Likewise, these models can form an example for initiatives aiming to implement novel governance models to foster cooperation between public bodies, nature organisations and agricultural enterprises in similar situations. The inventory and best practices identified will be made available on the project website, as well as a description of the governance model developed in the particular case of the All4Biodiversity project on the basis of this inventory.

- **Overview of (combinations of) business models fostering biodiversity**

Developing an overview of currently proven (combinations of) business models with a positive impact on biodiversity that can be used as a starting point for the business models applied as part of Action C.2 of the project.

The particular focus of the project will be on creating a range of different business models, that will become available to agricultural enterprises and other land users. As individual business models, these will perhaps in some cases not be sufficiently attractive, however by applying several business models in parallel they are intended to form an appealing alternative compared to 'business as usual', with positive impacts on biodiversity as well as on the enterprises' economic performance.

The business models will be based on a standard set of Key Performance Indicators (KPIs) that together form the 'Biodiversity monitor' (biodiversity monitor). As a result, agricultural enterprises and other land users will be provided with a clear system enabling them to calculate the economic benefits of implementing certain measures that positively affect biodiversity. These benefits may cover for instance include a higher price (biodiversity premium) for their products, more favourable loan conditions and access to subsidies. The package of benefits as a whole should hence provide the overall perspective enabling the shift to business approaches fostering biodiversity.



The system of the Biodiversiteitsmonitor, is in our view unique because (1) it is based on measuring KPIs rather than rewarding certain management practices and (2) because the aim is to develop a standardised system in which all stakeholders apply the same KPIs in a uniform manner (all 'rewarding' stakeholders apply the same indicators, thereby creating a reliable and clear basis for benefits and minimising administrative burden for the enterprises.

The – trialled and finalised – biodiversity monitor and the individual business models are therefore in our view important best practices evolving from the project.

#### DEMONSTRATION:

The project will first (in phase 1) be implemented in 15 selected Natura 2000 areas – at this stage the methodology will be developed and refined on basis of the experiences acquired in these areas. The 15 areas identified for the first phase are selected on the basis of diversity in landscape / habitat types and location specific pressure factors (and related types of stakeholders that required to address these pressure factors. As a consequence the pilot sites will form a solid basis for upscaling to other areas with comparable pressure factors.

Phase 2 is the main demonstration phase of the project. In this phase, the approach developed will be scaled-up to 44 areas in which the methods developed will subsequently be demonstrated. This demonstration phase is intended to show that the methodology can be implemented in a broad range of landscape types, with a broad range of surrounding land users. The demonstration concerns the broad range of actions contributing to the overall goals of the project, including:

- establishing a sound governance system in which all stakeholders participate,
- the development of business models that support the long-term sustainability of the actions and provide financial incentives for land-users to focus on activities with a positive impact on biodiversity,
- removing regulatory barriers and strengthening governmental support for biodiversity improvement,
- ensuring that management of the areas is supported by state-of-the-art research and knowledge, contributing to the effectiveness of the measures taken.

The monitoring activities conducted as part of Action D.2 will provide important feedback on the effectiveness of the measures, ensuring that lessons learnt in the demonstration areas will be incorporated in the approach. Since the monitoring will continue throughout (and after) the project, this will continuously result in new insights that are applied to further refine the activities. While some ecological impacts (such as increase in insect populations) are expected to be measurable in relatively short timeframe, other impacts will be evolving over a longer period – the continuous loop of monitoring and evaluation, and subsequent improvement of measures taken will hence remain prominent throughout and after the project.

Main basis for the demonstration in phase 2 are the experiences acquired with the approach in the 15 pilot sites. Each of these pilot areas will, at the end of the first phase, provide a report in which lessons learned are made available and recommendations are made for the demonstration phase. The main lessons learned will be analysed and consolidated in an overall phase 1 evaluation report that will provide the outline of the demonstration in phase 2. The provinces and the partners in the areas surrounding the N2000 sites (including the agricultural collectives) addressed in phase 2 will use this outline to:

- develop their plans for the additional 30 N2000 sites in which the approach will be demonstrated.

- steer the continuation of the activities in the 15 pilot sites, which will also form part of the demonstration phase, in a more self-steering manner as is foreseen also in the 30 additional sites. The teams that were involved in the implementation of activities in the 15 pilot sites will remain available to provide assistance in all 44 areas in the demonstration phase.

Main objective of the demonstration phase is to ascertain the broad applicability and replicability of both the methods and the approach, and to confirm that implementation can take place with the guidance provided at the end of phase 1, based on the lessons learned in the pilot areas.

After successful demonstration the methodology will in phase 3 of the project be initiated in all Natura 2000 areas in The Netherlands. At the end of phase 2, as part of action E.2, an implementation package will be made available providing a well-elaborated instruction and support system enabling the set-up of area teams and subsequent implementation of the All4Biodiversity approach.

#### PILOT (INNOVATION):

The LIFE IP All4Biodiversity is based on a broadly supported and integrated approach of nature conservation practices in Natura 2000 areas and the surrounding land uses like agriculture and tourism. In this regard several innovative elements are adapted or developed in governance, business models and agricultural methods.

Novel agricultural management practices with a positive impact on biodiversity will be adapted and developed (action C1). The principles of agroforestry and food forests have attracted much attention last years in the Netherlands. Agroforestry is the cultivation of both trees and agricultural / horticultural crops on the same farmland area. They are designed to provide tree and other crop products and at the same time protect, conserve, diversify and sustain vital economic, environmental, human and natural resources. Agroforestry differs from traditional forestry and agriculture by its focus on the interactions amongst components rather than just on the individual components themselves. Research over the past 20 years has confirmed that agroforestry can be more biologically productive, more profitable, and be more sustainable than forestry or agricultural monocultures. A food forest goes one step further in only using trees, shrubs and perennial plants. These are mixed in such a way as to mimic the structure of a natural forest – the most stable and sustainable type of ecosystem in this climate.

Fresh water is becoming scarcer, and the Netherlands has a close relation to the sea. In this regard innovations in saline agriculture are explored. Fish and shellfish are traditionally the main food products from salt or saline waters, but many new initiatives are taking place around seaweed and algae or salt tolerant crops.

Innovative business models will be developed comprising economic incentives based on (activities that foster) improved biodiversity and an improved conservation status of Natura 2000 areas (action C2). Incentives can only be put on measurable benefits and therefore the basis for these business models will be formed by an integrated set of KPIs on biodiversity, climate and environment. These incentives and business models may include adapted loan conditions, incentives around water management, and premiums from food processing companies and retailers buying agricultural products.

In action C3 innovative governance is developed in a shift from specific measures to overarching goals and comprehensive policy regarding different environmental themes like biodiversity, nitrogen deposition, climate change, water quality, etc. In addition, a further shift is required from mitigating impacts to addressing the root causes of the respective

issues. The framework needs to be fully coherent and integrated across governing bodies and governance levels in full width of the framework. Thus creating a regulatory framework that rewards innovators and closes loopholes for those who seek not to comply.

## EFFORTS FOR REDUCING THE PROJECT'S "CARBON FOOTPRINT"

### At project level:

The project actions are pre-dominantly aimed at creating benefits for nature and biodiversity but also have a strong related impact in reducing and mitigating climate change: successful implementation of the project will hence lead to considerable positive contribution to national and EU climate policies. Several project actions are directly related to objectives set in the national climate policy of the Netherlands as stipulated in the 'Klimaatakkoord'.

The partners of the consortium furthermore aim to reduce the carbon footprint of the project as much as possible. For a number of aspects, principles and in some cases targets are set which are partly already implemented during the preparation phase of this proposal. Concrete measures to reduce the project's carbon footprint include the following:

#### Fostering public transport / reducing (CO<sub>2</sub> impact of) travel

- Where possible, meetings are organised through teleconferencing and online tools (in the project preparation phase an online cooperation platform 'All4Biodiversity Teams' was created (using the 'Microsoft Teams' application) that enables easy communication (via chat, phone and videoconferencing) and document / information sharing.
- Face-to-face meetings are organised at central locations that are easy to reach by public transport (mostly at RVO Utrecht, which is at a central location in the country and within 5-minute walking distance of the main railway station).
- For visits to conferences and fairs / dissemination occasions, travel by train will be opted for where possible.

#### Energy reduction:

- As much as possible applying computers, lighting and other energy appliances (HVAC) with best in class energy performance (all partners in the consortium have energy efficiency policies / measures in place aimed to reduce office energy use as much as possible).
- Ensuring energy management is in place avoiding unnecessary energy use.

#### Printing / paper use:

- The use of the online All4Biodiversity Teams platform has the additional benefit that it enables easy access to all project documentation, thereby promoting the use of digital documents and discouraging the use of hard copies.
- For printed material produced as part of the dissemination actions of the project, materials (paper, inks) with the lowest environmental impact will be applied.

#### CO<sub>2</sub> reduction of services and works contracted:

- Contractors will be requested to adhere to the same principles as the consortium partners (listed above).
- Integrate the CO<sub>2</sub> footprint as an evaluation criterion in relevant procurement procedures (see also below under green procurement).

Green Procurement:

- Several project partners, including the Ministries of LNV and lenW / RWS have ambitious green public procurement policies in place. The partners in the LIFE IP All4Biodiversity will, based on their respective policies, ensure that negative impacts on the environment (including, but not limited to reducing the carbon footprint) of goods and services purchased within the framework of the project are minimised.

## STAKEHOLDERS INVOLVED IN THE PROJECT

Involving all stakeholders with an interest in the management of Natura 2000 sites and adjacent areas is essential to achieve the objectives of this Integrated Project. The IP builds further upon an already existing cooperation between a broad societal coalition of nature, agricultural, science and business organisations initiated in 2018 to restore biodiversity in the Netherlands ('Delta Plan Biodiversity Recovery'<sup>4</sup>). In this IP the Netherlands' government will implement the PAF in close cooperation with the partners of the Delta Plan Biodiversity Recovery. During the preparation phase of this proposal, stakeholder groups have been consulted to identify their needs and concerns. As a result, this proposal is broadly supported by all key stakeholders which is shown by active involvement of their representatives in the proposed actions.

Which stakeholders will be involved may vary for each site, depending on the organisation managing the site and the current land use of the surroundings – as far as it affects the site. In most cases, cooperation with (local) farmers organisations will be important and cooperation with representatives of other economic interests (e.g. recreation) may be required. As a main strategy, the implementation of the LIFE IP itself will be used as an instrument to carry out actions together with stakeholders. This should create confidence and could quell suspicion creating mutual understanding of each other's interests and broad support for the actions.

The following main stakeholder categories have been identified which are represented by one or more organisations that participate as beneficiary. In this way, dissemination of results as well as capacity building within the stakeholder groups is assured.

### **- Provinces**

The provinces have the overall responsibility for implementation of nature policy and management of the Natura 2000 areas. In the IP the provinces of Zuid-Holland, Noord-Brabant, Limburg, Friesland and Gelderland are associated beneficiaries. Other Provinces are expected to be included in the second and third phase of the project, when the model is replicated in other Natura 2000 areas. The provinces are organised in the Association of Provinces of The Netherlands (*Interprovinciale Overleg; IPO*). An umbrella organisation representing the provinces at national and European policy level. IPO is a platform for innovation and knowledge exchange. The provinces are in the lead in the C.1 actions.

### **- The ministry of Agriculture, Nature and Food Quality (LNV)**

The ministry of Agriculture, Nature and Food Quality (Landbouw, Natuur en Voedselkwaliteit, LNV) is responsible national nature policy and for the development and implementation of the PAF. LNV is in the lead for action C.3, which focuses on optimising the regulatory framework and other policy instruments.

### **- Ministry of Infrastructure and Water Management / Rijkswaterstaat (MinlenW)**

Responsible for developing water related Natura 2000 management plans (thereby providing a strong connection to the ongoing LIFE15 IPE NL016 Delta Nature) and is in addition responsible for the management of embankments, road-, canal- and riversides which form important connections as part of the Netherlands' National Nature Network (NNN). Rijkswaterstaat is the executive agency of the Ministry of lenW responsible for management of nature areas.

<sup>4</sup><https://www.samenvoorbiodiversiteit.nl/wp-content/uploads/2019/04/Delta-Plan-for-Biodiversity-Recovery.pdf>

#### **- Agriculture sector organisations**

Consisting of individual companies, cooperatives and associations. For most actions in this IP they are vital cooperation partners. The agriculture sector is represented by LTO (the Netherlands agri- and horticultural organisation and BoerenNatuur (organisation supporting farmers in applying agricultural methods supporting nature development). The Rabobank, an important bank for the agricultural sector participates as co-financers. In addition, individual companies and branch associations such as Royal Agrifirm and Sustainable Dairy Chain (*Duurzame Zuivelketen*) are important stakeholders of the project.

Agricultural Collectives (*Agrarische Collectieven*) are officially registered cooperation groups in demarcated areas, wherein farmers and other property owners voluntary work together to implement agricultural, nature and landscape management. The cooperation groups are allowed to receive and handle subsidies. At present 40 collectives are active in the Netherlands that together cover the whole country

As part of the Dutch Top Sectors approach, seven sectors have been selected in which The Netherlands has unique expertise at the international level, including the agricultural sector ('Top Sector Agri & Food'). In these sectors, a cooperation has been set up between private companies, universities, research institutes and governmental organisations to further strengthen the position of the sector.

Green Deals (GDs) are agreements between government, companies and other organisations to remove the hurdles for sustainable initiatives. More than 200 Green Deals have been concluded since 2011, with 42 about biodiversity and 27 about food. Current relevant Green Deals are Food Forests (GD219), Pasture Pig (GD214), Nature Inclusive Land Use Herenboeren (GD213), Dutch Soy (GD207) and Pesticides in Recreation Areas (GD188). Recently finished Green Deals are Infranature (GD196), Sustainable Tourism (GD175), Green Pesticides (GD164), Sustainable Agriculture (GD108).

Action C.4 includes training for agricultural service and product suppliers to build capacity in the agricultural sector.

#### **- Nature conservation organisations**

Responsible for implementation of management measures in Natura 2000 areas and adjacent areas in cooperation with other relevant land users. All main organisations are represented in the IP: World Wide Fund for Nature Netherlands (*Wereld Natuur Fonds*), The Nature and Environment Federations (*Natuur- en Milieufederaties*), Society for Nature Conservation (*Natuurmonumenten*), Birdlife NL (*Vogelbescherming Nederland*), Dutch Butterfly Conservation (*Vlinderstichting*), Landscapes NL and the State Forestry Service (*Staatsbosbeheer*).

#### **- Knowledge institutes**

Naturalis Biodiversity Centre is a leading knowledge institute on biodiversity in the Netherlands, and participates in the All4Biodiversity consortium. In addition, leading universities and research institutes capable of generating the ecological, economic and social sciences knowledge needed to support and implement the LIFE IP, and to monitor and evaluate the project will be consulted and may in some cases be involved as subcontractor. During the proposal phase, the universities of Wageningen, Groningen, Nijmegen and Utrecht have been actively involved as well as research institutes Louis Bolk Institute for Sustainable Agriculture (LBI) and the Netherlands Institute for Ecological Research (NIOO-KNAW).

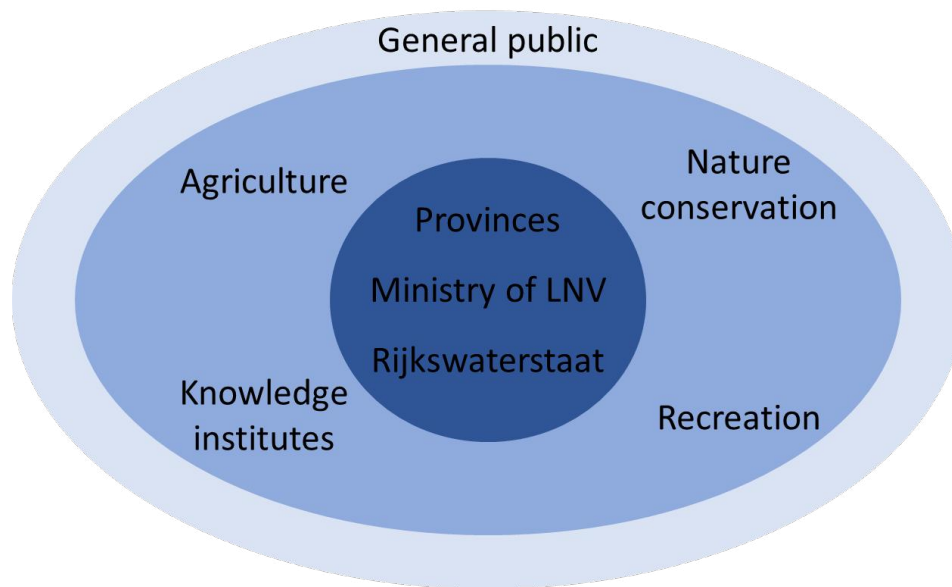
Action C.4 includes the development of a curriculum on biodiversity for education institutes.

#### **- Recreation and leisure organisations**

Organisations representing the general public using the outdoors for recreation and leisure, but also companies will be involved as stakeholders (e.g. in the project's Advisory Board). Important stakeholders include ANWB (Royal Dutch Tourist Club, with 4.2 million members and approximately 4,800 employees), Recron (the branch association of recreation entrepreneurs, with 2,000 members) and the Natuur- en recreatieschappen (local associations of actors involved in exploitation of nature and recreation areas).

**- The general public**

To be addressed through their interest in a good conservation status of nature in the Netherlands (for recreational use, ecosystem services and climate resilience) and in their capacity as consumers of agricultural products.



*Figure 4 Global overview of stakeholders in this LIFE IP*

## EXPECTED CONSTRAINTS AND RISKS RELATED TO THE PROJECT IMPLEMENTATION AND MITIGATION STRATEGY

During inception phase of the project, each action coordinator will be requested to develop a risk management strategy. This will increase awareness of risks and will encourage coordinators to identify ways to limit or avoid these risks. The project director will be overall responsible for the development of the risk management strategies at the action level and for the identification and management of risks at the IP level.

Main perceived constraints and risks for this IP and related mitigation strategies are provided below.

### **CONSTRAINTS** (internal)

#### **1. Mobilising funds for complementary actions**

A significant amount of Complementary funding has been identified for the LIFE IP, of which the majority has been committed (as confirmed by the EC letter in reply of the concept note of this proposal, almost € 350 million can be considered mobilised.

Mitigation activities are focused on creating continuing spin-off by stimulating the development of complementary projects and ensuring that financial resources are increasingly available for measures in support of biodiversity.

#### **2. Project costs**

Project costs are based on best notice but may in practice exceed budget estimations.

Mitigation:

Implementation will take place in different stages, allowing for adjustments to the budget in case of unforeseen circumstances. If during the implementation project particular activities appear to be substantially more expensive than budgeted or foreseeable, project partners will be able to shift resources to more cost-efficient measures yielding the same result, thus controlling costs. The LIFE IP approach is based upon a project cycle in which actions are evaluated after each two-year period, after which a detailed budget planning for the next 2-year period is made and submitted to the EC for approval.

#### **3. Formal board approval**

Despite the fact that all beneficiaries have committed themselves to the implementation of activities, sometimes additional approval for specific activities has to be requested to relevant boards. Especially as the project runs over a longer time and some of the planned actions are planned at a later stage.

Mitigation:

All partners have committed themselves to implementation of activities, and have ensured high level representation in the consortium. Senior staff with decision/influencing power will be available to help obtain approval for (in some cases sensitive) decisions.

#### **4. Staff costs**

Staff costs are based on average wages and salary scales as used at the organisations involved. However, for every employee involved in the project own terms and conditions may apply. During the financial reporting actual costs will be used to determine hour and day rates.



## **5. Additional staff**

Activities undertaken within the framework of this LIFE IP include for most organisations involved a considerable amount of additional work compared to their regular activities. For instance, for the governmental organisations it is assumed that approximately 40% of the staff involved will be additional in line with the LIFE-IP definitions. Partners will make sure that additional staff is registered accordingly and fulfils the necessary requirements for additional staff during the project.

Therefore, the overall sum of the public bodies contributions to the project budget will exceed the sum of the salary costs of non-additional staff by more than 2%.

## **6. External costs**

The IP includes many actions for catalysing and building up guidance for implementation, for developing instruments and tools to facilitate participation by other actors and stakeholders. For these actions the input comes in some cases largely from external experts through subcontracts. Contracting procedures are indicated in the financial forms.

## **7. Infrastructure**

All durable goods purchased by the beneficiaries will be used for implementation of the actions intrinsically connected with the implementation of the project and used to a significant degree within its duration. Within the budget these costs are considered fully eligible. The coordinating beneficiary and associated beneficiaries will continue to assign these goods definitively to activities implementing the targeted plan beyond the end of the integrated project.

## **RISKS** (external)

### **1. Implemented measures have lower impact on biodiversity**

(Likelihood: medium. Impact: high)

Mitigation: The approach based on indicator species provides an 'early warning system' that enables refining/redirecting activities within the timeframe of the LIFE IP, with a view to enhancing biodiversity impacts.

### **2. Alignment of governmental bodies takes longer**

(Likelihood: medium. Impact: medium-high)

Mitigation: As part of developing the LIFE IP, a clear commitment and task/responsibility alignment between relevant governmental organisations is developed, resulting in a solid basis for cooperation and decision-making.

### **3. Interests of different stakeholders can not sufficiently be addressed simultaneously**

(Likelihood: medium. Impact: medium-high)

The current public debate on protecting natural values and improving biodiversity while maintaining economic interests on the one hand creates momentum for change and willingness of stakeholders to understand and support each other's interests. On the other hand it shows it that it will be a significant challenge to make the transition to more sustainable forms of agriculture and other forms of land use.

*Mitigation:*

The composition of the consortium is already proof of the willingness of stakeholders to cooperate and develop ways to preserve economic interests while supporting biodiversity. Ensuring that the debate (also within the consortium) remains constructive and developing increasingly successful business models fostering biodiversity are key elements to mitigate this risk.

#### **4. Stakeholders with economic interest have slower transitions**

(Likelihood: medium. Impact: medium)

It might be difficult for stakeholders operating in the current system to transition to new business models.

*Mitigation:*

The goal of this project is to introduce new business models that are attractive for all stakeholders and to demonstrate them in pilot projects. This will lower the risks involved with transitioning to a new business model and will thereby accelerate the transition.

#### **5. Risks in planning, budget and definition of the actions**

(Likelihood: medium. Impact: medium)

The project involves a participatory approach, the implementation of measures and the monitoring of long-time effects. For the implementation of actions procurement needs may arise. These are time consuming. Furthermore, monitoring of effects within the scope of this project will take time, as natural processes will have to cause changes, which takes time.

*Mitigation:*

The proposed project planning already includes a 6-month buffer period in order to finish the proposed actions within the set time frame in case of any unexpected delays in the implementation and demonstration part of the project. Besides, the LIFE IP approach is based upon a project cycle in which actions are evaluated after each 2-year period and a detailed planning for the next period is made.

#### **6. Challenges related to Dutch nitrogen emission policies**

(Likelihood: medium. Impact: low)

On May 29, 2019 the court ruled that the integrated approach to nitrogen emissions (PAS) is not suitable as a basis for approving new activities with extra nitrogen emissions since it was not in line with European regulations. This resulted in 18.000 project being halted and major farmer and construction protests followed. In November 2019 the government announced emergency measures like lowering the speed limit from 130 to 100 from 6h to 19h, reduce pig farming and removing the protected status of some Natura 2000 areas. More measures will follow. This shows the current volatile context around nature protection in the Netherlands.

*Mitigation:*

The main strategy to address this risk is to ensure regular reporting on the progress of implementation, on the outcomes of the stakeholder consultations and on the arising problems to relevant management levels of public bodies and ministerial cabinets. A transparent flow of information will create the ownership needed to ensure continued support and financial commitment.

A supporting mitigation strategy is to ensure and optimize the involvement and therefore ownership of other actors and stakeholders through consultation / participation, awareness raising, capacity building and mobilisation of resources. Agreement on participation / commitments and budget will be made upfront (e.g. through a partnership agreement) including allocation of the agreed budgets.

Through optimising the cooperation with all relevant stakeholders including those with an economic interest (such as the agriculture and fisheries sectors), and ensuring an intensive and high level of communication is maintained throughout the project, the LIFE IP will ensure that sufficient priority is given, and sufficient funding will be available for Natura 2000 implementation.

#### **7. The management structure is not structurally applied**

(Likelihood: low-medium. Impact: medium)

Mitigation: The approach includes development of new earning models for all land-users involved, thereby creating incentives for durable and structural implementation.

#### **8. Licenses, permits, environmental impact assessment**

(Likelihood: low. Impact: high)

The implementation of the proposed measures may depend on obtaining the required permits to perform the (construction) works. This might take more time than expected.

Mitigation:

Since in all cases the responsible authorities are partners and stakeholders in the project, the applicants assume that no problems will rise in obtaining these permits. Nevertheless, it's necessary to well prepare the application for permits, including possible environmental impact assessments and to take the time to consult the competent authorities in the preparatory phase of the relevant actions.

Refer to action A.1

#### **9. Management structure is not supported by all stakeholders**

(Likelihood: low. Impact: medium-high)

Mitigation: A solid basis for cooperation has been established as part of the Deltaplan Biodiversity recovery. This cooperation is further strengthened during the process of developing (and implementing) the LIFE IP).

#### **10. Ongoing or planned development projects threatening actions**

*(infrastructure or industrial projects)*

(Likelihood: very low. Impact: low)

We are not aware of any ongoing or planned development projects that will interfere with the goals of this LIFE IP.

**CONTINUATION / VALORISATION AND LONG TERM SUSTAINIBILITY  
AFTER THE END OF THE PROJECT**

- How will you ensure the long-term implementation of the plan and beyond?

The duration of the Delta Plan Biodiversity Recovery will continue beyond the duration of this LIFE IP and will therefor ensure the long-term implementation of this project. Long-term sustainability is also inherent of this project through the creation of sustainable business models fostering biodiversity. One of the main objectives of the project is to develop business models that create (lasting) economic incentives for land-users to perform activities / adapt their usual way of operating in a way that minimises pressures on Natura 2000 and positively impacts biodiversity. Thereby farmers and other land-users will be supported in their efforts to reduce negative impacts of their business activities, and will be compensated for a potential decrease in income brought forward by these efforts. The transition to business models that do not put a burden on, but will on the contrary positively impact natural values is hence the key to ensure the project actions will continue after its end-date.

In addition, the governance models developed in the project will result in a broadly accepted approach to cooperate on the level of the area (i.e. Natura 2000 and surroundings), between areas and nationally, ensuring that decisions are taken that are in line with the interests of all land users and foster natural values. The close cooperation between the Provinces and farmer's organisations that will be developed as part of the project is a key element in this respect.

- Which actions will have to be carried out or continued after the end of the project?

The governance model that is developed in Action A2 and further refined (incorporating a supportive regulatory framework) in Action C3 will be continued in each Natura 2000 area. Monitoring (action D.2) will also be continued, providing further insight in the effectiveness of the measures taken at the area level, based on which these can be refined and adapted. To achieve this, a number of dissemination actions will be continued including the creation of shared values and broad support under Action E.1, replication and scaling up of lessons learned (including new insights derived from monitoring activities) under Action E.2 and more general dissemination activities fostering awareness among specific target groups and the public at large as part of Action E.3 (see also below under dissemination).

- How will this be achieved? What resources will be necessary to carry out these actions and how will those capacities be ensured?

The project will include activities aimed at securing funding for the above-mentioned activities after its end-date, as part of the business models that are developed in Action C.2 and in a broader sense for continued monitoring and dissemination actions. The Delta Plan Biodiversity Recovery is expected to be attributed a key role in this respect: main relevant stakeholders at the national, regional and local level will continue their cooperation within the framework of the foundation. Sustainable funding for the foundation will be created through contributions of its members and by attracting finance from other funds, for specific project activities and institutional development.

- Will the staff recruited/trained during the project continue to work on the implementation of the plan?

The project incorporates extensive training and education activities for various target audiences as part of Action C.4, which are explicitly aimed at capacity building of all stakeholders directly involved, with the long-term perspective of continuing the project activities after the end of the project. This will include staff at local, regional and national authorities, organisations involved in the management of Natura 2000 and last but not least organisations and companies active in the areas surrounding Natura 2000 sites including farmers associations. Staff attracted specifically for the project implementation at these organisations are expected to remain involved after the project end, as a minimum this will concern the staff involved / participating in governance at the local level (i.e. the Provinces and local authorities involved), monitoring (coordinated by the Deltaplan Biodiversity Recovery) and dissemination / knowledge exchange (staff involved from partners BoerenNatuur, LTO and Deltaplan Biodiversity Recovery).

- How, where and by whom will the equipment acquired be used after the end of the project?

Innovative equipment will be installed in two of the pilot areas to control the water level. This will, if proven to be effective and successful, remain in place and will be maintained by the respective beneficiaries (Provinces of Zuid-Holland and Fryslan).

- To what extent will the results and lessons of the project be actively disseminated after the end of the project to those persons and/or organisations that could best make use of them (please identify these persons/organisations)?

Dissemination of the results and lessons learned after the end of the project will take place at three levels:

1. Organisations directly involved in the activities at the regional landscape level will continue to exchange experiences and results, also based on the outcome of ongoing monitoring activities.
2. Dissemination to a broader audience will continue through several means: the LIFE IP website will be kept online for at least 5 years after the project end-date as required, in addition all associated beneficiaries are committed to actively disseminate the results of the project by presenting the results at relevant fairs and congresses.
3. Opportunities to disseminate the results to relevant stakeholders in other EU Member States will actively be targeted.

The Foundation Biodiversity Recovery will remain an important focal point for continued communication of the project results after its end date, by channelling and further disseminating the results obtained by its members and other cooperation partners to a broader audience and specific stakeholders where relevant.



# ***LIFE Integrated Projects 2019***

## **Stage 2 – Full proposal**

### **TECHNICAL APPLICATION FORMS**

**Part C – detailed technical description of the  
proposed actions**

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## DETAILS OF PROPOSED ACTIONS

### **A. Preparatory actions (elaboration of management/action plans, obtaining licences and permits, trainings, etc.)**

*A1: Developing and conducting a stress and opportunities test for Natura 2000 areas*

**Beneficiary responsible for implementation:**

Lead: Naturalis Biodiversity Center

Other beneficiaries involved: Natuurmonumenten, PZH

Other stakeholders involved: Landschappen NL, OBN

**Description (what, how, where and when):**

PAF references: cPAF B.3 p.17-20; nPAF section A4.2 p.16 and E (paragraph on pressure factors for each landscape type).

*What*

The conservation status of Netherlands' Natura 2000 sites is still threatened by a wide range of internal and external stress factors. Internal factors include management regimes, availability of different successional stages, species population viability and others. External factors include nitrogen deposition, water table management, desiccation, climate change, regulatory barriers and others. This action will develop a 'stress and opportunities test' for Natura 2000 areas in relation to internal and external stress factors (below referred to as the Quick scan). Insight in stress factors, opportunities to relieve these factors and the stakeholders that need to be involved in this process will assist prioritization of further actions needed to improve the status of Natura 2000 areas. The test will focus on pressures on the ecosystem and the extent to which land use of adjacent areas has an impact on achieving management objectives (this is likely to be different depending on the impact, e.g. water management is locally organised, whereas other impacts may be a result of activities in a larger geographical area). This will be a coordinated action for various nature conservation, governmental and scientific organisations.

The test will subsequently be conducted in the selected Natura 2000 sites (see table 4) and will include an assessment of regulatory barriers. The Quick-scan approach will be applied in 2-3 expert working days for each Natura 2000-site in the focal areas. As a result, opportunities to improve the conditions in each site are identified, which will provide input for the overall governance structure (A.2) and the area-specific implementation activities (C.1). Furthermore, the outcomes will be aligned and shared with relevant national and regional policy initiatives such as the 'Natuurwinstplan' ('Nature gain plan'), the project 'Hoger Doelbereik' and the provincial nature conservation policies.

*How*

1. Stakeholder workshop on available methods for assessing stress factors and opportunities for Natura 2000 areas
2. Development of a prototype Quick scan, which includes information on who is needed, which data are needed, what is assessed, how is the outcome visualized
3. Testing of the adequacy of the Quick scan by experts from nature conservation organisations
4. Training of stakeholders (one per pilot N2000-site) in the use of the Quick-scan in a, to-be-selected, Natura 2000 reserve
5. Training of stakeholders of the phase 2 demonstration areas in the use of the Quick scan.

The development of the test will be carried out by the partners mentioned above, that include major nature conservation management organizations as well as responsible

governments (provinces, ministry) and knowledge institutes (e.g. Naturalis). The test will be based on general risk assessment methods that have been amended and trialled in a nature conservation context by Natuurmonumenten and will build on the ongoing landscape level stress tests carried out by OBN and their expert teams.

#### *Where*

Naturalis will host the stakeholder workshop and coordinate the process. The phase 1 Natura 2000 site of the province of Zuid-Holland (Donkse Laagten) will be chosen to perform the first field test of the Quick-scan. The finalised Quick-scan will be conducted in each of the N2000 pilot sites as part of Actions C1.1 – C1.6 (see also respective tasks).

#### *When*

The process of initial tool development will take 6 months and will initiate at the start of the Life IP project. Developing the Quick scan is not dependent on other developments or actions. Upon completion, training activities (initially learning-by-doing by conducting the Quick-scan in cooperation with the organisations involved in the area processes, see also actions C.1.1 – C1.6) will take place. At the start of phase 2, the organisations involved in the 29 new N2000 sites will be trained on the use of the tool.

#### ***Reasons why this action is necessary:***

All Natura 2000 areas in the Netherlands are under pressure from a range of (often large-scale, external and interacting) stress factors each with their own direct and indirect drivers. While much of this information is probably known by (some of the) reserve managers, it is rarely assessed systematically. Given that resources for meeting Natura 2000 goals are limited, it is crucial to target conservation efforts to mediate the most important stress factors and to take action on the most promising opportunities. The Quick scan that will be developed will allow for that systematic review to take place, will guide future conservation actions (e.g. C actions) and will allow for the comparison of stress factors and opportunities for nature recovery across Natura 2000 sites and their landscapes.

#### ***Constraints and assumptions***

##### *Constraints*

Given that all Natura 2000 site managers are fully aware of the complexity of stress factors as well as of some of the opportunities for nature recovery (including through actions aimed at climate change adaptation), and that they are Associated Beneficiaries of the LIFE IP project, we expect full cooperation on this action and willingness to participate. A possible constraint could be the availability of adequate information on all relevant drivers. This will be remediated by the participation of the provinces (main partners of LIFE IP), that hold detailed regional and local information on ecological, economic and social variables. In addition, regular submission on the state of all Natura 2000 sites to the EU is obligatory and includes relevant information on state of and pressures on the sites. These documents will be used as a basis for the Quick scan.

##### *Assumptions*

The main assumption is that the effectivity of nature conservation will be improved when based on a thorough analysis of local/regional stresses and opportunities. A previous trial of a similar method by Natuurmonumenten, a major nature conservation NGO, showed that both a more coherent view of the local stressors was obtained, and a better comparison could be made across different habitats within nature sites. The combined result provided a sound basis for assessing the likelihood of meeting conservation goals and of the most promising next steps in nature conservation.

#### ***Expected results (quantitative information when possible):***

1. Quick scan, once developed, will be used in all living labs
2. Results from quick scan will be used to set priorities for local/regional conservation strategy

**Cost estimation:**

The costs of this action are estimated based on:

- Required working days for coordination (by the action coordinator), and development (by an ecologist and a researcher) of the Quick-scan method
- Working days and travel costs for a 1-day initial workshop of 12 experts
- Working days and travel costs for a 3-day field test in Natura 2000 site with 5 conservation managers/experts
- Working days and travel costs for training workshops with representatives of the Natura 2000 sites of the LIFE IP (conducted in a N2000 site in each participating Province, i.e. five workshops). Training materials are foreseen for these workshops, included under 'Consumables'.
- Costs of producing the actual Quick-scan (design and lay-out for web-based and printed version, printing of 200 hard copies).

**Deliverables:**

31/12/2020	DA1.1 Quick-scan tool (web-based form and printed version)
28/02/2021	DA1.2 Training materials for workshops
30/11/2021	DA1.3 Report on quick-scan method
31/01/2022	DA1.4 Manual on the use of the quick scan

**Milestones:**

30/09/2020	MA1.1 Workshop on available methods for stress test conducted
31/12/2020	MA1.2 Quick-scan methodology finalised

## A2 Developing an integrated governance model for the coordinated management of nature areas and surrounding land use to achieve the Natura 2000 objectives

### **Beneficiary responsible for implementation:**

Deltaplan Biodiversity Recovery and MinLNV in cooperation / consultation with other beneficiaries (Naturalis, VBN) and stakeholders at the level of the area, i.e. the project partners and stakeholders involved in actions C1.1-C1.6).

In order to achieve the N2000 goals, close cooperation between stakeholders in the surrounding areas is indispensable. This involves joint decision making on long-term and intermediate goals, conditions required to achieve these goals and a clear plan of action and time schedule. For this purpose, new governance models need to be developed based on multi-stakeholder processes and broadly supported decision-making processes. The governance models will be trialled in the pilot areas under coordination of the Provinces.

In order to develop an integrated governance model for achieving the Natura 2000 objectives, the current governance models will be assessed, and key success factors and best practices will be identified at the following levels:

- area level: the target Natura 2000 sites and surrounding areas.
- regional (provincial) and national level.
- knowledge exchange between stakeholders at and between the different levels.

An area specific approach implies tailor made solutions: working towards a favourable state of conservation of nature areas in conjunction with other objectives, including reduction of nitrogen depositions, climate adaptation and mitigation and improvement of the quality of water, soil and air. In addition, win-win situations need to be created combining improvement of natural values with sustainable economic development, providing opportunities for nature inclusive farming and enhancing the socio-economic situation in rural areas.

To ensure that a well-elaborated area specific approach is developed, and to ensure that exchange between the areas takes place, and area specific processes are supported on all levels of government, this Action is divided into two sub-actions (A2.1 addressing the area specific level and A2.2 addressing the exchange between areas and coordination of governmental involvement at various levels).

### **Action A2.1 Area based governance integrating stakeholder interests**

#### **Description (what, how, where and when):**

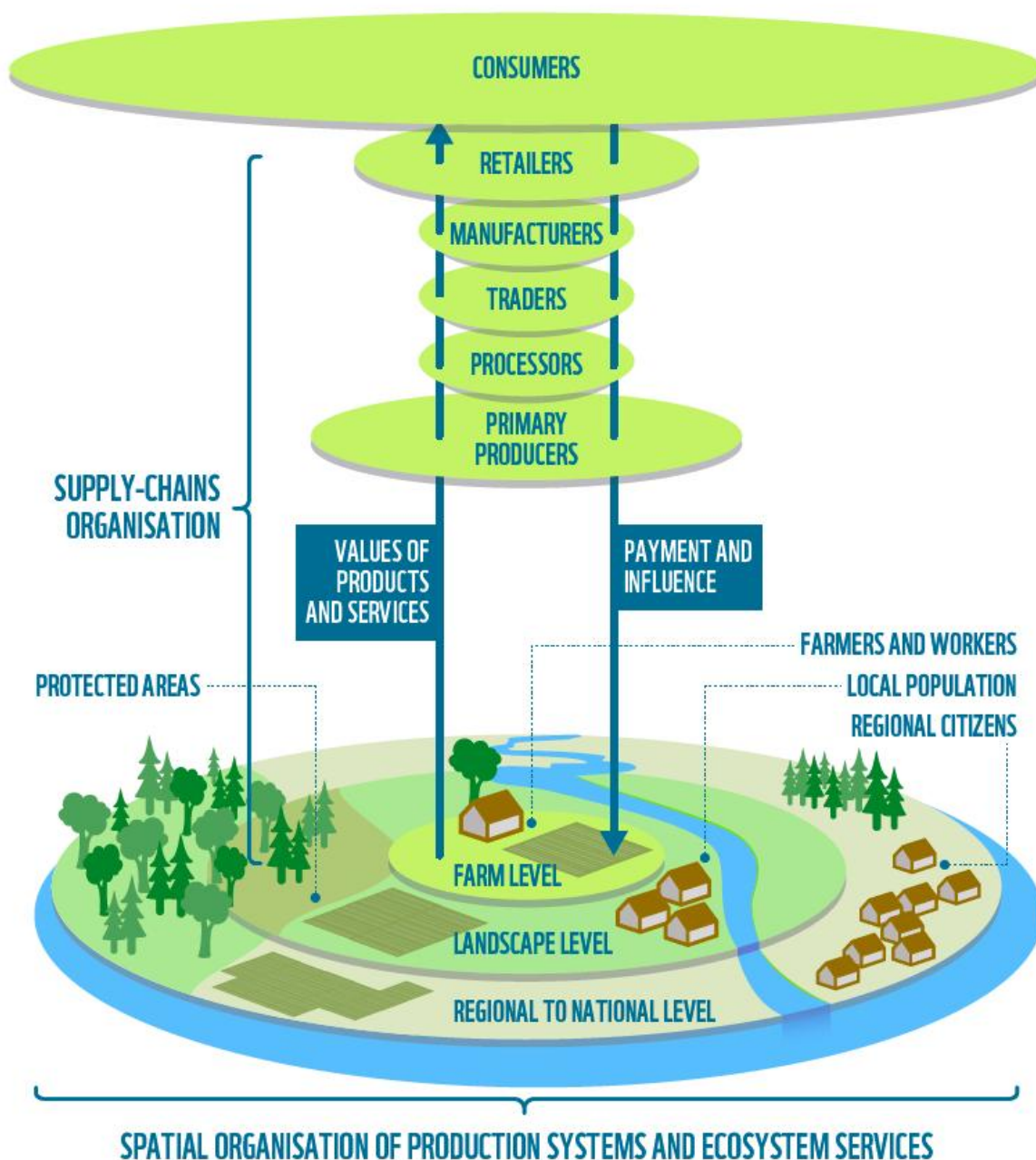
##### *What*

Building an appropriate governance model for enhanced cooperation within Natura 2000 areas and areas surrounding Natura 2000 sites between land users, governments, farmers' organisations, NGO's and market actors. The model will closely connect to the IBP initiative aimed to align governance levels and will serve as a template aimed to be made area-specific for each site on basis of local specificities.

##### *How*

A governance team will be established in each area (see also actions C1.1-C1.6) consisting of a relevant selection of (area specific) representatives of the provinces, BoerenNatuur / farmers' collectives, the Dutch Agriculture and Horticulture organisation LTO, managers of nature areas (SBB, NM) and where relevant other stakeholders such as regional water authorities. In addition knowledge institutes with specific expertise on governance of nature areas (such as University Utrecht) will be asked to contribute.

A fairly complex combination of actors and stakeholders is relevant to the area specific processes, since not only area specific cooperation is envisaged, but also cooperation within value chains (see also Figure 5).



**Figure 5 Actors involved in the value chains of biodiversity related products and services**

The governance teams in each area will provide input for the following tasks, that will be performed as part of this action:

- Make an inventory of existing governance models in the targeted areas (Natura 2000 areas and surrounding areas)
- Analyse these models and gain insight in their critical success factors and needs for improvement.
- Make an inventory of gaps and the potential need for new or innovative models and organize workshops and/or consult experts to develop these further

- Identify best practices in cooperation for management of nature areas and adjacent areas that already exist in certain regions. Develop KPIs for the critical success factors required for an appropriate governance model.
- Scale up best practices to other regions.
- Make an inventory of current business models for land users adjacent to Nature 2000 sites.
- Make an inventory of current business models for land users in Nature 2000 sites.
- Develop a harmonised set of indicators (see also Action C.2) to accumulate rewards land users receive for enhancing biodiversity (including for instance higher prices for products, favourable conditions on loans and land lease contracts and subsidies and other financial incentives. In Action A.2, the possible sources and options for rewards and incentives will be mapped, in Action C.2 these will be incorporated in an overall system of business models based on harmonised KPIs (integrated in the Biodiversity Monitor). The majority of these indicators will be applicable to all areas, some may be to some extent area specific.
- Develop a governance structure for joint management plans focused on area-specific biodiversity goals in order to improve cooperation between site management organisations.

#### *Where*

The governance teams will be established in the areas addressed in the concrete implementation actions described in Action C.1.

#### *When*

The approach will be developed and refined in phase 1 (2020-2022) and will then be demonstrated in phase 2 (2022-2024) and replicated to all N2000 areas in phase 3 (2024-2026).

### ***Action A2.2 Governance integration of the local, regional and national level***

#### ***Description (what, how, where and when):***

##### *What*

Development of a national and provincial governance structure to identify good practices of cooperation and knowledge exchange between stakeholders at national, provincial and area level (in and around Natura 2000 areas).

##### *How*

The following activities need to be performed to achieve this:

- Make an inventory of existing governance structures at national and provincial level.
- Identify where fragmentation in governance occurs in Natura 2000-sites at national, regional and local level, and to what extent this fragmentation negatively impacts habitat conservation.
- Define KPIs for good practices and design a generic governance model that can easily be tailored to specific circumstances
- Develop (digital) tools for knowledge exchange to enhance mutual learning.
- Develop a 'governance assessment tool' to identify barriers and supportive conditions for successful rollout of governance models.
- Defining a strategy for rollout.

##### *Where*

The model will be trialled in the 15 identified pilot sites (Natura 2000 areas and surrounding areas) research will primarily be done in. In phase 2, the model will scaled up to 44 areas.

## When

Timing	What	Explanation
2020	Inventory & analysis (governance)	<ul style="list-style-type: none"> <li>• Inventory of existing governance models in the targeted areas (Natura 2000 areas and surrounding areas), at provincial and at national level, including gap analysis.</li> <li>• Identify critical success factors and best practices at the three levels.</li> <li>• Identify where fragmentation takes place.</li> </ul>
2020	Inventory & analysis (business models)	<ul style="list-style-type: none"> <li>• Make an inventory of current business models for land users adjacent to Nature 2000 sites.</li> <li>• Make an inventory of current business models for land users in Nature 2000 sites.</li> </ul>
2021	Develop governance models	<ul style="list-style-type: none"> <li>• Design a generic governance model for the different levels (national, regional and area) that can easily be tailored to specific circumstances</li> <li>• Develop a structured framework to accumulate rewards land users receive for enhancing biodiversity.</li> <li>• Develop a governance structure for joint management plans focused on area-specific biodiversity goals in order to improve cooperation between site management organisations.</li> </ul>
2022 -	Demonstration and knowledge exchange for mutual learning	<ul style="list-style-type: none"> <li>• Develop (digital) tools for knowledge exchange to enhance mutual learning.</li> <li>• Develop a 'governance assessment tool' to identify barriers and supportive conditions for successful rollout of governance models.</li> <li>• Scale up best practices to other regions.</li> </ul>

The action will hence pre-dominantly take place in phase 1 (in which the methodology is developed and piloted), however refinements are expected to take place after demonstration in phase 2.

### **Reasons why these actions are necessary**

New integrated governance models are needed for achieving the Natura 2000 objectives. The current approaches do not yet lead to the desired results.

Key points that need to be addressed are:

- How to organize all key stakeholders in the Natura 2000 areas and surrounding areas to work towards common goals.
- How to work out a governance structure where different stakeholders use the same KPIs for rewarding land users for enhancing biodiversity. Only then a structured approach to accumulate rewards land users receive can be rolled out and make it (financially) interesting to participate.
- How are we going to ensure optimal coordination in governance at the various levels (national, regional and in specific N-2000 sites and surrounding areas)

### **Constraints and assumptions**

The challenge will be to change existing (formal) governance structures and existing views at different parties involved. By going through the change process step by step with all stakeholders involved and the introduction of new knowledge on good practices, support will be created.

### **Expected results**

1. New governance models for:
  - Successful cooperation between all key stakeholders involved in Natura 2000 areas and between Natura 2000 areas enhancing biodiversity.
  - Successful cooperation between key stakeholders in a certain Natura 2000 area and its surrounding area diminishing the environmental pressure on the specific Natura 2000 by the surrounding area considerably.
  - Optimal coordination in governance at the various governmental levels (national, regional, municipal / in specific N-2000 sites and surrounding areas).
  
2. A thorough overview of best practices / available business models, incentives and reward schemes favouring management measures in support of nature development and biodiversity. This will form the basis of an overall framework (in Action C.2) enabling agricultural and other land users to accumulate rewards, based on a standard set of KPIs (enabling assessment and valuation of the contribution to improving biodiversity of each measure).

### **Cost estimation**

Staff costs estimations are based on the required involvement and fee rates of experts in governance (MinLNV), communication and nature conservation/management specialist (Deltaplan, VBN). Limited specialised support is in addition foreseen to be subcontracted by Deltaplan (area-oriented governance expertise).

### **Deliverables:**

- |            |   |
|------------|---|
| 31/01/2022 | DA2.1 Manual area specific approach N2000 and surroundings      |
| 31/01/2022 | DA2.2 Report: governance integration in support of N2000 policy |

### **Milestones:**

- |            |   |
|------------|---|
| 31/10/2020 | MA2.1 Area governance teams installed and operational             |
| 28/02/2022 | MA2.2 Area specific approach successfully trialled in pilot sites |



### A3. Assessing the knowledge base, defining the research agenda and setting education priorities.

*Beneficiary responsible for implementation:*

Deltaplan Biodiversiteitsherstel (lead)

Other beneficiaries involved: BoerenNatuur, MinLNV

**Description (what, how, where and when):**

PAF references: cPAF F.3, p. 50-51, nPAF section E 1.4, p.37.

#### **What**

An abundance of knowledge on nature conservation in the broad sense has been generated over many decades by both researchers and practitioners. However, this knowledge is not readily available and is scattered among many institutions, libraries and experts. This means that (a) it is difficult to assess the knowledge gaps in existing knowledge, (b) future research cannot sufficiently be guided by current knowledge gaps, and (c) existing knowledge is not readily accessible to all relevant stakeholders including next generation conservation practitioners. To remedy this problem, action A3 will assess the knowledge base, define knowledge gaps, set the research agenda and outline a structure for knowledge exchange and education.

To structure the knowledge base for the Natura 2000 areas in the Netherlands we will build on and strengthen the OBN Knowledge Network ([www.natuurkennis.nl](http://www.natuurkennis.nl)), currently the most developed nature conservation knowledge base of the Netherlands. In this network, researchers, conservation site managers, universities, consultancies, NGO's and governmental bodies, such as provinces and water boards, closely cooperate to provide the knowledge needed to restore ecosystems and nature reserves. Knowledge from research and practice are combined to develop the most effective approaches to enhance sustainable conservation of important ecosystems in the Dutch landscapes. Expert teams largely organised around the major landscapes of the Netherlands, formulate research questions aimed at solving (long-term) management problems, supervise research projects, and disseminate knowledge. More recently, OBN has added a focus on environmental issues, such as the effects of atmospheric nitrogen deposition, climate change, sea level rise, coastal defence, flood risks, and other changes in the hydrological systems. While the intentions are good and the network is improving, it currently mainly hosts the knowledge from its own research and does not link to all major research and conservation institutes. Given the need for conservation actions to be taken by an increasing variety of stakeholders, and on an increasing variety of topics (incl. novel conservation and monitoring techniques), a preparatory action on integrating available research results and knowledge on nature conservation and subsequently defining potential gaps, is urgently needed.

Through action A3 the OBN Knowledge network will be positioned as the central place for nature conservation knowledge in the Netherlands.

#### **How**

##### 1. Assessing the knowledge base.

In our consortium a wealth of knowledge on nature conservation in the Netherlands is available. Besides the aforementioned OBN Knowledge Network, the consortium has access to knowledge on nature management on farmland from the country-wide BoerenNatuur Network (9.000 farmers managing farmland from a nature conservation perspective), current and past ecological knowledge from the Netherlands Ecological Research Network (partner of the Deltaplan Biodiversiteitsherstel) and other relevant knowledge from the major conservation agencies in the Netherlands (also members of associates of the Deltaplan Biodiversiteitsherstel). OBN will be equipped to gather, collate and organise this knowledge, and make this available through their website. The

LIFE IP All4Biodiversity website will create an easy access knowledge portal linking to the OBN website, highlighting the most relevant nature conservation research topics.

2. Defining knowledge gaps

The knowledge base compiled above, together with the challenges and opportunities for Natura 2000 sites identified as part of the Quicksan (Action A1) can be used to define knowledge gaps for nature conservation. This process will be organised by the knowledge and innovation working group of the Deltaplan Biodiversiteitsherstel with contributions from the experts in the above-mentioned networks and additional experts if deemed necessary.

3. Prioritising and setting the research agenda

The next step will be to prioritize the most urgent knowledge gaps and set a research agenda for Life IP nature conservation in the Netherlands. Prioritization will be carried out by small teams of experts for each of the major themes. The knowledge and innovation working group of the Deltaplan Biodiversity Recovery will organise this in cooperation with OBN. The outcome will be a coherent list of most urgent research topics.

4. Knowledge exchange

The knowledge base constructed in step one and available from the OBN website will be sufficient for some stakeholder, but not for all. To make this knowledge fit-for-purpose for province officers, nature farmers of conservation practitioners additional work is needed. Together with all LIFE IP partners, the major needs for additional knowledge exchange actions will be assessed (e.g. through an online questionnaire and targeted interviews), leading to a prioritized list of requirements for knowledge exchange. The OBN and BoerenNatuur networks, together with governmental organisations (e.g. IPO) will be the main instruments through which additional knowledge exchange will be achieved. Specific events and tools will depend on the assessed needs, but may include masterclasses, information leaflets, instruction videos, conferences etc. In addition the assessment of knowledge requirements conducted as part of this action will provide input for curriculum development and knowledge exchange in action C.4, and will provide input for the dissemination actions (mainly Action E.3).

**Where**

This action will be of national scale, with linking closely to the national networks of OBN, BoerenNatuur and Deltaplan Biodiversiteitsherstel.

**When**

Action A3 will start upon finalisation of the Quick scan to provide scientific support and guidance to the execution of actions in the selected pilot Natura 2000 sites.

**Reasons why this action is necessary:**

Information is currently scattered, incomplete and often not tailor-made for the detailed, local actions that are required to achieve Natura 2000 aims.

**Constraints and assumptions**

Given that all major players are included in or linked to the Life IP consortium, and that some are the main funders of conservation knowledge, we foresee no constraints to the action. The assumption is that partners will contribute and share their knowledge, which is highly likely given the current level of organization in the OBN, BoerenNatuur, Governmental and DeltaPlan networks.

**Expected results (quantitative information when possible):**

- Relevant knowledge on nature conservation available at [www.natuurkennis.nl](http://www.natuurkennis.nl) website
- National agenda outlining the major priorities for conservation-relevant research
- All stakeholders are provided with easy access to relevant conservation knowledge

**Cost estimation:**

Personnel costs are estimated based on staff (and related person-days and fee rates) needed to conduct the assessment, analysis and development of the agenda and knowledge products.

Deltaplan has in addition reserved budget for external assistance (expert nature conservation knowledge) assisting in conducting the knowledge assembly.

**Deliverables:**

01/03/2021	DA3.1 Paper: definition of knowledge gaps
01/06/2021	DA3.2 Research agenda (updated annually)
01/09/2021	DA3.3 LIFE IP pages on OBN website online
31/12/2022	DA3.4 Five targeted knowledge exchange products published

**Milestones:**

31/01/2021	MA3.1 Person hired for knowledge assembly
01/04/2021	MA3.2 Workshop on prioritization of research topics

*Note: additional deliverables and milestones may be defined for phase 2, based on the outcome of the action during phase 1.*

## **C. Concrete (conservation/implementation) actions**

### C.1 Collaboration at the regional landscape level

#### C1.1 Concrete implementation actions in the Geuldal area (Natura 2000 sites 153 and 157)

##### **Beneficiary responsible for implementation: Province of Limburg (lead)**

Other beneficiaries involved: Natuurmonumenten, Staatsbosbeheer

Other stakeholders involved:

- Farmers interest group Limburgse Land- en Tuinbouw Bond (LLTB)
- Agricultural collective "Coöperatie Natuurrijk Limburg",
- Water Board Limburg,
- Waterleidingbedrijf Midden Limburg (WML, drinking water company),
- Foundation for nature protection "Het Limburgs Landschap",
- Water regions Maastricht Mergelland and Westelijke Mijnstreek.

##### **Description (what, how, where and when):**

PAF references:

cPAF: F.2 p. 47-48

nPAF: In section E2.3 (peat and other wet habitats): Measure 1 in both the table for measures in Natura 2000 areas and outside Natura 2000 areas. Pages 50 and 51 of PAF 2021-2027

Specifically, the area has a large number of well zones (an estimated 550 of which 500 are located in the Bunder and Elsloo forest) including many Petrifying springs with tufa formation (Cratoneurion) (H7220) and a small number of Alkaline fens (H7230).

The 'specific measures' identified in the PAF and required by the Natura 2000 management plans for these two habitats are in particular: reduction of nitrate levels in the groundwater inputs from agricultural and residential areas located at higher levels.

In section E2.6 (forest land and forests): measure 1 in both the table for measures in Natura 2000 areas and outside Natura 2000 areas. nPAF pages 62 and further. These forests mainly include the habitat types Oak and Hornbeam Forest (H9160B) and Alluvial Forest (in seepage zones and along streams; H91E0).

The 'specific measures' required for alluvial forests under the Natura 2000 plans, referred to in the nPAF, are in particular: reduction of the nitrate content of the groundwater inputs from agricultural and inhabited higher plateau areas and prevention of the reduction of seepage into these forests.

In the case of the Oak-Hornbeam forests, it is mainly a matter of maintaining or restoring the traditional 'middle forest management' (removing selected trees and leaving the other trees in place) and reducing the influence of neighbouring fields and meadows in the form of preventing fertilisers and crop protection agents entering the forest areas.

##### **What**

The main tasks of sustainable water and soil management in the Heuvelland in Zuid Limburg are:

- The preservation and further sustainability of agriculture through future-proof and nature-inclusive forms of land use with a positive contribution to the other tasks, with a focus on new earning models for agriculture that fit within the ambition of the Heuvelland proposition.

- Achieving good environmental and water conditions for the (very species-rich) Natura 2000 areas.
- Reducing flooding problems in the villages in the brook valleys.
- Protection and restoration of ground and surface water quality, including a number of water catchment areas and groundwater protection areas.

The tasks are interrelated and require a transition of the rural area aimed at making land use more sustainable so that the quality of the groundwater improves. Agriculture in the Heuvelland can make a major contribution to the realisation of these tasks, in which a promising agricultural sector is important for the sustainable maintenance of the measures and is also important for maintaining a tourist-recreational attractive South Limburg. The intended transition is therefore of great importance for the preservation and restoration of many nature and landscape values that are characteristic of the National Landscape South Limburg.

The challenges in this transition are huge. For the Heuvelland region alone, the joint task of preventing flooding is estimated to require an investment of € 250 million in 20 years. The approach to sustainability in the Heuvelland is therefore started in areas where the above tasks are interrelated and where we can achieve results in cohesion for all tasks. This is the first phase of the approach which will be implemented in the entire Heuvelland area. The envisaged transition is also expected to provide many insights and practical examples for other parts of Limburg, the Netherlands and other countries.

### **How**

Making water and soil management in the Heuvelland more sustainable starts with gathering knowledge and experience from pilots and trial projects. Through an intensive process with the farmers, we then focus on nature-based and cultivation-technical measures, possible functional changes and, if necessary, civil-technical solutions.

We aim to implement an integral set of measures for each agricultural company. For this purpose, we will visit about 150 agricultural companies and provide "environmental conscious guidance" throughout phase 1 of the project (continuing on a more demand-based manner in phase 2). These 150 farms cover approximately 90% of the agricultural land in the focus area.

The measures will be aimed at the preservation of crops with low nitrate leaching, such as grasslands and fruit cultivation. In arable farming, (new) cultivation techniques (such as crop rotation and green fertilizers) and measures to reduce nutrient leaching and run-off are being implemented. In addition, the introduction of new functions, new earning models and new crops will be trialled.

Concrete measures in the field will furthermore include the construction of small-scale landscape elements (such as farmers' buffers and ditches), increasing the organic matter content and storing CO<sub>2</sub> in the soil.

The aim is to make agriculture more sustainable by tackling and supporting future-proof and nature-inclusive forms of land use. This leads to sustainable, environment-conscious farm enterprises; enterprises that are not only an asset to their surroundings, but that are also future-proof in terms of business operations and earnings model.

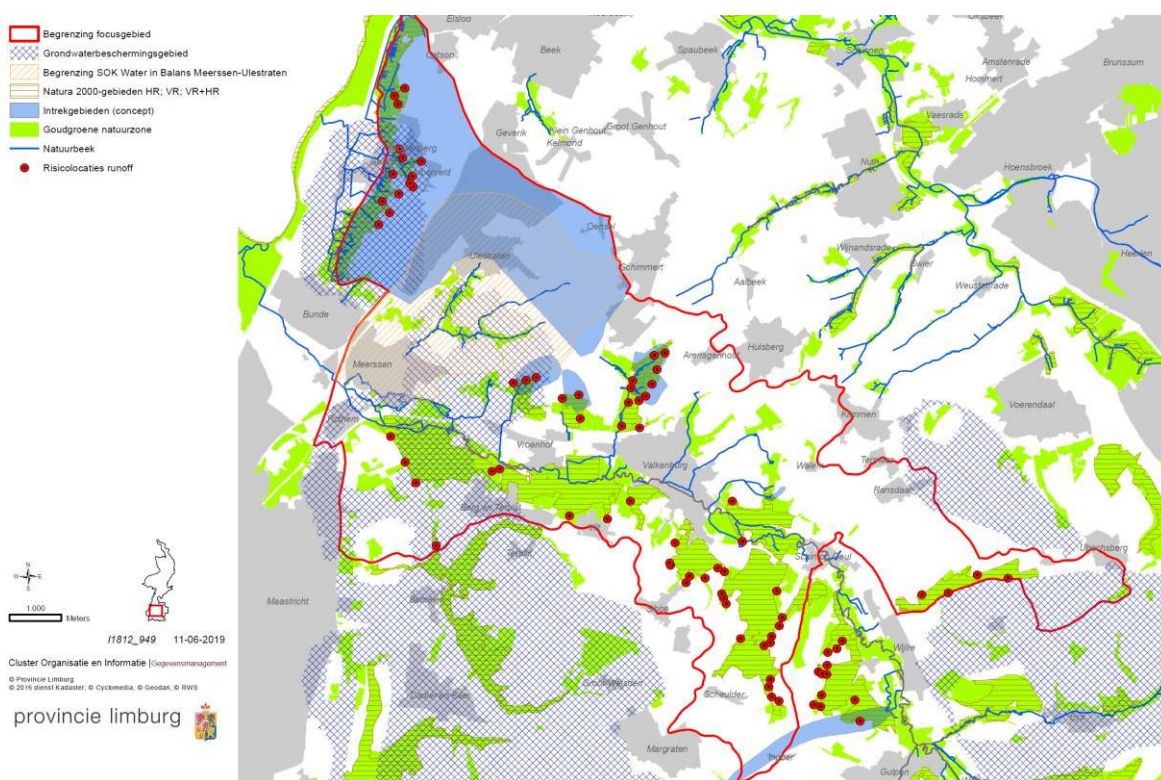
The nature organisations managing the N2000 sites will take measures in their own areas, in line with the objectives of this proposition. They work in the capillaries of the water system, where water retention and infiltration is important and manage areas on the slopes where restoring natural processes can play an important role. The site managers also face the challenge of nature areas where the nitrate load has an impact and where measures must be implemented within the framework measures aimed to reduce nitrogen deposits.

Many measures to limit nitrate leaching are also suitable for preventing rainwater runoff. With virtually the same set of measures, therefore, two goals are being worked on at the same time.

Concretely, the actual implementation of measures will be steered to a large extent by organising site visits to all 150 farmers, conducted by specially trained farm visitors, to discuss the possibilities for full or partial conversion to sustainable soil and water management and to explain the financial compensations available to them to implement these measures. The farm visitors will be contracted by the Province of Limburg.

### Where

Ultimately, we want to apply this approach throughout the Province Zuid-Limburg, since the issues described occur throughout the province. However, for the first phase of the project we have selected a focus area within the Heuvelland Zuid-Limburg region (the area within the city ring Maastricht-Geleen-Hoensbroek-Heerlen-Kerkrade) in which the activities will be trialled (see figure below), after which demonstration in and replication to other areas will follow.



**Figure 6 Focus area of Action C1.1, Heuvelland Limburg**

This is the area where the tasks are most urgent, and the approach can begin in the short term. By focusing on a limited area, we can present a completed and feasible approach in this proposition with a substantial effect of the measures.

The Focus Area consists of the catchment area of the limestone tuff springs of the Natura 2000 area Bunder- and Elslooërbos, the area 'Samenwerkingsovereenkomst Water in Balans Meerssen-Ulestraten', a large part of the Beneden- en Midden-Geuldal and the Ransdalerveld (territory of the municipality of Voerendaal).

### When

Preparations for this project have already been underway for some time, in response to the request of the national government to select areas in which IBP-Vitaal Platteland projects could be developed. In Limburg, this has led to establishing contacts with the intended partners in the area as described above in the Action. The project description was then

further developed and fine-tuned as part of the development of the current LIFE IP project. In order to maintain momentum, we will continue with the actual implementation of the project directly, therefore (and since this was also the intention of the other beneficiaries, see also subsequent action descriptions) the earliest possible starting date of the project was opted for.

This process has resulted in a well elaborated project plan that is ready for implementation and execution. Main activities and their timing are indicated in the table below.

**Table 7 Global timing of activities of Action C1.1**

Task/activity	When?
Meeting of chain parties on new earning models	June 2020
Information days in area	June 2020
Company visits	Summer 2020
Signing of cooperation agreement parties	June 2020
Organize value networks 2020	Sept. 2020
Implementation of other measures	2021 and 2022
Monitoring	2022 - onward

***Reasons why this action is necessary:***

Zuid-Limburg Heuvelland: A unique landscape with interrelated challenges

The South Limburg Heuvelland is unique in the Netherlands and has the special status of National Landscape. The soil consists largely of lime and loess soils. The landscape is characterized by plateaus, interspersed with slopes, steep edges, ditches, hollow roads, dry and brook valleys. These shape the characteristic Zuid Limburg landscape. Plants and animals occur in the area that are hard to find in the rest of the Netherlands and the Natura 2000 sites in the area have the highest biodiversity in the Netherlands.

Agriculture is characterised by larger farms on the plateaus (mainly arable farming), on the slopes and in the (dry) valleys it still has a more small-scale and varied character. With approximately 60% of the land use the farmers are the main managers of the valuable cultural landscape.

The area is also home to a number of sources of drinking water supply. The landscape quality is one of the most important assets for the economy in Zuid Limburg and contributes significantly to the living climate of the 600.000 people inhabiting the area. The unique values of the area, which are strongly intertwined, are vulnerable and under pressure.

An important task is to limit the nutrient load (especially nitrate) of ground and surface water, as a result of which the **water quality** in Natura 2000 areas and WFD water areas does not yet meet the standards. This load comes from various domestic and foreign sources, particularly industry, traffic and agriculture. Although the nutrient load on groundwater and surface water from agricultural soils has decreased in recent years, the load is often still too high. This has consequences for both the natural values and the quality of drinking water.

The changing climate has as a consequence that rain showers become more intense, last longer and occur more frequently. In southern Limburg the water comes from three sides; as precipitation from the air, via fast-flowing streams which can overflow at times, and water flowing from the high plateaus through fields and (semi)paved roads to the valleys. In combination with the changing weather, this increases the risk of **flooding** and unsafe situations, for example in Meerssen-Ulestraten, Valkenburg and Ransdalerveld in Voerendaal. In Zuid Limburg, this involves thousands of households in dozens of residential areas that may have to deal with water in their homes. In addition, local **runoff takes** place, causing agricultural land to flow to Natura 2000 areas with possible negative

ecological effects as a result. Erosion is currently limited by measures already taken and regulated, such as non-inversion tillage, the construction of grass strips and the construction of water retention buffers. Extreme showers as a result of climate change may increase erosion pressure, this has to be prevented.

These problems have a range of causes and therefore require the involvement of a wide range of actors and concern many target groups. In this project, we focus on actions in the field of water and soil management and measures that can be carried out in cooperation with the municipalities, the water board, the water supply company, the agricultural land users and nature organisations.

The area is part of the **National Landscape Zuid Limburg**. The municipalities in the area have conducted research on the bottlenecks related to flooding, drought and heat stress. Water from the slopes, especially in the Heuvelland, causes local flooding in urban areas. In parallel to the LIFE IP, municipalities and water boards will continue to work on water collection in buffers, disconnecting hard surfaces from the sewer systems and promoting measures that citizens can take themselves. These efforts will further strengthen the activities conducted as part of the LIFE IP by contributing to making Heuvelland climate-proof and water-robust.

Sustainable agriculture and sustainable soil management offer a great opportunity to tackle these challenges, hence the aim of sustainable and profitable farming in a unique (small-scale) cultural landscape. To this end, as part of the LIFE IP we want to accelerate and broaden the ongoing development to more sustainable and nature inclusive methods. The current development towards sustainable agriculture is shown by a number of initiatives. In the Heuvelland region, about 90% of the farmers have already switched to non-inversion tillage, about 75 farmers participate in the project 'Sustainable Clean Groundwater' of drinking water company WML and 25 in the 'Smart Fertilisation' project, both of which are aimed at limiting the leaching of nitrate. In addition, many farmers participate in the collective approach to agricultural nature management via Natuurrijk Limburg.

The Action addressing the Heuvelland area fits very well into the overall approach of the LIFE IP as:

- a. It involves regional cooperation between nature managers, local authorities, the farmers' interest group LLTB, the collective for agricultural nature management Stichting Natuurrijk Limburg, the Province, the Water Board and the WML with the aim of reducing and ultimately eliminating the negative external influence on a number of Natura 2000 areas.
- b. The approach is tailor-made: agricultural farms are examined to determine the possibilities of adjusting the business model in such a way that the nitrogen load on the groundwater and the superficial run-off of rainwater from agricultural areas towards nature reserves and urban areas is greatly reduced. In this sense, a new and sustainable earning model is being sought per farm as a basis for making the agricultural businesses involved more sustainable.
- c. The Delta Plan method - learning-doing-measuring-doing better - is an approach that is seen as important, promising and in fact indispensable for the success of the project. In particular, measuring intermediate results more intensively than usual (such as the KPIs and measuring changes based on the development of indicator species) is considered a promising approach that should be taken up and applied in the Heuvelland project.
- d. Tackling bottlenecks and contradictions in the current regulations, solving knowledge gaps and ensuring the roll-out of good practices found in Heuvelland in other areas with similar problems will be part of the approach from the outset.



## **Constraints and assumptions**

### *Constraints*

Some presumably important and – if not managed carefully - potentially hampering factors are:

- Lack of mutual understanding between farmers and nature managers on the problems faced by each group: the Action will therefore put great effort into exchanging views between the partners in the area by creating meeting opportunities to reach a better understanding of each other's situation and shared values
- Opportunities for farmers to switch to a different earning model without getting into financial difficulties: the business models developed in C2 are of high importance to ensure the long-term sustainability of the action in this respect.
- Sufficient availability of manpower among municipal organisations. From the start of the Action, contacts with the municipalities are established to ensure capacity is available to participate in setting up local partnerships to jointly counter the external influence of Natura 2000 areas and to increase the density of landscape elements and biodiversity around Natura 2000 areas.

### *Assumptions*

Main assumptions are:

- All parties remain committed to the implementation of the agreed measures and make the promised funds available as indicated in the project plan.
- The proposed area-oriented approach of the Action will be closely linked to the area-oriented approach that will be developed in the coming period to address the excessive N deposition in Natura 2000 areas (since the LIFE IP aims to significantly contribute to achieving nitrogen deposition reduction targets, good synergy is expected between both initiatives).
- The project is also seen by farmers as an opportunity to change to more sustainable agricultural practices, thereby tackling the N-deposition problem while at the same time securing their income. Hence, the vast majority of farmers are and remain prepared to move to more sustainable water and soil management and to promote the restoration of biodiversity.

## ***Expected results (quantitative information when possible):***

### **Intended finalised activities of phase 1:**

- Workshops have been organised in each subarea, at which the outcome of the stress tests (conducted in action A.1) have been discussed as well as the potential consequences for current Natura 2000 management plans.
- Through an area-wide roll-out of the Sustainable Clean Groundwater and Smart Fertilisation approach, 70% of the agricultural land in the focus area is involved in an approach to further reduce the load of nutrients (especially nitrate). Measures have been elaborated and as far as possible implemented (executed) by farmers in the area.
- New earning models for farmers and horticulturists in the project area have been developed. On the one hand this concerns the preservation of cattle (grassland) and on the other hand it concerns the preservation of fruit cultivation. Markets for sustainable products have been explored and are being developed, as well as for arable farming / horticulture, including nature-inclusive agriculture.
- Measures have been developed to infiltrate 10 mm extra water into the rural area. Implementation has started on at least 10% of the companies with which talks have been held.
- Practical research on agricultural land confirms the potential of promising, sustainable crops.
- New earning models (see also Action C2) have successfully been trialled.
- A pilot has been concluded regarding lease of government-owned land based under strict nature and environmental conditions.

- Measures to prevent run-off to natural areas and other sensitive areas, such as water catchment areas, have been developed for each risk location. The execution has started.

These activities will lead to the following expected results in phase 1, up to March 2022:

- For 70% of the agricultural land in the focus area, agricultural businesses have agreed to an integral set of soil and water management measures on their farms, or are in the process of drawing up that set of measures; 20% of the businesses have already started to implement those measures.
- guiding at least 5 agricultural businesses towards a new earning model.
- the establishment of so called 'Light Qualitative Obligations' (abbreviated to LQO) on approx. 40 ha, aimed at increasing the organic matter content of the soil and discontinuing the use of artificial fertiliser and slurry.
- the construction of small-scale water retaining and/or water buffering landscape elements on approx. 15 ha.
- the realization of a "green plus", the design and/or planting of 5 km of nature measures (dams and low areas), so that they contribute to goals related to species protection and landscape enrichment.
- carry out a pilot project aimed at the application of a lease under conditions on land owned by public bodies and Waterleiding Maatschappij Limburg (WML). Conditions could for example include abandoning the use of artificial fertilizers and/or slurry, cultivation measures to capture CO<sub>2</sub> and water infiltration), set-aside or management of areas by the water board.
- agreement reached and formalised between all public bodies concerned on the objectives and instruments for land use with a view to making water and soil management more sustainable.

**Cost estimation:**

The costs of the action are based on the person-days and related fee rates required to provide guidance to 150 companies in environmentally conscious entrepreneurship and monitoring ("learning and doing"), to coordinate the action (project coordinator of the Province Limburg, 2 working days/week) and to set up consultation and cooperation networks for each Natura 2000 area concerned; i.e. for the Natura 2000 areas Bunder- and Elsloer bos and Geuldal-west respectively.

Approximately 40% of the personnel costs of Province Limburg will be incurred by additional staff.

Travel costs are foreseen for meetings to coordinate with the other project partners and visits to the local partners.

External assistance: the intensive guidance to the companies in the area will be partly outsourced to specialised advisors who will receive specific training for this purpose (see also above under 'How').

**Deliverables:**

30/04/2020	DC1.1.1 Overview of technical measures
30/09/2020	DC1.1.2 Stress test report N2000 sites 153 and 157
31/12/2020	DC1.1.3 Plan of Action and Cooperation Agreement
28/02/2022	DC1.1.4 Report on lessons learned in the first phase of the project
28/02/2022	DC1.1.5 Report on the most promising new crops for the project area, new cultivation methods and new business models

**Milestones:**

- 31/12/2020 MC1.1.1 Plan of Action and Cooperation Agreement signed by all participating parties
- 31/12/2020 MC1.1.2 80 company visits completed (of which at least 40 with an agreement for company adaptation aimed at sustainability and approximately 10 with a light quality obligation)
- 31/03/2021 MC1.1.3 Signature 1<sup>st</sup> Light Qualitative Obligations
- 31/12/2021 MC1.1.4 160 company visits completed (of which at least 80 with an agreement for company adaptation aimed at sustainability and approximately 20 with a light quality obligation)

C1.2 Concrete implementation actions in Van Gogh National Park (Natura 2000 sites 129, 130, 131, 132, 133, 134, 125)

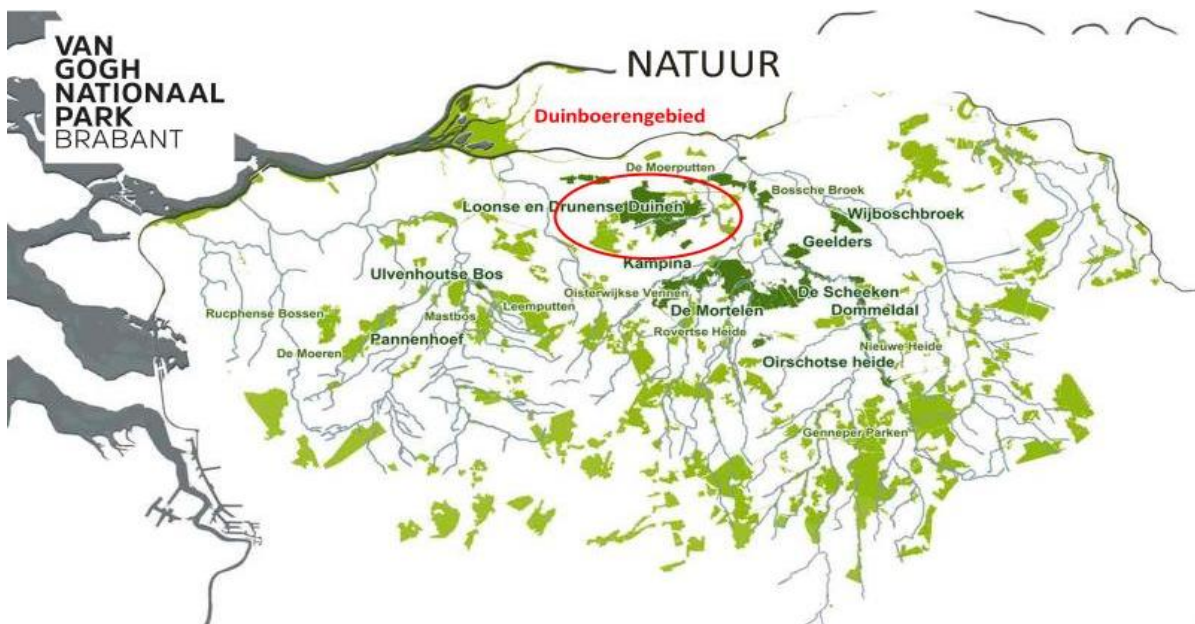
**Introduction**

This action is divided into two sub-actions. First, a general introduction is provided of the area, subsequently the two sub-actions are further detailed in separate paragraphs. Finally the deliverables and milestones are provided for both sub-actions.

**The area and its challenges**

Vincent van Gogh was inspired by the scenery of North Brabant. At the exact location where he found his inspiration, a new national park is currently being created: the Van Gogh National Park (VGNP). In this national park, 'old soil' consisting of beautiful nature reserves and cultural landscape the heritage of Vincent Van Gogh is cherished and in the meantime innovation combined with the spirit of Van Gogh provides a future-proof landscape, which offers solutions for contemporary societal issues.

The centre of the VGNP is an area of 50.000 hectares in which nature (including seven Natura 2000 areas), culture, and the (agricultural) landscape form an 'inner garden' for the four largest cities of the province of North Brabant: 's-Hertogenbosch, Eindhoven, Breda and Tilburg. The VGNP is characterized by a landscape with water courses of plain to montane levels, forests, heathlands, open agricultural landscape and stream valleys. High quality nature is intertwined within the rural- and urban landscape. Eleven parties consisting of the Dutch national government, water authority, province Noord-Brabant and the local government, Friesland Campina, the Rabobank, ZLTO, Collectief Midden Brabant, Duinboeren Foundation, managing organisations of the Natura 2000 areas and Brabant Water have joined forces to improve the quality of the area. For these parties VGNP already exists but they are working hard together to get the formal status of a 'National Park' new style.



**Challenge 1: Conservation goals of 7 Natura 2000 areas**

The seven Natura 2000 sites of the VGNP have different conservation goals. But in most N2000 sites there are species sensitive to nitrogen, eutrophication or suffering desiccation.

The activities presented further on in this proposal contribute to the restoration and consolidation of biodiversity in Natura 2000 areas. The actions stimulate forms of land use in surrounding areas that are in balance with the needs of nature.

The VGNP includes the following seven Natura 2000 areas:

1. National Park de Loonse en Drunense Duinen (Natura 2000 site 131) is a large drifting sand area. This drifting sand area is surrounded by vast coniferous and oak forests that connect to the Brand on the south side, a stream valley with alluvial forests, marshes and fens. A few kilometres south of the area are isolated loam pits. This area contains many dug ponds, surrounded by swamp forest. The conservation goals that are the most connected with the surrounding agricultural landscape are: dry sand heaths with *Calluna* and *Genista* [H2310] Sub-Atlantic and medio-European oak or oak hornbeam forests of the *Carpinus betuli* [H9160A] Floating water-plantain (*Luronium natans*) [H1831] The dry sand heaths are most affected by the nitrogen deposition. The other two nature types [H9160A] and [H1831] are affected by desiccation.
2. Vlijmens Ven, Moerputten & Bossche Broek (Natura 2000 site 132) is a site where the brook valleys of the Dommel, Aa en Broek- and Zandley merge into the peat bog area of the 'Naad van Brabant'. This area is a transitional zone and as such home to base-loving water, marsh and grassland vegetation. The grasslands are the habitat of two very rare butterflies, the *Maculinea teleius* and the *Phengaris nausithous*. In the ditches and marshes live large and small *Misgurnus fossilis* and *Characeae* and *Luronium natans* dependent on seepage water. For hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. [H3140] it is important that the quality of the water improves. One of the measurements is to improve the water quality (eutrophication).
3. The Kampina & Oisterwijkse Vennen area (Natura 2000 site 133) is an alternating semi-natural heath landscape, with dry and moist heathland vegetation, fields, meandering brooks, nutrient-poor fens and *Molinia* meadows on calcareous, peaty or clay-silt-laden soils. In the riparian zones of some fens there is still peat bog formation, in the south there are heath fields. The Kampina is especially important because of the wet heathland and the attractive transitions to lean grasslands (Smalbroeken). The whole area is of great importance for biodiversity because of the fens. In particular dry sand heaths with *Calluna* and *Genista* [H2310] and inland dunes with open *Corynephorus* and *Agrostis* grasslands [H2330] are poorly developed and are under pressure because of eutrophication and acidification.
4. De Langstraat (Natura 2000 site 130) is located in the municipality of Waalwijk. The area is 529 hectares. The landscape of Langstraat is an old ribbon farm landscape with long narrow fields, bordered by alders. Staatsbosbeheer (state forest management) and farmers are the most important managers of the area. De Langstraat is situated on the 'Naad van Brabant', where sandy soils and clay meet. This creates a special hydrological and geological situation. One of the most important consequences is the occurrence of seeps. For hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. [H3140] a direct relation has been found with the level of eutrophication in the surrounding agricultural plots. For *Molinia* meadows on calcareous, peaty or clay-silt-laden soils (*Molinia caerulea*) [H6410] in addition to eutrophication, acidification and desiccation affect the conservation goals.
5. Regte Heide en Riels Laag (Natura 2000 site 134) is a high-altitude heathland with natural dystrophic lakes and ponds [H3160] that merge into a stream valley with oligo-mesotrophic waters and alluvial forests. The area suffers from desiccation. The Natura

2000 habitat inland dunes with open *Corynephorus* and *Agrostis* grasslands [H2330] are affected by poor water quality, eutrophication and acidification.

6. Ulvenhoutsebos (Natura 2000 site 129). The 'Ulvenhoutse Bos' is one of the oldest forests in the Netherlands and consist of both Carr and oak-hornbeam forests. This diversity is a result of relief and the appearance of seep. The sizes of fields with wood anemone have declined over the last years. Moreover, the quality and size of some of the forest types are affected by eutrophication, acidification and desiccation.
7. Kempenland-West (Natura 2000 site 135). This area consists of almost 2000 hectares of precious nature: dry-, moist- and wet heathlands, oligo-mesotrophic waters, stream valleys and alluvial forest. In Kempenland-West Northern Atlantic wet heaths with *Erica tetralix* [H4010A], European dry heaths [H4030] and dry sand heaths with *Calluna* and *Genista* [H2310], are declining in surface and affected in their quality. Moreover, other conservation goals are affected by eutrophication and acidification.

### **Challenge 2: Dairy farming and the natural landscape**

Within the VGNP there is a special role for dairy farming. The area is characterized by an open and closed landscape of meadows interspersed with pockets of nature and forest. Dairy farming is the defining aspect of the landscape. In recent years, many dairy farmers have closed their businesses and sold or leased their pastures. These pastures are now being used for intensive cultivation such as arboriculture, lilies or potatoes. These forms of cultivation are characterized by higher revenues per hectare; however they have a higher impact on the environment. Within the VGNP the challenge is to find viable business models for agricultural entrepreneurs that provide a positive contribution towards the quality of the nature and the environment of the area.

### **Area-oriented approach**

Recently, a cooperation of stakeholders (entitled 'Brabants Bodem') has been formed in the area to tackle the aforementioned issues. The parties within Brabants Bodem are committed to cooperating in the transition of agriculture, supported by the agricultural entrepreneurs / farmers, businesses and inhabitants of the area. Brabants Bodem provides a new perspective for farmers that fits within, and contributes towards, the quality of nature and the landscape. Brabants Bodem is a collaboration between the Rijksoverheid (Dutch national government), Waterschappen (water boards), Provincie Noord-Brabant, the local municipalities<sup>5</sup>, Friesland Campina, Rabobank, three agricultural organizations ZLTO, Collectief Midden Brabant, and the Duinboeren Foundation, the managing organisations of the Natura 2000 site and Brabant Water (the organization responsible for high-quality drinking water in the province). The Brabants Bodem coalition has recently developed and prioritised concrete plans for the region. This Action of the LIFE IP All4Biodiversity comprises two of these projects: the biodiversity monitor and the agroforestry plan. Connecting to Brabants Bodem has the advantage of connecting to an existing cooperation of the main stakeholders in the area.

Especially the involvement of Duinboeren Foundation is important for the implementation of the agroforestry project in this area-oriented approach within the VGNP. Duinboeren Foundation is a group of mostly dairy farmers, in the direct surrounding of the N2000 site Loonse and Drunense Duinen (131). They have set up the regional enterprise 'Duinboeren

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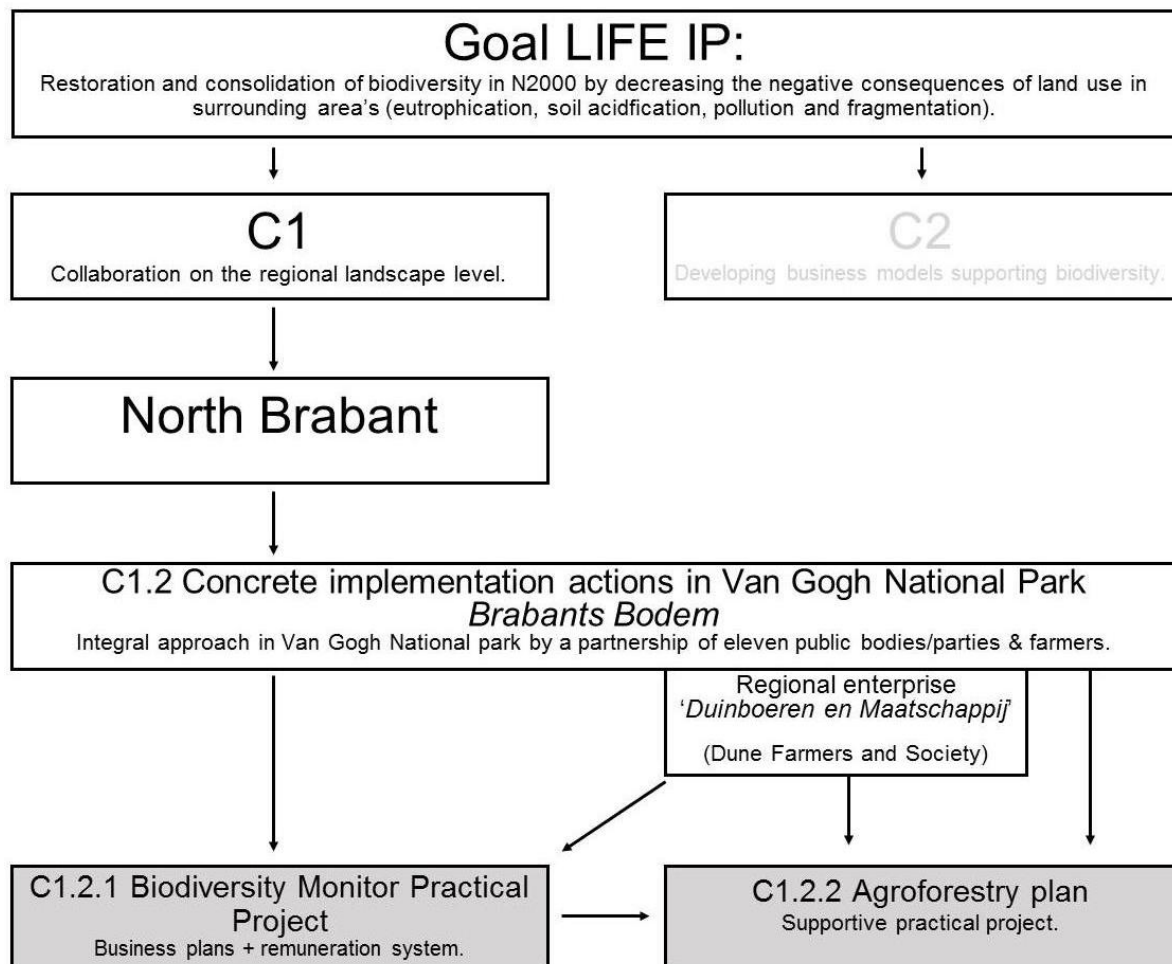
<sup>5</sup> Municipality Tilburg is part of the steering group, 27 municipalities are part of the VGNP.

en Maatschappij' (Dune Farmers and Society). Their experience is an important basis for this LIFE IP project. Within the area in which they are active, the Duinboeren Foundation has taken the initiative to improve the quality of the landscape, nature and biodiversity in the agricultural area surrounding the national park by encouraging the 150 local agricultural businesses to develop sustainable future strategies that contribute to the landscape. The insights and results of the process, that started in 2015, will be organized in this LIFE project and used as a proof-of-concept case to promote the area-oriented approach for the entire VGNP and to stimulate the other 450 farmers who live and work there to shift to more sustainable land use.

This LIFE-action is divided in two sub actions:

1. C1.2.1 Biodiversity Monitor practical project.
2. C1.2.2 Agroforestry plan.

The figure below shows the relationship of the sub-actions to this project's main goals and activities:



The focus of both sub-actions is on improving and demonstrating the positive effects that sustainable dairy farming can have on nature and landscapes. A partnership between regional parties makes the achievement of these activities possible.

There are five guiding principles which form the basis and starting point for the two practical projects:

1. Through an integral approach multiple goals can be achieved.
2. Farms and farmers (the agricultural businesses) form the starting points of these activities.
3. A multi-stakeholder approach: different stakeholder groups (entrepreneurs and regional parties) are involved in each step of the activities.
4. Involvement and funding: entrepreneurs and local stakeholders who co-finance these projects will be involved during the projects. Successful implementation of the projects will make it very likely that these parties will continue their (financial) involvement after the LIFE IP project period.
5. A doing-learning-doing better approach. This implies that learning points and insights will be monitored during the implementation process. In the demonstration phase (phase 2) and replication phase (phase 3) these insights are expected to improve and accelerate the process.

### **C1.2.1: Biodiversity Monitor practical project**

*Beneficiary responsible for implementation: Province of Noord-Brabant (lead)*

Other beneficiary involved: LTO

*Other stakeholders involved:*

- Brabants Landschap
- The Brabantse MilieuFederatie
- Gebiedsonderneming Duinboeren en Maatschappij
- Water Board Aa en Maas

*Description (what, how, where and when):*

PAF references (sub-action, page):

cPAF: F2 p. 47, F3 p.49

nPAF (sub-action, page):

E.2.2. Heathlands and shrubs, p.47.

E.2.3. Bogs, mires, fens and other wetlands, p.51.

E.2.4. Grasslands, p.56.

E.2.5. Other agroecosystems (incl. croplands), p.61.

E.2.6. Woodlands and forests, p.63.

E.2.7. Rocky habitats, dunes & sparsely vegetated lands, p.71.

### **What**

The Biodiversity Monitor is a new instrument that makes biodiversity enhancing performance in dairy farming measurable. The concept of biodiversity is translated into four interrelated pillars: functional agrobiodiversity, landscape diversity, species diversity and regional biodiversity. For these pillars, key performance indicators (KPIs) have been defined. For the VGNP these have been complemented with several indicators that are relevant to the area. The set of indicators measures the performance of the dairy farms and their contribution to biodiversity in each of the pillars. Indicators are for example: the percentage of managed land, the percentage of grassland rich in herbs, greenhouse gas emissions, the emission of ammonia, the nitrogen soil surplus, the percentage of protein from their own farm and the percentage of permanent grassland.



## How

For each indicator four performance levels are determined. The better the performance on each indicator, the more points a dairy farmer can earn. Dairy farmers will receive a score on each of the indicators via a company scan that will be performed on each farm.

The table below gives an indication of the distribution of points for each performance level:

Indicator	Performance	Points
Ammonia emission (kg NH <sub>3</sub> /ha)	<45 kg NH <sub>3</sub> /ha	200
	<50 kg NH <sub>3</sub> /ha	150
	<60 kg NH <sub>3</sub> /ha	100
	<75 kg NH <sub>3</sub> /ha	50
% of total surface used for (agricultural) nature conservation	>25%	200
	>10%	150
	>5%	100
	>1%	50

With the company scan the dairy farmers get an overview of their performance on the indicators. The results of the company scans help dairy farmers in improving their performance by offering concrete measures that they can take to improve their score. The dairy farmers will receive advice (on their farm) for the three measurements that are most suitable for their style of farming and will have the greatest impact on improving their score. For the farmers it is important to receive a higher score because higher scores provide several (financial) advantages. Dairy farmers with higher scores are able to receive a higher price for their milk from their dairy purchaser (for example Friesland Campina), they enjoy the benefit of discounts on the interest at their bank and/or a reduced lease price for the agricultural land from the governmental organizations etc. The unique component of this biodiversity monitor is the remuneration system, which consist of stacking rewards from different organisations on the same indicators. With this system, companies, civil society organisations and governments value the sustainability performance of entrepreneurs in a concrete and effective way for dairy farmers.

The problem at this moment is that most indicators are monitored by different parties. The biodiversity indicators lack a consistent monitoring and registration system. Complimentary and combined monitoring will be organized within this LIFE IP project with the Scan-ICT system. This system has already been developed in collaboration with partner BoerenNatuur. This project will focus on implementing the Scan ICT system for the participating farmers in the VGNP. Monitoring and registration of the indicators is necessary because farmers receive several rewards if their indicator scores improve. Within this project the validation, monitoring and registration of the green indicators is organized in such a way that there is one consistent system. This is an essential necessity for parties that contribute to the remuneration system.

A maximum of 10 farmers will form an agricultural focus group and advise on the implementation process of the biodiversity monitor. They make sure the monitor inspires the dairy farmers to improve their scores; the development of a remuneration system, they

will contribute to improvement of the monitor and contribute to knowledge sessions that are offered to the farmers in the area.

The project aim is to develop a system that stimulates a large group of dairy farmers to implement measurements leading to more sustainable dairy farming. In this LIFE project, a total of 200 farmers will participate.

### **Where**

Initially the biodiversity monitor project is aimed at 200 farmers in the surroundings of the seven Natura 2000 areas within the VGNP. In the second phase (starting March 2022) 'Brabants Bodem' has the ambition to roll out this concept in the entire province of North Brabant. The aim is to then include at least 600 farmers in this next phase of the project.

### **When**

The Biodiversity Monitor project will start in March 2020 and will be rolled out in two phases. Phase 1 consists of two blocks. Block one is a small scaled phase in the first 6 months in which 50 farmers will participate. (March 2020 – September 2020). After the 50 farmers have started, an additional 150 farmers will participate in block two, starting September 2020 with end date March 2022.

After the first phase, the aim is to roll out the project to the whole province of North Brabant in phase 2 (starting from March 2022), reaching at least 600 participating farmers.

Relationship with other project components:

- C2. The practical components are all related to the theme of business models from subproject C2 and are based on an area-oriented approach.
- D. The monitoring of the impacts will be coordinated with Action D.

### ***Reasons why this action is necessary:***

The realization of a biodiversity monitoring system provides insights to dairy farmers in what measures they can take to make their business perform better on functional agrobiodiversity, landscape diversity, species diversity and regional biodiversity. Improvement on these facets is linked with (financial) benefits for dairy farmers. The remuneration system within the tool will motivate dairy farmers to actually implement measures and contribute to biodiversity as a result. Within the VNGP there are seven Natura 2000 area's which are intertwined with the surrounding (agricultural) landscape. Dairy farmers are an integral part of the landscape. Solutions need to be found that allow dairy farmers to continue their business in such a way that positive business models are achievable, with measures that contribute positively towards biodiversity. The Biodiversity monitor will assist this process.

### ***Constraints and assumptions:***

200 farmers are willing to participate in this project voluntarily. The data from different farms collected in 2019 constitute the baseline measurement for the KPI's that are to be developed for the first 50 farmers and the 150 farmers thereafter, in 2020. The indicators can be improved by farmers through management measures and will be in line with European- and national legislation and regulations.

### ***Expected results:***

In the total project period of this LIFE IP project (6 years) we expect quantifiable positive effects on the environmental indicators that are developed at the beginning of the project; indicators such as: the percentage of grassland rich in herbs, greenhouse gas emissions, the emission of ammonia, the nitrogen soil surplus, the percentage of protein. This will indirectly contribute to the reduction of eutrophication and acidification in the seven Natura 2000 areas in the VGNP.

### ***Cost estimation of this project:***

#### *Personnel costs:*

##### Policy officer – permanent staff

- A project manager for the general project and developer of the business models.
- 2 days a week, 43 weeks a year for 2 years at a rate of € 400 a day.

##### Policy officer – additional staff

- Additional staff for 2 days a week. Project leader who develops cooperation with farmers and other parties, coordinates actions and is responsible for implementation.
- 2 days a week, 43 weeks a year for 2 years at a rate of € 400 a day.

#### *Eternal assistance:*

##### Project manager – external assistance

- Project manager for C1.2.1. Three days a week in the first year, two and a half days a week in the second year at a daily rate of €800.

##### Scanning 150 business plans of farmers

- The costs for scanning 150 business plans, costs are estimated at €1.000 per individual farmer. This sum includes the costs for recruiting these farmers.

##### Demand-driven knowledge sessions

- This action consists of visits to individual farms and group knowledge sessions that are aimed at identifying measures for farmers to reach a higher score in the biodiversity monitor. Costs are for two years.
- Costs for individual sessions for 150 farmers x €500.
- Three to six knowledge sessions that are organised by theme for example: forage, grazing etc. (Budget €25.000 total)

##### Set up and implement monitoring KPI agrobiodiversity

- Elaborate and validate agrobiodiversity indicators for biodiversity monitor in Brabant.
- Monitoring performance indicator for agrobiodiversity (among entrepreneurs).
- General costs for this activity € 15.000 (developing a general system).
- The individual costs for each farmer are based on 1 day for each farmer (0,5 day for an on-site check, 0,5 day for processing the data.) In total this equals 200 days at a rate of €800 a day = € 160.000.

##### Agricultural focus group

- Ten farmers will be involved in the agricultural focus group. They will receive a compensation to attend a meeting every quarter. Twelve meetings in total (duration is three

years). Eight of these meetings are budgeted in C.1.2.1. the other four meetings are budgeted in C.1.8.

- Eight meetings, ten agricultural entrepreneurs at a compensation of € 250 for each agricultural entrepreneur.

### **C1.2.2 Agroforestry plan**

*Beneficiary responsible for implementation:*

- Province of Noord-Brabant (lead)

*Other stakeholders involved:*

- Regional enterprise Duinboeren en Maatschappij (Dune Farmers and Society)

*Description (what, how, where and when):*

PAF references:

cPAF: F2 p. 47, F3 p.49

nPAF:

E.2.2. Heathlands and shrubs, p.47.

E.2.5. Other agroecosystems (incl. croplands), p.61.

E.2.6. Woodlands and forests, p.63.

E.2.7. Rocky habitats, dunes & sparsely vegetated lands, p.68.

### **What**

Green-blue interlacing is one of the key indicators for biodiversity in rural areas (Geertsma, W. 2002)<sup>6</sup>. Agroforestry is a special form of green interlacing. Planting trees is not only beneficial to biodiversity, the trees also contribute in different functions to the livestock that are an integral part of the VNGP area. Agroforestry has therefore been on the agenda of the Duinboeren Foundation for the last few years. Many VNGP farmers were interested in fodder trees and shrubs for their livestock after attending a course on this subject. On request of the farmers, the Duinboeren Foundation has developed a plan for its members to put agroforestry into practice. The aim is to develop suitable business cases. These cases will be tested by planting forage trees and shrubs.

The first step of this project focusses on a group of 15 farmers in the Duinboeren area and is aimed at assisting these farmers to implement agroforestry into their companies. In the second step of this project another 10 farmers will be involved in the wider VGNP to promote agroforestry and (forage) tree planting. After the two steps taken in phase one, the project will reach phase two in which it aims to scale up in the whole VGNP.

The trees and shrubs that are planted will have several functions within the agricultural systems: they serve as fodder trees and shelter for cattle, they strengthen the health of the livestock and also reduce pesticide use in the cultivation of fodder crops. Furthermore they serve as picking edges, food forest, or a picking garden: their purpose is to enable people to harvest fruits, nuts and leaves themselves (paid or voluntary).

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<sup>6</sup> <https://core.ac.uk/download/pdf/29296102.pdf>

Farmers participate in this project with their own land and labor and will invest in adjusting their livestock farm in a different system, agroforestry.

### **How**

The following actions are covered by this practical project:

- Recruiting 15 + 10 farmers who are interested in agroforestry.
- Further developing the theoretical concept for the VGNP.
- Perform a baseline study (at 15 + 10 farmers).
- Designing different cases (15 + 10 farmers).
- Feasibility study for different cases (15 + 10 farmers).
- Construction of the cases. 25 farm pilots. Starting with 15 pilots, later 10 additional. The pilots consist of at least 25 hectares of different forms of shade and wind trees (solitary, windbreaks, winter gardens, etc.), fodder trees and medicinal (fodder) trees and 5 km of picking hedges for local residents; (wooded banks with food producing trees).
- Determine results of agroforestry for the farms.
- Determine results for biodiversity/impact on nature and Natura 2000 (impact and spatial).

### **Where**

The project will be performed in the 'Duinboeren' area. This is the N2000 site 131 Loonse- and Drunense Duinen. In the second phase this project will scale up and aims to reach farmers within the whole VGNP (all seven N2000 sites of the VGNP).

### **When**

This project consists of two phases. The first phase runs from March 2020 – March 2022. The second phase starts from March 2022 onwards. In the first phase two steps will be taken. In step one, starting March 2020, the first group of farmers (15 farmers) will start with start planting trees within the 'Duinboeren' area - N2000 site 131, Loonse and Drunense Duinen. In step two, starting March 2021, the second group of farmers (10 farmers) will follow in the same area. The second phase will start in March 2022. In this phase farmers of the whole VGNP will be invited to participate.

### ***Reasons why this action is necessary:***

Motivation for this part of the practice: agroforestry activities have a double objective. They contribute to the wellbeing of livestock/cattle of farmers in the VGNP and are beneficial for agrobiodiversity as they contribute to an attractive landscape. Moreover they contribute to the restoration and consolidation of biodiversity in Natura 2000 by decreasing the negative consequences of land use in surrounding area's (eutrophication, soil acidification, pollution and fragmentation).

### ***Constraints and assumptions:***

There are 25 farmers who want to participate voluntarily in this project.

### ***Expected results:***

The expected results of this project are:

- 25 farmers who have implemented agroforestry into their business
- 25 hectares of different forms of shade and wind trees (solitary, windbreaks, winter gardens, etc.), forage trees and medicinal (forage) trees as forms of agroforestry for

farmers and 5 km of picking walls for local residents and tourists; (wooded banks with food producing trees).

- Knowledge is gathered and shared about the (economical) value and benefits of implementing forage trees into an agricultural business
- Knowledge is gathered and shared about the impact of an increase of (forage) trees in farm fields and meadows to the biodiversity of the N2000 sites and surrounding areas.
- If projects results are positive they might convince farmers in the remaining part of the VGNP to implement agroforestry elements into their business. This may lead to a further increase in the number of hectares in which agroforestry is implemented.

*Cost estimation of this project:*

*External assistance:*

Project coordination

- Project coordination for the agroforestry plan C.1.2.2
- Two years, one and a half day a week at a rate of € 800

Baseline measurement of interested farmers

- Recruitment of the 25 farmers that will participate in this project and perform a baseline measurement.

Feasibility studies

- Economic calculations of forage/medicinal trees and their impact on business operations for farmers.

Design and construction of agroforestry elements

- At this stage 25 farmers will be given the assignment to plant the forage trees and shrubs which contribute towards the demonstration site in N2000 area 131 Loonse and Drunense Duinen.
- Analysis of the farmers' plots.
- The analysis is translated into a plan in which a description is made of what species of (medicinal) forage tree is most suitable for which plot. Furthermore, a set of KPI's will be developed for the demonstration sites to monitor the progress.

Monitoring the impact of agrobiodiversity

- These costs are for monitoring the progress and results of this project specifically aimed at agroforestry. (Costs for monitoring are largely included in the biodiversity scan.)

*Durable goods / Equipment*

Equipment needed to pilot / demonstrate agroforestry (planting and harvesting tools). This equipment will be used to a significant degree during this project and will be used as well in phase 2 where the project will be scaled up throughout the whole VGNP (action C1.7). Public body province of North Brabant complies with Article I.13 of the Model Grant Agreement.

*Consumables*

Planting forage trees (costs estimated based on quote from supplier)

Costs for the arrangement of demonstration sites / pilots. The trees and shrubs planted will serve as prototype and practical test.

**Deliverables:**

30/09/2020	DC1.2.1 Stress test report all seven N2000 sites VGNP
31/12/2020	DC1.2.2 Area activity plan including roles and responsibilities
28/02/2021	DC1.2.3 Area specific monitoring plan (input for D.1 overall monitoring plan)
31/10/2021	DC1.2.4 Update of technical and financial progress
28/02/2022	DC1.2.5 Concluding report (input for F.2 Interim Report 1)

**Milestones:**

30/06/2020	MC1.2.1 First meeting with all stakeholders, intention to cooperate confirmed
31/08/2020	MC1.2.2 Cooperation agreement signed
31/12/2020	MC1.2.3 Activity plan adopted
28/02/2022	MC1.2.4 Concrete measures implemented

### C1.3 Concrete implementation actions in Brummen area (Natura 2000 Landgoederen Brummen 58)

*Beneficiary responsible for implementation:*

Province Gelderland (lead)

Other beneficiaries involved:

- Natuurmonumenten
- LTO

Other stakeholders involved:

- Waterboard Vallei en Veluwe
- Land-owners
- Agricultural Collective Veluwe / individual farmers
- Residents
- Stichting Landschapsnetwerk Brummen
- Municipality of Brummen

*Description (what, how, where and when):*

See also PAF sections E2.2 E2.4 and E2.6.

In this area, efforts are being made to restore the following habitat types:

H3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*

H4010A Northern Atlantic wet heaths with *Erica tetralix*

H6230 Species-rich *Nardus* grasslands

H6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils

H7150 Depressions on peat substrates of the *Rhynchosporion*

H91E0C Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*

H9120 Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer

In addition, the site has been designated under the Habitats Directive for the following species:

H1166 *Triturus cristatus*

H1831 *Lurionium natans*

#### **What**

The WaardeVOL-Brummen project area is located in the Zuidelijke IJsselvallei. The Natura 2000 area Landgoederen Brummen (58) is located in this area consisting of the De landgoederen Voorstonden and Leusveld and the nature reserves Empense and Tondense Heide. A special feature of this area is the valuable and varied landscape gradient that runs from the Veluwe, via the estates area and the floodplains to the river IJssel. This type of gradient landscape is rich in different ecosystems and high biodiversity. Because of their great natural values, both the Veluwe, the country estate area and the floodplains are part of the European Natura 2000 network. The area hence can serve as a valuable pilot area for the All4Biodiversity project, providing a variety of habitats in which activities can be trialled.

Action 1.3 'WaardeVOL Brummen' aims to strengthen the (natural) qualities of the area and respond to a changed climate. In this action the Province of Gelderland cooperates with Natuurmonumenten and LTO as well as with other important stakeholders such as the municipality of Brummen and the Vallei and Veluwe Water Board, residents groups, social organizations and companies in the agricultural sector.

The main tasks of this action are:



- Creating new nature and improving the quality of existing nature
- Protection and restoration of the hydrological system aimed at improving water quality and water retention and storage.
- Development towards a nature-inclusive cycle of agriculture with a sustainable earnings model.

### **How**

The action will start by drawing up a sketch design for the layout of the area together with all partners and stakeholders involved. The sketch includes a design for the restoration and development of Natura 2000 habitats and the mitigation of climate change. For this purpose hydrological measures are taken for water retention and storage. This leads to higher groundwater levels in spring and summer. This requires adjustment of the water management of the Oekense brook and the Rhienderen brook. Approximately 150 hectares of farmland will be transformed into nature area in the course of the project. These areas are selected on the basis of ecological potential and the effects of hydrological measures. Plots that get wetter are less suitable for regular agricultural use and often have a higher natural potential.

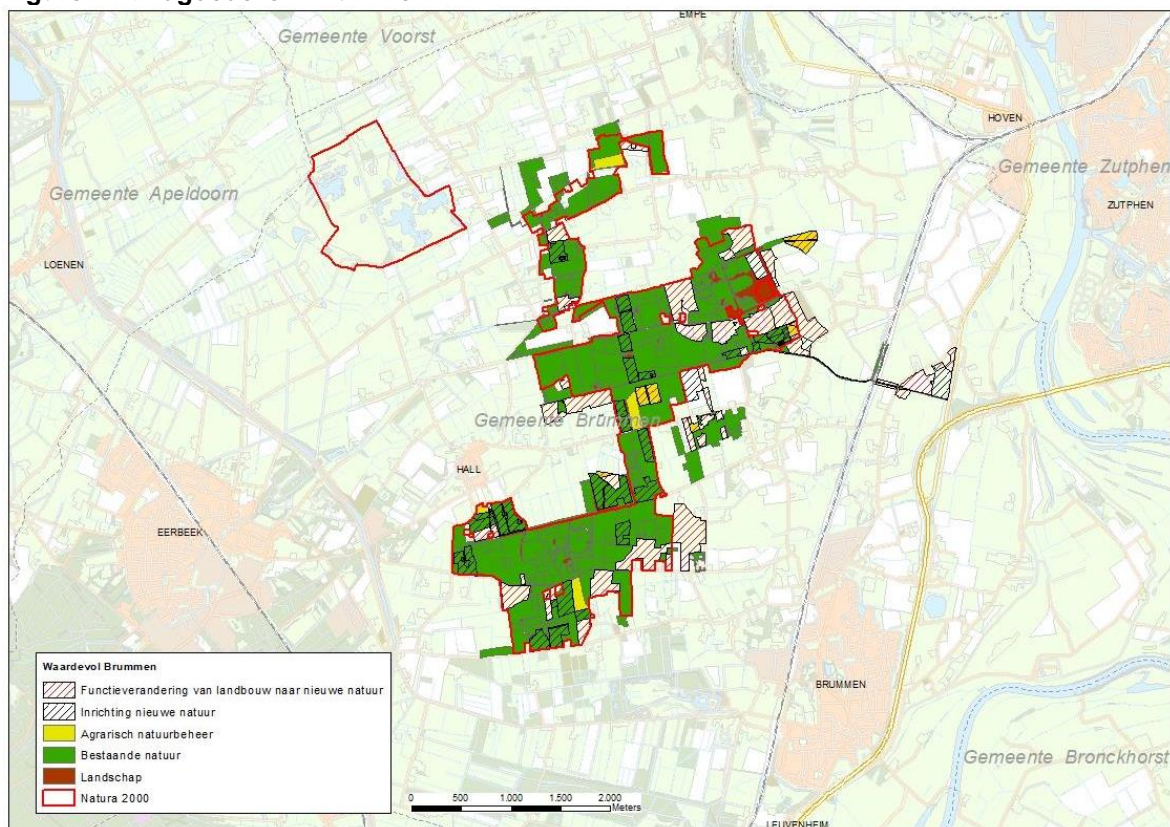
In addition, opportunities will be sought together with local farmers for further development towards a nature-inclusive cycle of agriculture, with accompanying earning models to link business operations to the tasks in the area. These actions shall be carried out by the partners concerned and will include:

- Joint exploration with local farmers and Natuurmonumenten into the possibilities of nature-inclusive circular agriculture and associated earning models in line with the surroundings and demand for local food.
- Nature-inclusive business plans are drawn up with (5-10) interested farmers – this activity will be coordinated with Action C2.
- In order to realise these plans, the necessary land, financing, developments in the value chain, ancillary activities, subsidies from the government for potential complementary actions, room for experimentation, etc., will be identified.
- Promote the demand for local food by developing more knowledge and awareness among consumers (companies, institutions and inhabitants) about the benefits of local food by working with local food networks (to be coordinated with the campaign on the relation between biodiversity and food that will be conducted as part of Action E1).

### **Where**

A picture of the N2000 area 'Landgoederen Brummen' (marked yellow), which is located north-west of the municipality of Brummen is provided below:

**Figure 7 Landgoederen Brummen**



Actions will be conducted in the N2000 area and its direct surroundings. The exact outreach will depend on the design sketch developed at the start of the project and on the farmers participating in the activities.

### **When**

The project WaardeVOL Brummen is conducted in phase 1 and will continue in phase 2 of the project (partly within the IP itself, partly by initiating new complementary actions).

Summary of activities in phase 1:

- March – June 2020: Partnership development and sketch of plan area.
- August – September 2020: Stress test conducted.
- July – December 2020: Exploration with farmers, development of detailed plan.
- January 2021 – March 2022: Conducting field activities / developing business plans
- January 2022 – March 2022: report on lessons learned for demonstration in other areas.

In phase 2 of the project execution of works on new nature development and hydrological measures will continue (partly as complementary actions of the LIFE IP, e.g. financed by POP/ERDF or Agrarisch Natuur- en Landschapsbeheer ANLb/EARDF funding – a number of farmers in the area participate in ANLb).

### **Reasons why this action is necessary:**

This Action is being carried out for the realisation of the Management Plan Natura 2000 Landgoederen Brummen. The nature objectives for completing the Gelderland nature network will also be achieved by making the nature areas more robust with approximately 150 hectares of new nature. The further development towards a nature-inclusive cycle of agriculture has a positive contribution to the reduction of nitrogen deposition, increasing biodiversity and improving the hydrological situation.

## **Constraints and assumptions**

### *Constraints*

This project is carried out on the basis of voluntary cooperation from farmers and other land owners, and thus depends on their continued willingness to participate in the development towards nature-inclusive circular agriculture. Contacts that have already been developed during the preparation of the LIFE IP are so far very positive in this respect.

### *Assumptions*

We assume by working on local involvement nature development and the development of agriculture in this area is positively supported by residents and farmers.

### **Expected results:**

- Restoration measures Natura 2000 Brummen Estates,
- Hydrological recovery by adapting brooks and small watercourses
- New nature for Natura 2000 and Gelderland nature network approximately 150 ha
- Nature-inclusive circular agriculture taking into account its environment (water management, biodiversity and nature management) on at least 5 farms.
- Opportunities to sell local products at institutions and shops.

### **Cost estimation:**

The cost estimation (combined for Actions C1.3 and C1.4) is based on the following:

Personnel costs are estimated based on the required competences and capacity to conduct the project, in total approximately 24 person-months are foreseen in phase 1 of the project. The majority of personnel of the Province assigned to the project will be additional staff fully dedicated to implementing the LIFE IP.

Travel costs are foreseen for overall project meetings and meetings with the local stakeholders.

Several activities are envisaged to be subcontracted, including

- Acquiring support in developing the area specific plans for nature inclusive farming.
- Development of business plans/earning models for farmers.
- Support in developing a marketing strategy/promotion campaign for agricultural products that have a positive impact on biodiversity.
- Development of further field actions / additional complementary actions, including assessing finance options for these actions.

### **Deliverables:**

30/09/2020	DC1.3.1 Stress test report N2000 site Landgoederen Brummen
31/12/2020	DC1.3.2 Area activity plan including roles and responsibilities
28/02/2021	DC1.3.3 Area specific monitoring plan (input for D.1 overall monitoring plan)
31/03/2021	DC1.3.4 Business plans supporting nature/biodiversity
31/07/2021	DC1.3.5 Report on local market for biodiversity enhancing products
31/10/2021	DC1.3.6 Update of technical and financial progress
28/02/2022	DC1.3.7 Concluding report (input for F.2 Interim Report 1)

### **Milestones:**

30/06/2020	MC1.3.1 First meeting with all stakeholders, intention to cooperate confirmed
31/12/2020	MC1.3.2 Cooperation agreement signed, including 5-10 farmers willing to participate
31/12/2020	MC1.3.3 Activity plan adopted
28/02/2022	MC1.3.4 Concrete measures implemented

C1.4 Concrete implementation actions in the IJsseluitwaerden area (Natura 2000 Rijntakken, area number 38)

**Beneficiary responsible for implementation:**

Province Gelderland (lead)

Other beneficiaries involved: MinlenW, Staatsbosbeheer, Natuurmonumenten.

This area includes the following floodplains: Hoenwaard, Wilpse Klei and Velperwaarden, specific additional stakeholders in the area partners are listed below.

*Hoenwaard*

- Waterboard Vallei en Veluwe (main stakeholder, co-ordinating activities in the area with the Province Gelderland).
- Municipality of Hattem.
- Municipality of Heerde.
- Individual farmers.
- Vadesto outdoor center.
- Geldersch Landscape and Castles Foundation.
- Agricultural collective Veluwe.

*Wilpse Klei*

- Gelderse Natuur- en Milieufederatie (GNMF, co-ordinating activities in the area with the Province Gelderland).
- Municipality of Voorst.
- Individual farmers.
- Agricultural collective Veluwe.

*Velperwaarden*

Other stakeholders involved:

- Municipality of Rheden.
- Municipality of Arnhem.
- Individual farmers.
- Geldersch Landscape and Castles Foundation.
- Agricultural collective Veluwe.
- Stichting Heideboerderij Nederland.

**Description (what, how, where and when):**

PAF references:

cPAF sections B.3 p. 17, F.3 p. 49

nPAF sections E2.4 and E2.6

In the floodplain of the IJssel, efforts are being made to restore the following habitat types and species:

- H6120 Xeric sand calcareous grasslands
- H6510 Lowland hay meadows
- Grasslands with *Fritillaria meleagris*
- Ash and elm forests
- H91F0 Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmion minoris*)
- H3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
- Habitat of the *Crex crex* (A122) and *Porzana porzana* (A119)

### **What**

The Hoenwaard, Wilpse klei and the Velperwaarden are floodplains of the river IJssel which are entirely located in the Natura 2000 area Rijntakken. Each of these areas has its own regional processes with governments, nature organisations and landowners such as farmers. Large parts of these floodplains are used for agriculture and partly also already in use as nature. In order to strengthen the nature quality and river safety of the area, the various parties are working on a plan for the realisation of the various tasks.

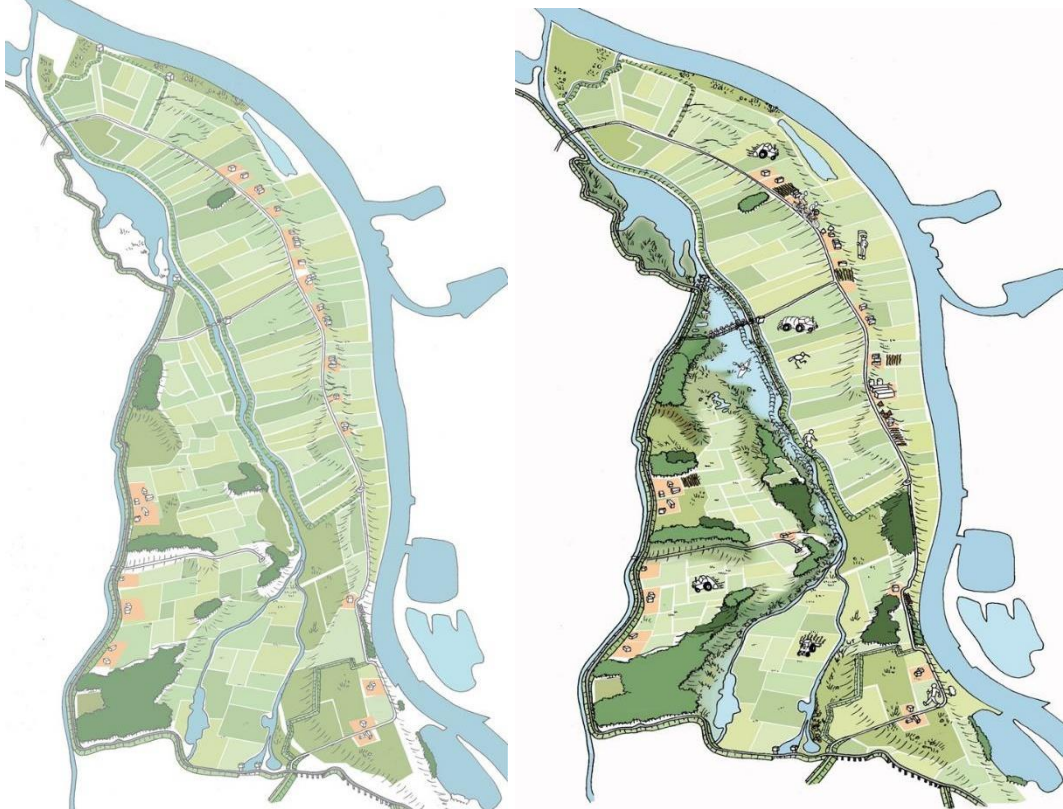
An important task for nature areas lies in the realisation of hardwood forests and grasslands with *Fritillaria meleagris* in the vicinity of a meadow bird area. This creates tension with the objectives of other stakeholders, such as farmers and the river management by Rijkswaterstaat. In addition, there is another task for the transformation of agriculture into nature for the benefit of the Gelderland Nature Network.

The main tasks for these floodplains are:

- Creating new nature and improving the quality of existing nature
- Protection and restoration of the river system aimed at improving water quality and safety.
- Development towards nature-inclusive circular agriculture with a long-term earnings model.

Below, an impression is provided of the current and envisaged land use in Hoenwaard.

**Figure 8 Impression of current and envisaged land use in the Hoenwaard N2000 area**



### **How**

#### *Hoenwaard*

For the Hoenwaard, the action builds upon a cooperation that has been initiated with the stakeholders indicated above. All parties have agreed to general principles of the cooperation that are included in the document 'Levendige Hoenwaard' (Lively Hoenwaard). At the end of 2020, the directors of the government parties will adopt a joint development plan with an implementation programme. From 2021 onwards, the parties will carry out this task. Waterschap Vallei en Veluwe will raise the eastern quay (3 km) of the Wetering and

move it to the east. The western quay (1.5 km) will be lowered for nature development. The pumping station in this area is also being renovated. MinlenW / Rijkswaterstaat will implement the WFD measures.

The Province of Gelderland will purchase agricultural land in order to transform it into nature.

Together, the participating authorities will work in close consultation with the farmers and other stakeholders on the acquisition of the necessary agricultural land. The municipalities, in consultation with entrepreneurs, take care of the recreational objectives such as walking and cycling paths, canoe routes and viewpoints. The results of the regional process will be included in the regional vision of the municipality. The Geldersch Landscape and Castles Foundation ensure good management of nature in the area.

As part of this Action, the Province Gelderland will together with the farmers and other stakeholders explore how they can further develop their business operations based on the new natural conditions in the area in order to achieve nature-inclusive circular agriculture with a sustainable income model.

#### *Other floodplains*

A similar approach is taking place in the other floodplains of the Natura 2000 area Rijntakken, along the river IJssel: Wilpse Klei and the Velperwaarden. However, progress is different there, in particular the cooperation with the land-owners is at an earlier stage of development and will be further elaborated as part of the project, as of March 2020.

#### **Where**

The maps of the Hoenwaard, Wilpse klei and Velperwaarden are provided below (N2000 sites indicated in green – habitat directive / blue ). For the Velper values, the area between the Veluwe (indicated in purple) and the Velperwaarden is also included in the plan area.

**Figure 9 Hoenwaard, Wilpse klei and Velperwaarden**



#### **When**

- 2020: Research and consultation for the purpose of the development plan
- 2020: Exploration with the farmers and the elaboration of the nature business plans.
- end of 2020: Decide on development plan.
- 2021: Preparing specifications for technical works and applications for permits.
- 2021: Start implementing the individual nature business plans.

- 2022: Carry out the design plan.

***Reasons why this action is necessary:***

The main objective is to achieve a solid and productive cooperation, in which clear objectives are targeted by the individual stakeholders. The future prospects outlined in the Levendige Hoenwaard aim for a combined achieving of the objectives of the Province (strengthening biodiversity, requirements of the Rijntakken management plan for Natura 2000) and those of individual entrepreneurs (there must be a sustainable future for the farmers in the area) and citizens, as well as meeting the requirements of MinlenW / Rijkswaterstaat with regard to river safety and nature, and safe water management of the Water Board.

***Constraints and assumptions***

*Constraints*

The strength of the project is also the limiting factor: good cooperation may sometimes also mean that compromises need to be made. Stakeholders need to be prepared not to have all their own goals fully achieved so that goals of other parties can also be (partially) achieved. The willingness of landowners (especially farmers) to sell land is an important point of attention, as is the space that can be found to carry out work in the floodplains that may not fully comply with Rijkswaterstaat's rules and regulations for these areas.

This project is carried out on the basis of voluntary cooperation from land owners and farmers, which means that it is possible that they do not wish to participate in the development towards nature-inclusive circular agriculture. The project is targeted at developing a system in which there are benefits for all land users, careful co-development and good communication with land users is essential to achieve this.

*Assumptions*

Parties assume that other public objectives in the area that may emerge during the project will not interfere with the action. The alignment and cooperation between different government levels / public bodies is a continuous point of attention during the project.

For the success of the project it is assumed that land owners will be willing to sell part of their land for the relocation of the quay and for nature development.

In addition, it is assumed that stakeholders are willing to negotiate and are not too rigid in pursuing their own objectives in full. It is important that the farmers in the working group maintain sufficient support among the other farmers and residents of the area.

***Expected results (quantitative information when possible):***

- A development plan supported by all parties.
- Nature business plans for individual farmers.
- An integral plan for land acquisition.
- Renovation of a pumping station.
- Shifting of quays and widening of a canal.
- Development goals in accordance with the Natura 2000 objectives.
- Farmers in the area are applying nature inclusive methods.

***Cost estimation:***

The cost estimation (combined for Actions C1.3 and C1.4) is based on the following:

Personnel costs are estimated based on the required competences and capacity to conduct the project, in total approximately 24 person-months are foreseen in phase 1 of the project. The majority of personnel of the Province assigned to the project will be additional staff fully dedicated to implementing the LIFE IP.

Travel costs are foreseen for overall project meetings and meetings with the local stakeholders.

Several activities are envisaged to be subcontracted, including

- Acquiring support in developing the area specific plans for nature inclusive farming.
- Development of business plans/earning models for farmers.
- Support in developing a marketing strategy/promotion campaign for agricultural products that have a positive impact on biodiversity.
- Development of further field actions / additional complementary actions, including assessing finance options for these actions.

**Deliverables:**

30/09/2020	DC1.4.1 Stress test report N2000 site Rijntakken
31/12/2020	DC1.4.2 Area activity plan including roles and responsibilities
31/12/2020	DC1.4.3 Nature inclusive farming area plan
28/02/2021	DC1.4.4 Area specific monitoring plan
30/06/2021	DC1.4.5 Nature business plans including realisation strategy
30/06/2021	DC1.4.6 Marketing strategy biodiversity improving products
31/10/2021	DC1.4.7 Update of technical and financial progress
28/02/2022	DC1.4.8 Concluding report (input for F.2 Interim Report 1)

**Milestones:**

30/06/2020	MC1.4.1 First meeting all stakeholders, intention to cooperate confirmed
31/12/2020	MC1.4.2 Cooperation agreement signed, including 5-10 farmers per project area willing to cooperate
31/12/2020	MC1.4.3 Activity plan adopted
28/02/2022	MC1.4.4 Concrete measures implemented



### C1.5 Concrete implementation actions in the Waddenarea

NL3009005 (Ameland) + NL3009007 (VR) (Terschelling) + NL2003059 (HR) (Terschelling) + NL3009006 (Schiermonnikoog).

In addition impacting NL1000001 (Wadden Sea) + NL9801001 (Wadden Sea) + NL9802001 (North Sea).

#### *Beneficiary responsible for implementation:*

Coordinating partner: Province of Fryslân

- Other beneficiaries involved: Staatsbosbeheer, Natuurmonumenten, Vogelbescherming Nederland

#### Involved stakeholders / partners of interest:

- Land owners / tenants cq. agrarians
- Wadden municipalities and inhabitants
- Wetterskip Fryslân
- Collective Wadden birds
- Vitens (water company)
- Bond voor Friese Vogelwachten
- Kollektieven beried Fryslân
- It Fryske Gea
- Business associations
- Wadden tourism board

#### **Description (what, how, where and when):**

##### References PAF:

cPAF: B.3 (p.20), F.3 (p.49)

nPAF:

E2.4. Grasslands (p. 62)

E2.7. Dunes (p. 71)

The habitat types and target species included in the management plans are listed in the table below.

<b>Habitat types</b>	<b>Code</b>
Humid dune slacks [Terschelling / Ameland / Schiermonnikoog]	H2190
Species-rich Nardus grasslands [Terschelling / Ameland]	H6230
Molinia meadows on calcareous, peaty or clayey-silt-laden soils [Terschelling / Ameland]	H6410
Decalcified fixed dunes with Empetrum nigrum [Terschelling / Ameland]	H2140
Fixed coastal dunes with herbaceous vegetation ("grey dunes") [Terschelling / Ameland / Schiermonnikoog]	H2130
Wooded dunes [Terschelling / Ameland / Schiermonnikoog]	H2180A

<b>Target species breeding birds</b>	<b>Code</b>
Asio flammeus	A222
Oenanthe	A277
Circus cyaneus	A082
<b>Target species non-breeding birds</b>	<b>Code</b>
Pluvialis apricaria	A140
Pluvialis squatarola	A141
Saxicola rubetra	A275
Limosa limosa	A156
Limosa lapponica	A157
Vanellus vanellus	A142
Haematopus ostralegus	A130
Tringa totanus	A162
Numenius arquata	A160
Branta leucopsis	A045
Branta bernicla	A046

### **What**

In short, the Wadden Islands Terschelling, Ameland and Schiermonnikoog all consist of beaches, a dune area, a polder with residential areas and salt marshes. The dune areas form a varied landscape with dunes, dune valleys, dune heath and forests.

The dunes of Terschelling are one of the oldest in the Wadden area and vary greatly in height. The dunes of Ameland are relatively flatter and form large continuous sloping dunes. The dunes of Schiermonnikoog are the most calcareous in the Wadden area and this can also be seen in the vegetation in the dunes and the forests with for example many hawthorns.

The dune areas with nature values of European importance have been designated as Natura 2000 areas, together with the Wadden Sea and the North Sea coastal zone, including the beaches of the islands. Dunes contain a variety of habitat types such as Grey Dunes, Moist Dune Valleys, Dune Heathen and Dune Woods. In addition, characteristic breeding birds have been identified as target species such as the Circus cyaneus, Asio flammeus and Oenanthe oenanthe.

The main bottlenecks to achieve the Natura 2000 objectives on the Wadden Islands are the decline in dynamics, the hydrological situation, the precipitation of nitrogen and the disturbance of breeding birds. In the future we expect also problems with drought and salinization through climate-change. There are opportunities for a return of more dynamism, restoration of hydrology and taking effect-oriented measures to resolve some bottlenecks and become more future-proof regarding climate-change. The polders of the islands are not part of the Natura 2000 area, but do form an important part of the island and have a great impact on the nature area of the Wadden Sea and the islands. The polders mostly have an agricultural use. The polders belong to the important meadow bird core areas of Friesland. High concentrations of meadow birds breed here, and success rate is good. In recent years drought and insufficient supply of food in the chick phase seems to become a problem for chick survival.

The Natura 2000 and meadow bird targets can only be met if water management in the surrounding area is adjusted and nitrogen deposition is prevented. Both measures can only be implemented with the support of and in close cooperation with stakeholders (mostly farmers). The farmers can also have an important role in the management of Natura 2000 sites by letting their cattle graze in the Natura 2000 areas.

More specifically, this action focuses on:

*Nature conservation, including the management of meadow birds areas, as part of profitable agriculture and contributing to the quality and experience of the Frisian Wadden Sea area.*

By restoring the coherence between the polders and the dunes, with their hydrological gradients and biodiversity, the habitat types in the Natura 2000 area will be strengthened. The polders are particularly important as a meadow bird breeding area, foraging area for wintering *Branta bernicla* (A046) and *Branta leucopsis* (A045), and the polder is important for wader birds crossing high tide such as *Haematopus ostralegus* (A130), *Numenius arguata* (A160) and *Limosa lapponica* (A157).

The Wadden Sea is a hub for millions of migratory birds and is therefore a world heritage site. The area is the most important stopover for migratory birds on the flyway between the Arctic and the Atlantic coast of Africa. In order to protect these migratory birds, the Netherlands and Friesland in particular have a special responsibility.

Combining agriculture with other functions and interests in the rural area is a major task. Cooperation of farmers on a voluntary basis is essential. In the meadow bird core areas, we support the farmers with, among other things, subsidies for development and management, the application of new business models, knowledge and voluntary parcel exchange. This should make it attractive for farmers to integrate meadow bird management into a new, profitable business that is more in line with the island's natural biodiversity. Meadow birds occupy a natural place in the agrarian country and are greatly appreciated by residents and tourists. The agricultural land with the meadow birds partly determine the image and identity of Friesland. By working with parties in the field from the bottom up on the qualities of the rural area, we strengthen the bond between the Frisian landscape and culture.

For the dunes and salt marshes, grazing is now an important nature conservation measure. The use of grazing livestock in the dunes as a nature management measure can strengthen the cohesion between the polder and the dunes. The organic material from the dunes from management measures such as mowing or felling trees, can also be used as organic material in agricultural operations. This can strengthen the cycle of organic material on the island.

*Broad public support, especially among farmers (organisations) and nature conservationists, is a prerequisite for a successful policy.*

Agricultural nature management is carried out jointly by the managers of different land uses in an area. For vital populations, it is essential that the parties in an area work together intensively to coordinate management and layout and to learn from and inspire each other. We will therefore work as much as possible from the bottom up. This means that we facilitate cooperation and coordinate where necessary.

The Natura 2000 areas are not only influenced by agricultural stakeholders, but also by the other inhabitants of the islands and the huge number of recreational visitors. An important factor to achieve the Natura 2000 goals is to inform people about their impact on the Natura 2000 sites.

**How:**

*Water management adjustments pilots*

The following specific measures are considered in the case of 'Physical adjustment of water management in pilots':

- Process- and project management
  - Bilateral conversations and plenary sessions with stakeholders
  - Draw up a vision of the future with the stakeholders
  - Project management during the design and construct phase
  - Communication during the design and construct phase
- In the design and construct phase: improvement of the hydrological situation through modifications to the water system and water management:
  - Adjusting weirs to implement higher summer and winter surface water levels, and make the flexible water level management possible, that is needed to optimise the ecological conditions
  - Adjusting drainage
  - Creating marsh zones

*Support for nature inclusive agriculture pilots*

The following actions are being considered when expanding cooperation between nature managers and farmers in the dune area:

- Process- and project management
  - Bilateral conversations and plenary sessions with stakeholders
  - Draw up a vision of the future with the stakeholders
  - Draw up a nature conservation-based management plan with the stakeholders as part of a business model

*Building stakeholder network around Natura 2000 sites*

We set up a network around the Natura 2000 to create awareness of everyone's impact on the Natura 2000 areas, in advance of the stress test, and to discuss the results of the stress-tests when available. Goal of this action is to make an inventory of promising areas to enrol the water management adjustments and nature inclusive management as described above.

- Bilateral conversations and plenary sessions with stakeholders on three islands

Cooperation will take place with all relevant stakeholders as indicated above, in addition cooperation and knowledge exchange will take place with other relevant initiatives, an initial overview is provided in the text box below (additional projects are expected to start within the project duration, including complementary actions initiated as a consequence of the LIFE IP).

*Regio deal Wadden Islands*

The Regio deal of the Wadden Islands forms a coherent overall package to strengthen the region's broad prosperity and focuses on four themes: (staff) housing in flexible and circular housing, organisation of care and education, smart mobility, working in and on circular economy.

*Program plan We and Wadden birds*

The project 'Wij & Wadvogels' van Vogelbescherming Nederland, co-financed by the Wadden Fund, concerns the improvement of the habitat / breeding areas of (migratory) birds in the Wadden area.

*Watchbirds programme*

Area-wide and integrative monitoring of control measures in the Wadden Sea area. The project 'Watchbirds' focuses on basic demographic measurements (birth and death) of various migratory bird species (spoonbill, sanderling, canoe, red-blooded godwit, black-tailed godwit and brent goose), and making spatially explicit observations of presence and land use using a variety of techniques.

*Wadden mosaic*

Sand, silt, shells, boulders, mussel beds, seagrass fields, flat oysters: in a rich Wadden Sea, the underwater bottom consists of a versatile landscape mosaic. However, there are strong indications that the once diverse underwater landscape has become more monotonous, with major consequences for fish and benthic animals. For the first time, Wadden mosaic completely maps out the variation in the underwater landscape and the associated biodiversity. In addition,

the project focuses on potential management measures for protection and restoration of the submerged mudflats - parts that are always under water.

#### *Swimway*

This project, co-funded by the Wadden Sea Fund, investigates the effectiveness of all measures that have previously been taken to improve fish stocks. The project will provide insight into the best measures to improve the living environment of fish in the Wadden Sea.

#### *Regio deal Nature inclusive agriculture (general)*

The aim of the Region Deal Nature inclusive Agriculture North Netherlands is to use an area-based approach to develop, test and apply a structural approach for nature inclusive agriculture based on ecological and agricultural knowledge, and knowledge about area participation and earning models. In an area-based approach, this Deal experiments with new methods, methods and techniques.

#### *Regio deal Nature inclusive agriculture (Schiermonnikoog, cheese factory)*

The dairy farmers on Schiermonnikoog have opted for 'biodiverse' (or nature inclusive) agriculture by reducing the herd, processing part of the milk production in a dairy farm (to be set up) and developing their own 'Schier-label' to market the dairy products as Schiermonnikoog's own product.

#### *Polderpracht Terschelling*

This is a project of the Dutch Society for the Protection of Birds (Vogelbescherming Nederland) which focuses on the protection and expansion of the birdlife on Terschelling. This by expanding the number of herbal and wet meadows in the polder. In order to properly protect the polder for the future, there must be an earning model for the farmers. To start with, the production of Terschellinger Cheese has started.

### **Where**

The following map shows the project area, comprising the Wadden islands Terschelling, Ameland and Schiermonnikoog. The picture below the map indicates the boundaries of the Natura 2000 sites (on each island, as well as the Wadden Sea and North Sea coast sites).

**Figure 10 Wadden Islands Terschelling, Ameland and Schiermonnikoog**



### **When**

- 2020-2021 Draft targets and water plans
- 2020-2021 Expand / professionalize partnership
- 2021-2022 Implementation concrete measures (continuing in phase 2, 2022 onward)

### **Reasons why this action is necessary:**

The Wadden Islands are part of a vulnerable ecosystem. The connection between the islands (dunes, beaches, polders and salt marshes) and the surrounding nature areas such as the Wadden Sea and the North Sea make the Wadden Islands a world-class nature reserve. This has also been made clear by the designation of Natura 2000 areas, but also as World Heritage Site (Wadden Sea).

The Wadden area has a strong entanglement of natural values and economic activities such as tourism. These natural values, the economic activities and the quality of life on the islands are increasingly at odds with each other. The pressure on biodiversity is increasing further due to climate change and, for example, due to desiccation and salinization. In the Natura 2000 management plans, important measures to achieve the objectives are 'Adapting water management' and 'counteracting nitrogen deposition'. Both objectives can only be implemented with the support of and in close cooperation with stakeholders.

### **Constraints and assumptions**

#### Constraints

- Stakeholder support for certain measures.

#### Assumptions

- Professionalisation of partnership ready at the end of 2020
- Water management plan ready on time
- Permits available on time

### **Expected results (quantitative information when possible):**

#### *Water management adjustments pilot areas*

- A package of hydrological measures supported by stakeholders
- Extensification agriculture (130 ha)
- A more self-sufficient water system (130 ha)

#### *Support for nature inclusive agriculture pilot areas*

- Vision of the future with the stakeholders
- A nature conservation based management plan with the stakeholders

#### *Stakeholder network*

- Examples of Plan of action to build a stakeholder network
- Examples of a Communication plan
- Evaluation of experiences of cooperation with stakeholder network

Example project for other (parts of the) Wadden Islands (national / international)

### **Cost estimation:**

The costs for the C1 actions are summarized in the financial forms. The costs are based on the following assumptions:

#### *Water management adjustments pilot areas*

- Process management will be accomplished by personnel of the Province of Fryslân (category Direct personnel costs) and a process manager of 'Collective Wadden birds' (category External assistance). We expect they both need about 60 days to do the job.
- The process manager of the Province of Fryslân and the project manager of Collective Wadden birds have to travel to and from the islands. Therefore, we include travel costs in the financial forms.
- We expect to make hydrological adjustments in an area of about 130 ha.
- Unit price per ha (preparation and realisation in the field): about € 5.000,-- to € 5.500,--.

#### *Support for nature inclusive agriculture pilot areas*

- Overall project management will be accomplished by personnel of the Province of Fryslân (category Direct personnel costs). We expect he or she will need about 40 days to do the job.
- The process manager from the Province of Fryslân has to travel to and from the islands. Therefore, we include in the financial forms.
- We will hire a specialised bureau and process manager of 'Collective Wadden birds' to facilitate the process and draw up the vision of the future with the stakeholders (category External assistance).

#### *Building stakeholder network around 11 Natura 2000 sites (3 in the Waddenarea, 8 on the mainland)*

- Process management will be accomplished by personnel of the Province of Fryslân (category Direct personnel costs). We expect he or she will need about 12 days per Natura 2000 site.
- We expect to hire some external assistance to facilitate the process and develop communication material. Therefore, we included € 20.000,-- per Natura 2000 site (category External assistance).

#### **Deliverables:**

30/09/2020	DC1.5.1 Stress test report N2000 sites Terschelling, Ameland and Schiermonnikoog
31/12/2020	DC1.5.2 Area activity plan including roles and responsibilities
28/02/2021	DC1.5.3 Area specific monitoring plan (input D1 overall monitoring plan)
31/12/2021	DC1.5.4 Update of technical and financial progress
31/12/2022	DC1.5.5 Concluding report (input for F2 Interim report 1)
31/12/2022	DC1.5.6 Area specific After Life conservation plan (input for F3)

#### **Milestones:**

31/06/2020	MC1.5.1 First meeting with stakeholders, intention to cooperate confirmed
31/08/2020	MC1.5.2 Cooperation agreement signed
31/12/2020	MC1.5.3 Activity plan adopted
31/12/2022	MC1.5.4 Concrete measures implemented

### C1.6 Concrete implementation actions in the Donkse Laagten (Natura 2000 site 107)



#### **Beneficiary responsible for implementation:**

Province of Zuid-Holland (lead)

Other beneficiaries involved: Staatsbosbeheer, Naturalis, LTO

#### Other stakeholders involved:

- Agricultural Collective Alblasserwaard-Vijfheerenlanden
- De Graafstroom (Cheese factory)
- Deltamilk (Dairy cooperative)
- Waterschap Rivierenland (Water Board)
- Wageningen University
- Molenlanden (Municipality)
- Bodegraven and Reeuwijk (Municipality)
- Regio Alblasserwaard-Vijfheerenlanden (cooperation of municipalities)
- Area platform AV: 26 Organisations from civil society (themes Agriculture, Landscape, Nature, Recreation, Cultural History) represented, which are committed to a vital region in which it is good to live, work and recreate.
- Den Haneker (Association for nature and landscape of farmers and citizens)
- Zuidhollands Landschap Nature protection organisation
- Kinderdijk Molens (World Heritage Foundation)
- Zuid-Holland Environmental Federation Environmental federation; contractor CO2 credits (bank standard, implementation)
- KTC Knowledge Transfer Centre (experimental farm)
- Louis Bolk Institute (research and advice in sustainable agriculture)

#### **Description (what, how, where and when):**

PAF references:

cPAF: B.3 (p.19)

nPAF: E2.4 (p.56)



The Natura 2000 area of Donkse Laagten is approximately 190 ha and is centrally located in the Alblasserwaard. The area consists of Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae, H6410). The area has been used for centuries as peat grassland and consists of moist and wet grasslands, located in polder Langenbroek and in a part of polder Kortenbroek, in the vicinity of a sand reclaim (donk). The grasslands are intersected by a canal (Grote or Achterwaterschap). The area is of international importance (Birds Directive) as a foraging area and roost for the Anser albifrons (A041), Branta leucopsis (A045), and the Cygnus columbianus (A037), which search for food both in the area itself and in the surrounding area. The geese arrive from the beginning of November, with numbers up to 25.000

As a breeding bird we find species such as Spatula querquedula, Anas clypeata (A056), Haematopus ostralegus (A130), Vanellus vanellus (A142), gallinago gallinago (A153), Limosa limosa (A156), Tringa tetanus (A162), Alauda arvensis and Anthus pratensis. In the swamp along the Achterwaterschap Acrocephalus schoenobaenus (A295), Acrocephalus palustris, Acrocephalus scirpaceus, Emberiza schoeniclus and Circus aeruginosus (A081) breed. The duck decoy in Polder Kortenbroek houses a colony of grey herons. From a botanical point of view, the Caltha palustris hayfields and the Molinion caeruleae are important. In the most western part of the nature reserve, near the Zijdebrug and along the dike of the Boezemkade, Molinion caeruleae is found with Cirsium dissectum, many Carex panicae and others such as Carex echinata and Carex nigra.

In addition to its international importance for Anser albifrons (A041), Branta leucopsis (A045) en Cygnus clumbianus bewickii (A037), the area is of increasing importance as a meadow bird area due to the strong decline of meadow birds in the surrounding peat meadow due to developments in animal husbandry.

**Table 8 Habitat species Natura 2000 Donkse Laagten**

Kind of Code	Common name	Scientific name	Population Short term (as of 2010)	Population Long term (seventies)
	<b>Breeding birds</b>			
A857	Northern shoveler	Anas clypeata	Moderate: 8 pairs in 2008 and 2010	Decline
A037	Little Swan	Cygnus columbianus bewickii	Winter guest on	winter guest only
A42	Lapwing	Vanellus vanellus	Moderate: 46 pairs in 2008 and 2010	Numerous, regression
A153	Snipe	Gallinago gallinago	Occasionally 1-2 pair	Scarce
A156	Black-tailed godwit	Limosa limosa	64 pairs in 2008 and 69 pairs in 2010	Stable to slightly rearing
.	Redshank	Tringa totanus	Increase, 9 pairs in 2008 and 15 pairs in 2010	Numerous

.	Skylark	Alauda arvensis	Equal, 11 pairs in 2008 and 11 pairs in 2018	Numerous
.	Meadow pipit	Anthus pratensis	Almost disappeared 1 pair in 2008 and 0 pair in 2018	Numerous, strong decline
.	Gadwall	Mareca strepera	Str 4 pairs 2008 27	Progress
.	Common Teal	Anas crecca	Occ 0 pair 2008 1 pair 2018	Stable
.	Garganey	Anas querquedula	Occasionally 1 pair 2008 0 p	Decline
A295	Sedge warbler	Acrocephalus schoenobaenus	Present in reed collars	Progress, present in reed collars
	Reed warbler	Acrocephalus scirpaceus	Present in reed collars	Present in reed collars
	Reed bunting	Emberiza schoeniclus	Present in reed collars	Present in reed collars
A081	Marsh Harrier	Circus aeruginosus	Missing as a breeding bird	Missing as a breeding bird
	Grey Heron	Ardea cinerea	Winter guest only	Winter guest only
	Bluegrass	Cirsiodissecti-Molinetum		
	Meadow thistle	Cirsium dissectum	Very scarce	
	Carnation sedge	Carex panicae	Very scarce	Decline
	Star sedge	Carex echinata	Missing	Missing
	Black sedge	Carex nigra	Very scarce	Scarcity, decline
	<b>Amphibians, fish</b>			
1214	Moor frog	Rana arvalis	Moderate	Moderate
6284	Natterjack toad	Epidalea calanita	Moderate	Moderate
1048	Green hawker	Aeshna viridis	Missing	Missing
6981	Pool frog	Pelophylax lessonae	Missing	Missing
5339	European bitterling	Rhodeus amarus	Pretty numerous	Pretty numerous
6963	Spined loach	Cobitis taenia complex	Pretty numerous	Pretty numerous

## **What**

The Donkse Laagten is surrounded by agriculture with mainly dairy farming. The ground level in the surrounding polders sinks faster because the drainage in the surrounding polders is greater. This means that the surroundings will always be lower than the nature reserve. This results in groundwater flowing away from the nature reserve and the storage basin to the surrounding agricultural polders and an (even) lower storage basin pressure within Donkse Laagten in the zone along the Groote- or Achterwaterschap. An elevated water level in the surrounding area prevents further subsidence and improves the water quality necessary for long-term conservation purposes.

The numbers of breeding pairs of meadow birds have remained stable in recent years in great contrast to the collapse of the meadow bird populations in the Green Heart. As a result, the relative importance of Donkse Laagten has risen sharply in recent years (since 2015). However, due to its isolated location and limited size, the area has a weak ecological resilience. With a buffer zone of sufficient size by increasing the meadow bird area in and around the Donkse Laagten this risk can be limited.

In the vicinity of the Donkse Laagten an important foraging area for the meadow birds is being realized. It is important that together with the farmers the possibilities for meadow birds, in particular *Limosa limosa*, to forage are increased, especially during the chick phase. It is important to look for improvements in (agricultural) management.

Two main threats are identified:

1. Climate change - In the first place, due to climate change, the area of Donkse Laagten is increasingly isolated, the hydrological isolation of which is most striking. Again, the size of the area is insufficient to be resilient to climate change.
2. Socio-economic future of the farmer - A second threat in the area concerns the socio-economic position of the agricultural sector. This puts the socio-economic future of the entire region under pressure. The agricultural sector faces several problems, such as environmental conditions such as nitrogen, PFAS, soil (-quality) and pesticides. In addition, it is becoming increasingly difficult for agricultural entrepreneurs to find a business successor.

### **Key factors for the quality of the Donkse Laagten in relation to the environment (Donkse Laagten Management Plan, adopted 2015)**

#### **1. Small surface area and isolated location**

Because of this isolated location, the Donkse Laagten has a weak ecological resilience and the area is too small to be self-sufficient, allowing the quality of nature and the target species to develop independently.

#### **2. Connectivity between foraging and resting area**

It is essential for the bird species to be able to feed and sleep freely and undisturbed in the environment. High obstacles between foraging and resting places, such as high-voltage pylons, wind turbines and tall buildings, have a disruptive effect on connectivity.

#### **3. Sufficient foraging possibilities (both quantitative and qualitative)**

Sufficient foraging opportunities in the Donkse Laagten or in sufficient distance from the area are important for a sufficient intake of energy. Donkse Laagten is only designated for feeding the *Anser albifrons* (A041).

#### **4. Drinking facility inside or a short distance from foraging area**

For the bird species it is necessary to drink regularly in order to digest their food. This means that drinking water must be available at a short distance.

#### **5. Presence of sufficient open water and puddle-race situations**

The birds use open water as a place to sleep. It is therefore important that there is sufficient open water. Puddle areas offer the bird species suitable sleeping locations, but also foraging opportunities for *Anser albifrons* (A041).

#### **6. Open landscape**

An open landscape is important for the bird species to be able to observe predators in time.

#### **7. Rest**

Sufficient rest is a requirement for the bird species. This requires that disturbance by predators (in sight) and/or disruptive human activities (noise/movements) in foraging and resting areas are absent.

#### **8. Socio-economic aspects**

The socio-economic future of the entire region is under pressure. The agricultural sector faces several problems, such as environmental conditions as nitrogen, PFAS, soil (-quality) and pesticides.

#### **How**

It is important that together with the farmers in the surroundings of the Donkse Laagten the possibilities for meadow birds to forage are increased, this applies particularly in spring to improve the chick survival rate. This requires intensive cooperation between Staatsbosbeheer as the manager of the Natura 2000 area and the farmers in its vicinity. Some agreements already have been made. A synergy is being sought between making agriculture more sustainable and the positive effects on nature. To accomplish this, a connection to the Groene Cirkel Kaas en bodemdaling (Green Circle Cheese and Subsidence) has been chosen.

#### Groene Cirkel Kaas en Bodemdaling (Green Circle Cheese and Subsidence)

In the Groene Cirkel Kaas en Bodemdaling, dairy company De Graafstroom, cooperation DeltaMilk, Rabobank, Waterschap Rivierenland, Provincie Zuid-Holland and Wageningen Environmental Research have joined forces to work together on future-proof livestock farming and a biodiverse landscape in the Green Heart. In the Groene Cirkel Kaas en Bodemdaling projects are taken up together that serve the common interest. Because this is still a quest, the projects are monitored to see what they deliver, what they contribute to the common ambition and to learn from it.

The main hypothesis is that preventing soil subsidence (in such a way that dairy farming is maintained) makes it possible to preserve the landscape in the Green Heart; leads to more soil life and herb-rich grass; leading to healthier cows, tastier cheese; and an increase in biodiversity. For this transition to a more sustainable system, (more) closed cycles and a new revenue model are essential.

The partnership is committed to the transition to closed cycles in the food industry. Through careful and local use of raw materials and the processing of residual flows, the impact on the environment is limited. The partners are actively looking for opportunities to connect with other sectors. From soil to manure and milk, not a drop is wasted. We work with nature as our partner, as insurance for the future of our food industry.

The Green Circle Cheese and Subsidence is organised in sub-circles:

- Soil subsidence - Rivierenland Water Board
- Biodiversity - Province of South Holland
- Business models - Rabobank
- Knowledge programme - WUR
- (Closing of cycles - Zuivelfabriek de Graafstroom; it has been agreed that this theme will be put on the agenda and positioned at a later date)

Those responsible for the sub-circles form the core team, chaired by De Graafstroom dairy factory. Resources and capacity are equally covered. An overview of the organisation is provided in the figure below.

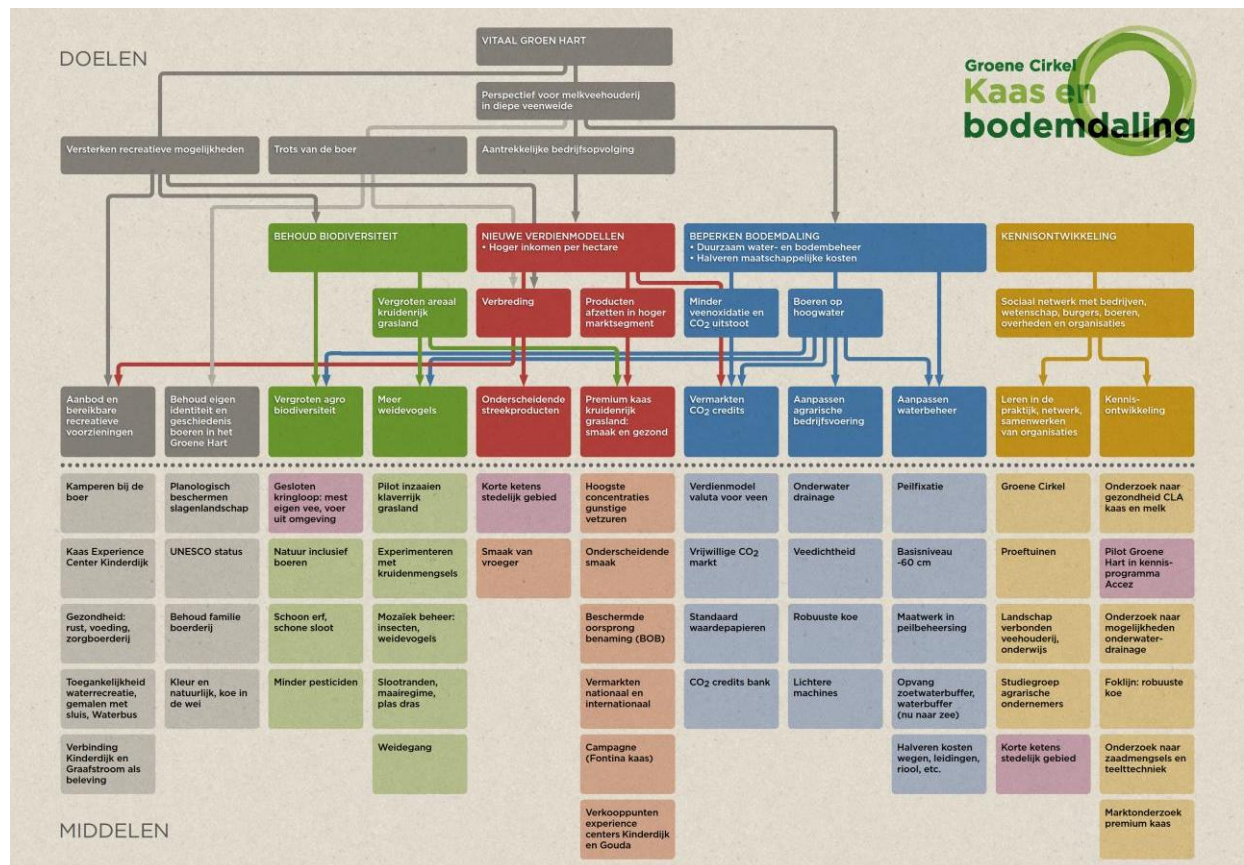


Figure 11 Organisation structure Groene Cirkel Kaas en bodemdaling

### Knowledge development

As an overarching theme, knowledge development becomes part of the above themes. Wageningen University Research seeks links with current research programmes and applications from various knowledge units through the themes. In addition, new possibilities are being sought for starting projects and submitting applications, including through the Top Sector Scheme. Examples of the different knowledge units are WENR, WECR and ASG.

### Peat meadows Information Centre (VIC)

The VIC is the research centre and pilot company where innovative projects in the field of soil subsidence in the Veenweidegebied are tested. The Boeren op Hoog Water (Farmers at High Water) project is primarily aimed at combating soil subsidence / greenhouse gas emissions from peat, due to the groundwater level at 20 cm below ground level, while the farmer also has an income. In doing so, a link is made to other social tasks such as biodiversity.

### Ambassador team (in formation)

The role and task of the ambassador team is to spread the message of the Green Circle and to lobby for opportunities. In any case the covenant partners have a place in the Ambassador's team (where possible directors). For the time being, these are the people who actually signed the covenant on February 1.

### Specification on main lines

In view of the outlined developments in the Donkse Laagten area, the needs arise to:

1. Making the Natura 2000 area ecologically resilient (buffer zone policy):
  - a) the enhancement of the quality of nature in and around the Natura 2000 area
  - b) Prevention of soil subsidence: hydrological measures (pressure drainage)
  - c) Enlarged core area for meadow birds (chick land)
2. Development of a revenue model for farmers, both economically and ecologically.

The tasks are interrelated and require a transition of the rural area aimed at making water and land use more sustainable. Agriculture in the Alblasserwaard can make a major contribution to the realisation of these tasks, in which a promising agricultural sector is important for sustainably maintaining the measures and is also important for maintaining a tourist-recreational attractive area. The intended transition is therefore of great importance for the preservation and restoration of many nature and landscape values that are characteristic of the Green Heart.

### Approach to the area process Green Circle Cheese and subsidence

1. Dream sessions with the partners:
  - a. For the entire Green Circle Cheese and Subsidence (see above)
  - b. Specifically aimed at increasing biodiversity in the rural area in relation to making agriculture more sustainable
2. Developing biodiversity in measures that contribute to biodiversity in short-term and longer-term measures
3. Developing business models
4. Develop experiments on soil subsidence through the construction of pressure drainage. This experiment will be extended.
5. Developing biodiversity in relation to business models and pressure drainage:
  - a. At first the dream scenario is defined
  - b. In the second session, the dream scenario will be translated into measures
6. Connection of measures with the sub-circles earning models and soil subsidence
7. Drawing up an integrated knowledge programme
8. Prepare programme for implementation
9. Application of short-term measures
10. Development of longer-term measures
11. Elaboration of pilots including the lessons learned from the pilot

### Cooperation with associated beneficiary Staatsbosbeheer

Staatsbosbeheer's approach is aimed at cooperation with farmers to raise their awareness of natural resources and agricultural management. It will be possible to set up a study club for this purpose.

Working method of Staatsbosbeheer:

- Staatsbosbeheer leases land, approx. 160 ha. On 20 - 22 leaseholders.
- The aim is that land users in Staatsbosbeheer also contribute to increasing biodiversity on their own farms.
- In 2020 the tenants will follow a nature training course.
- Staatsbosbeheer is striving for at least 40 cooperation agreements for nature-inclusive agriculture.
- Staatsbosbeheer is looking for a possible recalibration of the winter groundwater level in the area of the Donkse Laagten.

### Biodiversity measures outside the Natura 2000 area

The conservation of habitat types and species of grasslands requires regular management to prevent succession. In order to limit the negative impact of nitrogen deposition and to improve the conservation status of grasslands, remedial measures are necessary, in

particular to reduce eutrophication, attenuation and desiccation, but also to allow expansion of habitat types or habitats. In order to implement these measures effectively, plots of land in and around the Natura 2000 area or in the NNN can be purchased.

### Programme

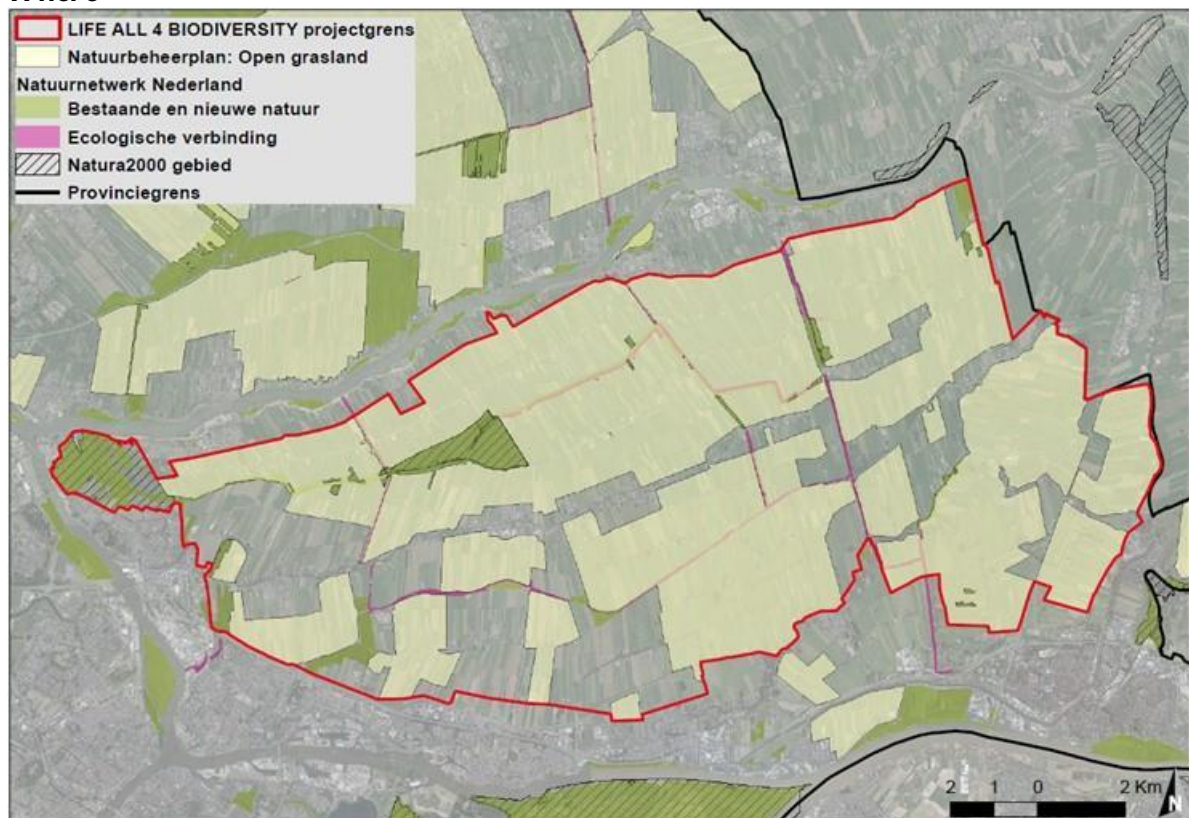
1. Gathering the knowledge and experience from the pilot and the pilot projects and measures already implemented as part of the 'Agrarisch Natuur- en Landschapsbeheer (ANLb) programme.
2. Literature study on the water management measures of clay on peat
3. Developing biodiversity in measures that contribute to biodiversity in short-term measures and in longer-term measures with farmers
4. Developing introducing the Blister head
5. Developing indicators
6. Implementation of the 3 pilots for water level design on 50 ha of agricultural land by applying underwater drainage and gaining knowledge in the field of biodiversity.
7. Knowledge sharing with 75% of agricultural businesses on measures in the agricultural area, such as water level management in relation to the management of herbaceous grasslands, botanical edge management (60% around the Natura 2000 area, 15% further away).
8. Execute monitoring programme for the results
9. Explore whether approximately 140 participants wish to contribute to various forms of nature management within the agricultural business, 10% of which is botanical edge management.
10. Experiments with sowing herbaceous grassland on 10 farms
11. The application of pressure drainage, with the aim of counteracting soil subsidence in the area and increasing biodiversity.
12. Developing business models in which biodiversity and soil subsidence are part of the agricultural businesses.
13. Research and application of payment from CO2 emissions.
14. Investigate the possibility of purchasing land.
15. Measures will be taken to promote nature-inclusive recreation.

### Concrete measures

<b>Nature management type</b>	<b>Measure</b>	<b>Impact on biodiversity/WFD</b>
Meadow bird meadow	Bearing set up until - 0.20 o. m. until 1 June	Forage area for meadow birds and chicks
	Resuscitation by applying pressure drainage	
	Phased mowing management	Survival chicks growing up
Herbaceous grasslands and Flowery grasslands	Weakening of the turf	Increased biodiversity Herbal richness Improvement of soil quality
	No fertilizer	Improvement of soil quality
	Research to other livestock type, e.g. Blister head	Increased biodiversity
	No use of chemical pesticides	Increased biodiversity and improved soil quality
	Pressure drainage	
Botanical grassland management	Two meters from the ditch do not fertilize	Increased biodiversity Improvement of water quality
Nature-friendly banks	Parts of parcels will be ploughed	Increased biodiversity Improving water quality
Extensification of	Add nature	Increased biodiversity

agriculture	management to business operations	Less charge of phosphates, nitrogen and nitrates
Other Biodiversity	Food Forest Development	Increased biodiversity Less charge of phosphates, nitrogen and nitrates
Development biodiversity on the farm	Placing nesting boxes	Increased biodiversity
Education	Development lessons for agriculture schools	
Monitoring	Research WUR	
	Research Naturalis	
Knowledge programme	Report of "Lessons to learn"	
Recreational co-use	Construction of bird watching tower	Nature-oriented recreation
	hiking trails	

### Where



**Figure 12 Focus area of Action C1.6, N2000 area De Donkse Laagten and surroundings**

### When

The activities in the Donkse Laagten area will start directly after the official project start date, with an initial main focus on establishing a good working relationship with the cooperation partners in the area. A networking meeting will take place shortly after the start of the project in April 2020, during which the LIFE application will be discussed in detail with the partners in the Donkse Laagten area.

In addition, technical measures will be initiated - a start will be made with the development and construction of an innovative pressure drainage system on a few grassland plots, with the aim of raising the water level in the spring for the benefit of meadow birds and



preventing subsidence in the summer. Monitoring (see also Action D.2) will be initiated with a baseline measurement to be carried out by September 2020. After that, the plots will be monitored every year.

The field activities will be implemented throughout the first phase of the project, leading to shareable results by the end of year 2 of the project, as a basis for the demonstration in other N2000 areas.

### ***Contribution to the main objectives***

The main objective of the Action is to provide a comprehensive understanding of the measures identified on the EU-wide Natura 2000 network and to implement the associated green infrastructure.

In line with the objectives of the EU Habitats Directive, on which the Dutch Natura 2000 network is based, the measures adopted in the Netherlands are designed in particular "to maintain or restore a favourable conservation status of natural habitats and species of EU interest, taking into account economic, social and cultural requirements and regional and local particularities.

The measures, as proposed, all contribute to this objective. The measures proposed in the surrounding agricultural area of the Donkse Laagten contribute to the improvement of ecology, hydrology and the development of sustainable agriculture.

### ***Reasons why this action is necessary***

The Donkse Laagten is surrounded by agriculture with mainly dairy farming. The ground level in the surrounding polders sinks faster because the drainage in the surrounding polders is greater. This means that the surroundings will always be lower than the nature reserve. This results in groundwater flowing away from the nature reserve and the storage basin to the surrounding agricultural polders and an (even) lower storage basin pressure within Donkse Laagten in the zone along the Groote- or Achterwaterschap. An elevated water level in the surrounding area prevents further subsidence and improves the water quality necessary for long-term conservation purposes.

The numbers of breeding pairs of meadow birds have remained stable in recent years in great contrast to the collapse of the meadow bird populations in the Green Heart. As a result, the relative importance of Donkse Laagten has risen sharply in recent years (since 2015). However, due to its isolated location and limited size, the area has a weak ecological resilience. With a buffer zone of sufficient size by increasing the meadow bird area in and around the Donkse Laagten this risk can be limited.

### ***Constraints and assumptions***

#### ***Constraints***

Stakeholders and farmers involved in the pilot studies might not be open to the implementation of the integrated governance approach or willing to freely share information and have an open discussion about combining nature conservation with other economic activities. Many conflicts of interest hamper collaboration, amongst which preferred economic activities (e.g. farming), water safety and the social/cultural function of certain N2000 sites. Additional financial support needs to be acquired from national and international funds.

Mitigation measure: linking with the approach to reduce CO<sub>2</sub> emissions and this process of Life All4biodiversity for the Donkse Laagten

#### ***Nitrogen deposition***

The discussion on measures to reduce nitrogen deposition in nature areas has created some tensions between governmental organisations and farmers. However, all parties are aware of the necessity of taking measures to reduce nitrogen.

Mitigation: careful consultation and communication, and – most importantly – cooperation between the Province and farmers' organisations. By jointly developing measures in which the interests of both sides are taken into account as much as possible, the nitrogen issue can become an important driver for positive change.

### ***Expected results***

#### **A. Expected results of Phase 1:**

- A cooperation platform has been set up between Staatsbosbeheer and 22 local farmers with the aim of increasing awareness of nature in agricultural operations.
- Research has been carried out into the possibilities of adjusting the winter water level in the area around the Donkse Laagten.
- Biodiversity in the Donkse Laagten has increased: the decrease in A156 Limosa Limosa has been halted.
- Measures to prevent subsidence have been taken in the form of pilots on 3 farms on 50 ha. This will take place around the Donkse Laagten.
- Reintroducing the Blisterhead for 50 ha.
- The area of herbs and flowery grassland has been increased by 100 ha.
- A programme has been developed to restore the quality of the locks.
- Botanical edges have been realized on 250 farms at 10% of the company.
- Increasing knowledge on soil subsidence, sustainable agriculture and biodiversity: A knowledge network has been set up, such as a study club. The WUR has drawn up and elaborated a knowledge programme in which the knowledge questions have been worked out and applied.
- There is a monitoring program active for the entire Alblasserwaard.
- Increasing the participation of the number of farmers: 60% of the farmers apply measures on the farm to increase biodiversity.
- Development of earning models: five earning models have been developed. 10 companies apply them.
- The number of participants in agricultural nature and landscape management has increased to 250.
- 40 ha of land has been purchased for more extensive agriculture.

#### **B. Expected results of phase 2 (to be updated/expanded at the end of phase 1)**

- Increasing the participation of the number of farmers: 90 % of the number of farmers apply measures on the farm, which contribute to increasing biodiversity.
- Biodiversity in the Dark Plains has increased: The number of black-tailed godwits has increased.
- The winter level in the surroundings of the Donkse Laagten has been adjusted
- The area of herbaceous grassland has been increased to 200 ha.
- Measures have been taken to prevent subsidence on 100 ha.

### **Costs**

The amounts in the financial statements are estimated based on the following:

- The hours and costs are based on actual hours to be incurred and actual fee rates of staff (at Province Zuid-Holland and Naturalis) that will work on the project, taking into account expected annual salary increases. At the Province Zuid-Holland, approximately 45% of the working hours are incurred by additional staff.
- In addition to own efforts, specific external knowledge is required, which is subcontracted.

- Knowledge development is an important part of this project. Four workshops will be organised with farmers, ecologists and specialists in the field of nature-inclusive agriculture and biodiversity in cooperation with the Staatsbosbeheer, the partner managing the N2000 area.
- A number of technical measures will be prepared and trialled, such as water level management and research into livestock species that are well adapted to wet soil. Costs are estimated based on contacts with potential suppliers.
- Botanical grass edges, herbaceous grasslands and nature-friendly banks will be constructed. Costs are based on previous experience this type of measures.

#### ***Deliverables***

30/09/2020	DC1.6.1 Stress test report Natura 2000 site 107 "Donkse Laagten"
31/12/2020	DC1.6.2 Area activity plan including roles and responsibilities
28/02/2021	DC1.6.3 Area specific monitoring plan (input for D.1 overall monitoring plan)
31/10/2021	DC1.6.4 Update of technical and financial progress
28/02/2022	DC1.6.5 Concluding report (input for F.2 Interim Report 1)
28/02/2022	DC1.6.6 Report "Lessons learned"

#### ***Milestones***

30/06/2020	MC1.6.1 First meeting with all stakeholders, intention to cooperate confirmed
31/08/2020	MC1.6.2 Cooperation agreement signed
31/12/2020	MC1.6.3 Activity plan adopted
28/02/2022	MC1.6.4 Concrete measures implemented

## C1.7 Phase 2 – upscaling: regional landscape cooperation in 44 Natura 2000 sites

### **Beneficiary responsible for implementation:**

Coordinating partners: Provinces of Limburg, Noord-Brabant, Gelderland, Fryslân and Zuid-Holland (note: possibly other Provinces / partners to be added as part of modification request at the end of phase 1).

Contributing beneficiaries: LTO, BoerenNatuur, NM, SBB, Deltaplan Biodiversiteitsherstel, VBN.

### **Description (what, how, where and when):**

#### **What**

After development, implementation (in 15 Natura 2000 areas), monitoring/evaluation and refinement of the model in the first phase of the project, the project will be upscaled to 44 Natura 2000 sites. The methodology (refined on basis of the pilots during phase 1) will now be demonstrated in a broader range of areas (thereby also addressing replication and adaptation issues).

#### **How**

Based on the development and refinement in the 15 Natura 2000 areas in the first phase of the project (as described in C1.1 – C.1.6), the methodology will be expanded to 44 Natura 2000 sites as of year 3 of the project. This will be done by forming implementation teams in which staff members (of the respective Province and other partners) participate that have also been involved in the first phase of the project. Based on the experience in the 15 trial areas, an implementation plan will be made for each of the 44 Natura 2000 areas targeted to be part of phase 2 by applying the toolbox developed in the A actions.

#### **Where**

This action concerns the upscaling to 44 Natura 2000 sites (which are pre-dominantly located in IBP 'Vitaal Platteland' pilot areas). As explained in section B2a (which also contains a list of areas foreseen to be addressed as part of phase 2) focus will be on the IBP 'Vitaal Platteland' pilot areas since a good basis for improved cooperation between government bodies has already been established in these areas.

#### **When**

At the start of year 3 of the project, stress tests (refined, final version on basis of the trials in phase 1) will be conducted in the additional Natura 2000-areas. Based on the stress tests, implementation plans will be developed for each area by the cooperating stakeholders. These will partly be organisations that have gained experience with the methodology in phase 1 and partly new, local partners that are of importance to achieve the objectives in the respective Natura 2000 area. The organisation for the new sites and approval of the implementation plans will take place in the first 6 months of phase 2, the implementation will take place in the subsequent 1.5 years (while a number of actions will be ongoing and continue in phase 3 of the project).

### **Reasons why this action is necessary:**

The objective of the project is to develop a methodology to restore biodiversity in all Natura 2000 areas of the Netherlands, to that end the methodology is first developed and trialled in 7 areas in different types of landscapes and with different natural values. To prove the broader applicability of the methodology the improved, finalised methodology will subsequently be implemented in parallel in a larger number of Natura 2000 areas.

## **Constraints and assumptions**

### *Constraints*

The stakeholders for the areas addressed in phase 1, as described in paragraph C1.1-C1.6 have committed their cooperation in the proposal preparation phase. The stakeholders that are required to cooperate in phase 2 are partly new to the project – their cooperation will thus need to be secured and confirmed during phase 1 of the project. The good practices developed in phase 1 are expected to have a positive influence and create enthusiasm and willingness to cooperate among stakeholders in the newly addressed areas.

### *Assumptions*

A budget has been reserved for this action based on the assumption that key learnings can be replicated fairly easily from the phase 1 sites to the phase 2 sites, and that economies of scale are observed by implementing the methodology in parallel in multiple areas (partly by the same organisations that have successfully implemented phase 1 of the project).

In addition, other policy objectives – especially those related to reduction of nitrogen deposition and climate adaptation and mitigation will require areas specific activities in a large number of sites – it is expected that budgets for area specific interventions will be increasing further in the coming years. Aim of the project is to ensure that all area specific measures mutually reinforce each other.

### **Expected results (quantitative information when possible):**

- Measurable positive impacts on biodiversity observed in the targeted Natura 2000 areas by the end of the project, and further improvement upon final monitoring 3 years after the end of the project.
- Critical mass observed in stakeholders benefiting from business models that positively affect biodiversity

### **Cost estimation:**

- Person-months per partner are estimated based on the number of Natura 2000 areas in which the respective Provinces and other partners are active and the current status of the areas and hence the expected resources needed (both directly as part of the LIFE IP and to ensure that sufficient investment will become available through complementary actions).

### **Deliverables:**

30/06/2022	DC1.7.1 Stress test report for each targeted Natura 2000 area
31/10/2022	DC1.7.2 Implementation plan for each targeted Natura 2000 area
28/02/2023	DC1.7.3 Technical and financial progress update I (consolidated for all targeted Natura 2000 areas)
28/02/2024	DC1.7.4 Technical and financial progress update II (consolidated for all targeted Natura 2000 areas)

### **Milestones:**

31/10/2022	MC1.7.1 Implementation plans agreed upon by all stakeholders involved
31/03/2026	MC1.7.2 Positive impacts on biodiversity measured in all 44 Natura 2000 sites

## C.2 Developing business models supporting biodiversity

### **Beneficiary responsible for implementation:**

Deltaplan Biodiversiteitsherstel

### **Description (what, how, where and when):**

#### **What**

Our current system of food production does neither value and reward farming practices that protect and enhance biodiversity nor incorporate all environmental costs of farming practices. This is partly due to a lack of knowledge and experience on which financial incentives are the most effective in stimulating a positive impact of farming practices on biodiversity both on farm and field and in the adjacent areas. Partly, there is also pressure on farmers from value chain actors – including the end-consumer to produce at the lowest possible costs (which will require communication efforts in addition to financial incentives). Identifying sustainable farming practices that support the lives and habitats of plant and animal species and connecting these to a methodology and instrument that rewards these actions, creates a best of both worlds. Allowing farmers to accumulate these rewards, may create novel business models.

#### **How**

Concrete implementation actions:

- Assess the availability of funding options for measures that can contribute to biodiversity in the selected areas.

As can be seen in the figure below, rewards for sustainable farming practices that benefit biodiversity can come from several stakeholders. Banks, landlords or water treatment companies can support these farmers via reduced tariffs. The European Union can support this via subsidies. National, regional or local governments can also provide subsidies or compensate farmers via fiscal arrangements. Food manufacturers, retailers and – last but not least – consumers can support these farmers via price premiums.

- Adopt a monitoring methodology that is supported by all stakeholders and that is based on land use actions that enhance biodiversity ('biodiversity monitor').

Both in the dairy and arable farming sector, a methodology is being developed to identify best practices to support biodiversity and connect these to KPI's. Such a monitoring system, based on consensus of all parties involved, is fundamental to creating business models for farmers that can accumulate the rewards provided.

- Joint development of new business models for farmers in selected areas to accelerate actions that decrease pressure on Natura 2000 sites and enhance biodiversity outside Natura 2000 sites.

The stress and opportunities test of action A.1 will identify sites in which the development of new business models provides an opportunity to achieve the protection and enhancement of biodiversity. In these sites, pilot projects will be planned to gain experience with methodologies through which farmers can accumulate rewards. This experience and the subsequent knowledge exchange will lead to a scale up and rollout of best practices at a national level.

### **Where**

At area level (Natura 2000 areas and surrounding areas) research will primarily be done in the 15 identified target regions. After that it will be tested how the findings can be applied in other relevant areas.

### **When**

Timing	What	Explanation
Phase 1 Year 1	Assessment of funding options and actions to be taken	<ul style="list-style-type: none"><li>• Assess the availability of funding options and other reward opportunities (public &amp; private) for measures that can contribute to biodiversity in the selected areas.</li><li>• Identify actions in land use that enhance biodiversity, based on a monitoring methodology that is supported by all stakeholders.</li></ul>
Phase 1 Year 2	Development of new business models	<ul style="list-style-type: none"><li>• Joint development of new business models for farmers in selected areas to accelerate actions that decrease pressure on Natura 2000 sites and enhance biodiversity outside Natura 2000 sites.</li></ul>
Phase 2	Testing new business models	<ul style="list-style-type: none"><li>• Testing new business models in the targeted 44 N2000 demonstration sites, evaluate and adjust.</li></ul>
Phase 3	Roll-out to other regions	<ul style="list-style-type: none"><li>• Roll out implementation new business models to other regions</li></ul>

### **Reasons why this action is necessary**

Creating proper incentives for land users will accelerate the increase of biodiversity. This can be achieved by developing innovative business models, e.g. through result-based payments or rebates for strengthening biodiversity. This transforms the protection and recovery of biodiversity from a cost item to a source of income.

### **Constraints and assumptions**

The challenge will be to bring public and private partners together towards contributing to nature development. The administrative burden related to funding needs to be reduced, thereby increasing accessibility of finance for farmers and other land users

### **Expected results**

- Farmers and other land-owners who are demonstrably involved in improving biodiversity according to generally recognized KPIs will be adequately rewarded for this both by private and public parties.

### **Cost estimation**

#### *Personnel costs*

Costs are estimated on basis of the required resources of the action coordinator and an economy and policy specialist (total of 5.5 person-months) and their respective fee rates. The action will take place in close coordination with the pilots in Actions 1.1-1.6.

#### *External assistance*

Specialized expertise will be contracted from an agro-economy specialist (approximately 5 working days).

***Deliverables:***

31/03/2021	DC2.1 Assessment report – funding sources for biodiversity
31/03/2021	DC2.2 Report on Biodiversity Monitor: system and KPI explanation
31/03/2022	DC2.3 Report biodiversity business models
28/02/2024	DC2.4 Evaluation of biodiversity business models

***Milestones:***

31/03/2021	MC2.1 Biodiversity monitor operational
31/03/2024	MC2.2 Biodiversity business models positively evaluated



### C.3 Optimising the regulatory framework

#### **Beneficiary responsible for implementation:**

Coordinating beneficiary: Ministry of Agriculture, Nature and Food Quality

Other involved beneficiaries: Provinces of Limburg, Noord-Brabant, Gelderland, Fryslan and Zuid-Holland

One of the tasks of the Ministry of Agriculture, Nature and Food Quality is preserving and strengthening the natural environment of the Netherlands. Biodiversity is in decline and the number of species of animals, plants and microorganisms is decreasing. The Ministry is therefore keen to preserve and sustainably exploit biodiversity at both national and international level. The aim is to enhance the biodiversity of natural systems, so that these systems will contribute to water and food security, poverty reduction and wellbeing.

#### **Description (what, how, where and when):**

##### PAF references:

cPAF: C.1 (p.24), C.3 (p.29)

nPAF: A4.1 (p.13), A4.3 (p.18)

#### **What**

As part of action A1, the beneficiaries will map the existing regulatory and legislation barriers regarding the realisation of Natura 2000 goals and nature inclusive agriculture.

Action C3 sets out to utilise these outcomes to implement a multi-stakeholder process to be able to discuss the regulatory barriers with relevant parties, respond more flexibly to identified regulatory barriers, improve policy coherency where possible and to collect lessons learned.

An inventory of the coherence of national and regional rules and regulations will be made. The aim is to do this in close cooperation with the work group Congruent beleid en regelgeving as part of the Deltaplan Biodiversiteitsherstel. Through the performance of this inventory, using existing data of the work group attendees, insight in the current situation of the selected N2000 areas will be obtained to distinguish the relevant regulatory barriers.

Concrete implementation actions include the development of proposals in a multi-stakeholder process to improve policy coherency regarding the realisation of N2000 goals, based on regulatory barriers identified in the selected areas (as part of action A1). To set up the multi-stakeholder process, creative sessions will be organized with the work group. Relevant experiences from other projects and Complementary Actions, will be taken into account. As an example, efforts are made to create opportunities to try out new methods and, where possible, use room for experimentation as part of the 'Experimenteerruimte RegioDeals and IBP-gebieden'. Of the ensuing, we can work on learning how to adjust the policy instruments to optimise the regulatory framework.

Furthermore an assessment of the applicability of the proposals to other areas will be performed. To what extent are these area-specific and compliant with (inter-)national objectives of the regulatory framework.

#### **How**

##### C3.1 - Mapping regulatory barriers

At the start of the LIFE IP project an inventory will be performed in close cooperation with the work group 'Congruent beleid en regelgeving' as part of the Deltaplan

Biodiversiteitsherstel, to map all overlaps in regulatory barriers between the LIFE IP areas.

The work group shall be composed of national and local government (LNV, provinces, local authorities), private sector, knowledge institutions and interest groups.

The work group will meet two times a year continuing through all phases of Action C3. The meetings will take place centrally in The Hague or Utrecht.

Throughout the project duration, this list of regulatory barriers will be updated annually in order to have a complete and up-to date list available at all times. The work group will also be in the position to commission additional research when deemed necessary.

### C3.2 - Proposal for a multi-stakeholder process

Creative session will be held in close cooperation with the work group Congruent beleid en regelgeving, where required supplemented with other relevant stakeholders of the selected N2000 area to develop a proposal for a multi-stakeholder process to be able to discuss the regulatory barriers with relevant parties, respond more flexible to identified regulatory barriers and improve policy coherency where possible.

The creative sessions will take place four times at the same locations as the work group sessions in phase 1 of Action C3.

### C3.3 - Recommendations and best practices

Towards the end of each phase, all results will be mapped and translated by the work group into a set of recommendations and best practices that could be used by other policy areas.

Dissemination of these recommendations will be pursued as part of action E 1, the dissemination of overall project information.

### **Where**

This LIFE IP action is focused on the seven Natura 2000 sites targeted in this LIFE-IP and will scale up in later phases to all Dutch N2000 areas (and their immediate environment) The creative sessions with stakeholders and the development of a multi-stakeholder process will take place centrally in The Hague or Utrecht at the MinLNV or the RVO.

### **When**

Action C3 is time dependent on the outcomes of action A1 and A2. Action C3 will be expected to start in October 2020 and will be carried out throughout the entire project duration.

- Working group meetings
- Creative sessions
- Development of a proposal for a multi-stakeholder process
- List of regulatory barriers
- Listing overlap in regulatory barriers
- Discuss regulatory barriers with relevant parties
- Mapping of all results
- Set of recommendations and best practices

### **Reasons why this action is necessary**

This IP action is focused on optimising the regulatory framework. This requires coordination and cooperation between all stakeholders groups relevant to the regulatory framework of N2000 areas.

Since synergy with other programs might provide additional incentive, finances and co-ownership to reach the N2000 targets in these areas. By identifying possible synergies early on in the planning period, opportunities will not be missed and there will be enough time to arrange a collaborative approach.

Since LIFE-IP action C3 will provide an added impulse to collaboration and will provide additional experiences, results, insights and knowledge, the beneficiaries will capitalise on this momentum.

### **Constraints and assumptions**

#### *Constraints*

- Difficulty in changing legislation
- Conflicting interests and a lack of ownership might impede the development and quality of

the gained process towards creating a regulatory framework that rewards innovators and closes loopholes for those who seek not to comply

### *Assumptions*

Our key assumption is that a lot of knowledge and experience about regulatory barriers exists, yet often remains tacit. A second key assumption is that creative sessions are the way to tap into this tacit knowledge and experience. Previous experience demonstrates that through asking the right questions a lot of information can be uncovered and can help organisations to become aware of their position and the effects of their actions.

Furthermore, we assume that all stakeholders that are involved, on a national and local level, will actively take part in the creative sessions and are open to their recommendations. Lastly we assume that:

- The results of the project will be positive and applicable to other Natura 2000 sites.
- Bottlenecks from previous inventories will also play a role for Action C3.
- Stakeholder presence cannot be enforced in advance, but the quality of the outcomes depends on their contribution. We assume that stakeholders want to be present.

### **Expected results:**

- Development of proposals in a multi-stakeholder process to improve policy coherency regarding the realisation of Natura 2000 goals, based on regulatory barriers identified in the selected areas (as part of action A.1)
- Increased commitment to overcome regulatory barriers in the targeted Natura 2000 sites.
- Insights in the regulatory barriers related to the targeted Natura 2000 sites.
- A number of creative sessions in each LIFE-IP site targeted in this LIFE-IP to collect regulatory barriers.
- Creative sessions with different parties (government, business, knowledge institutions and interest groups) other C actions will be taken into account in these creative sessions
- Establish a strategy approach for obtaining the inventory and understanding bottlenecks
- Better cooperation between governments, business, knowledge institutions and interest groups

### **Cost estimation:**

Staff costs are based on average wages and salary scales as used at the organisations involved. However, for each and every employee involved in the project own terms and conditions may apply. During the financial reporting actual costs will be used to determine hour and day rates.

External assistance costs are based on previous experience with consultancy agencies. All other costs are clearly indicated in the budget.

### **Deliverables:**

30/11/2021	DC3.1 Report on mapping of regulatory barriers
28/02/2022	DC3.2 Proposal for a multi-stakeholder process
28/02/2022	DC3.3 Recommendations and best practices

### **Milestones:**

28/02/2022	MC3.1 Clear insight in regulatory barriers and mitigation plan available
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*Note: deliverable and milestones for phase 2 and 3 to be defined as part of DC3.1 proposal for a multi-stakeholder process.*



#### C4: Knowledge, innovation and education

##### **Beneficiary responsible for implementation:**

BoerenNatuur (lead)

Other beneficiaries involved: LTO, MinlenW (lead Action C.4.2), Naturalis

Other stakeholders who expressed interest to cooperate:

- 40 farmer collectives (nationwide coverage)
- Wageningen University and Research Centre
- Van Hall Larenstein University of Applied Sciences
- Clusius College
- Radboud Universiteit Nijmegen
- Universiteit Utrecht
- Rijksuniversiteit Groningen
- Louis Bolk Institute for Sustainable Agriculture
- Netherlands Institute for Ecological Research (NIOO-KNAW).

##### *C4.1 Learning through practice: curriculum development, train-the-trainers and study groups*

By integrating existing knowledge and through continuously learning together, the 'learning through practice' principle is embodied. The LIFE IP will make full use of available expertise gathered by all beneficiaries, co-financers and other stakeholders involved in this LIFE IP. Experiences with concrete measures to improve biodiversity in the concrete implementation actions in the pilot (C1.1-C.1.6) and demonstration sites (C1.7) will be used to improve the curriculum and develop practices that are tailor-made to the specific landscapes and the to-be protected species.

Also numerous ongoing and previous initiatives are actively shared, gathered and updated in the training of trainer groups and study groups. In this way, gaps in current knowledge that are identified as part of Action A3 are gradually filled and updated, whilst continuing to restore and strengthen biodiversity.

BoerenNatuur is the Dutch national organization that represents all farmer collectives in the Netherlands. Our members execute the agri-environmental scheme (AES) at a landscape scale. Aim is to conserve farmland nature, maintain the farmland landscape and improve biodiversity. Within these 40 collectives over 10.000 landowners of which most are farmers are actively involved and in total they manage approximately about 100.000 hectares of AES farmland. Yearly over 70 million euro is invested in agri-environmental management. Our members range in size and management unit. Some of them have landscapes with open grassland and arable fields, while others work in in small scales landscapes with hedgerows and ponds.

BoerenNatuur will cooperate in this project with the universities/research institutes indicated above and will facilitate the development of the required curricula and the implementation in the relevant training programs within these universities and in the field with the farmer collectives.

##### **Description (what, how, where and when):**

###### **What**

BoerenNatuur and its partners will develop a curriculum and will set up training of trainer groups (named 'Knowledge Circles N2000') with a focus on the habitat improvement and biodiversity recovery in the Natura 2000 areas. The curriculum will comprise at least (more subjects may emerge from Action A3 and/or experience in the field in Action C1) the following subjects:

- Soil management: avoiding the use of chemicals, soil structure (physical) and soil biology for peat, clay and sandy soils.
- Farmland birds on arable land: creating favourable conditions for target species, integrating supporting measures in agricultural ecosystems.
- Meadow birds: idem - creating favourable conditions for target species, integrating supporting measures in agricultural ecosystems.
- Sustainable grassland management for N2000 and adjacent farming.
- Sustainable arable land management (strip tillage, field margins and mixed tillage) for Natura 2000 and adjacent farming.
- Green Ecological infrastructure (for N2000 species such as small mammals, birds, insects).
- Blue Ecological Infrastructure (for N2000 species such as insects, fish and birds).
- Agricultural water management (specific for different soil types - peat, clay and sand).
- Innovative farming practices such as agroforestry, pixel farming, food forests.
- Climate and agriculture (no till, long term root systems, food forests) including natural pest prevention and weed control.
- Ecological monitoring and quality control.
- Professional organization and management – administrative and governance.
- Professional management performance – process management, stakeholder involvement.

### **How**

For each subject a curriculum will be developed (instruction materials, such as PowerPoints, factsheets and for selected topics short demonstration videos). These study materials will be published at the All4Biodiversity website and the website of BoerenNatuur (since this is a website frequently consulted by farmers). Training of trainers 'Knowledge Circles N2000' groups will be set-up; training sessions will be organised annually in each group. In these 'Knowledge Circles' experts from green educational institutes, farmers, agricultural (service and supply) companies, NGO's, government and nature management organisations will meet to bring in their expertise.

Each 'Knowledge Circle N2000' develops a full curriculum for the annual training course including examples regarding different regional strategies for enhancing biodiversity, study questions and (instructions and preparatory material for the) field visits. The training courses will be evaluated after each annual edition and the outcome of the evaluation will be processed into improvement of the curriculum. In the preparation of the training courses, time will also be reserved to update and refine the developed materials, depending on research developments and newly developed skills and knowledge emerging from the other actions within the LIFE IP All4Biodiversity.

The curriculum will include detailed assignments suitable to be used in the regional study groups. For these assignments accompanying study material and teaching assignments will be developed with which the farmers can cooperate on the subjects and develop skills that will help them to implement measure to improve biodiversity in N2000-areas. For example, specific modules are developed for a specific area surrounding a Natura2000 area with certain wet habitats or for a special type of soil: peat, sand or clay.

Part of the training will in addition be dedicated to assessing, testing and applying the methodologies that are developed in other Actions, e.g. the Biodiversity Monitor of Action C2. This will yield valuable information on how an integrated set of Key Performance Indicators on biodiversity, climate, environment can support the realization of N2000 goals by farmers (dairy and arable). Activities will include dissemination of the learnings and the scaling up of local initiatives.

### **Where**

The Knowledge Circles N2000 will initially be set up in conjunction with the N2000 pilot areas of phase 1, thereby ensuring that a large variety of stakeholders is involved and that all relevant landscape types are covered. The meetings will be mostly organised locally on farms or otherwise (e.g. in visitors centres) so field trips as well as testing and explaining techniques in the field is the standard is given ample attention.

### **When**

Development of the curricula and forming the knowledge circles will take place in the first year of the project (March-December 2021), the programme will then be conducted in annual cycles starting in the year 2021, will be evaluated in q4 2021 and subsequently be refined and repeated/ upscaled to larger audiences.

### **Reasons why this action is necessary**

Experts of universities, NGOs, nature management organizations, private organisations as well as the farmer collectives and BoerenNatuur all have important 'pieces' of knowledge regarding sustainable management of the agricultural land surrounding the Natura 2000 areas. This dispersed knowledge must be brought together and is essential to form the curriculum and conduct the 'training of trainers' for the recovery of the Natura2000 areas. The loss of biodiversity is a consequence of a complex mix of issues, including excess of nitrogen deposition, fragmentation due to spatial infrastructure, water quality and water level, invasive species, climate change. These issues can only be addressed by working together and by building a strong shared knowledge-based curriculum together with all relevant expertise.

### **Constraints and assumptions**

#### *Constraints*

Local improvement of biodiversity and environmental conditions will take time. Positive changes in the agricultural management surrounding N2000-areas, will in most cases not directly lead to visible recovery of biodiversity in the N2000 areas. The recovery of biodiversity loss and environmental changes will take years. Environmental pollution from a long time ago can have negative effects on nature and landscape for years.

In order to show that the measures taken do have an impact, farmers will be involved in monitoring practices, e.g. as part of the BIMAG ('Boeren Insecten Meetnet Agrarisch Gebied' / 'Farmers Insect Measurement Agricultural Area') programme that is conducted by BoerenNatuur with support of MinLNV. Monitoring insects has the advantage that results are generally visible at a relatively short term. The programme has shown to be an important motivating factor for the participating farmers to engage in biodiversity improving practices.

#### *Assumptions*

A prerequisite in the longer term is that sufficient resources are available for the transition process for farmers and other stakeholders, pre-dominantly through the development of sustainable business models as part of Action C2 – where necessary supported by public means during the transition period

In addition, potential barriers in policies and regulatory schemes will have to be addressed (action C3 is dedicated to this challenge).

Through the cooperation with leading research institutes, excellent knowledge and educational insights on agricultural practices (including state-of-the-art measures and inventions) in support of Natura 2000 areas and species will be available to the project.

### **Expected results**

The Action will lead to strong knowledge development and educational sharing on agri-environmental measurements for Natura2000 areas and species.

Concrete results for phase 1 will include:

- Setting-up 12 knowledge circles
- Conducting 6 train-the-trainer sessions with 15-20 people attending annually
- Development of a curriculum for the training that can also form the basis for courses at the cooperating universities and research centres.

In phase 2, activities will be expanded by installing approximately 8 study groups that will be targeting specific issues / knowledge gaps that have been identified as crucial in the first phase of the project.

### **Cost estimation**

Personnel costs are based on resources needed to set-up the knowledge circles, develop the curriculum and conduct 12 training sessions in phase 2 and 3. In the second phase, resources are included for installing and supporting the study groups and further improvement of the 12 knowledge circles.

Travel costs are foreseen for trips to the course locations and for meetings with partners and stakeholders.

External assistance costs are foreseen to contract specific expertise (e.g. at universities and research centres) needed for curriculum development and for development of training methods. These are estimated based on the number of topics and curricula foreseen.

For the production of training materials, costs have been estimated based on number of participants and topics/fact sheets, to be incurred in the category Consumables.

### **Deliverables**

31/12/2020	DC4.1.1 Factsheets for the first five study themes
31/12/2021	DC4.1.2 Ten short instruction videos
31/12/2021	DC4.1.3 Complete curriculum for knowledge circles
31/12/2021	DC4.1.4 Annual report (evaluation of results, recommendations for improvement)
31/12/2022	DC4.1.5 Annual report
31/12/2023	DC4.1.6 Annual report (training/curriculum evaluation, study groups)
31/12/2024	DC4.1.7 Annual report
31/12/2025	DC4.1.8 Overall evaluation report

### **Milestones**

31/12/2021	MC4.1.1 Twelve knowledge circles operational
31/12/2022	MC4.1.2 First training cycle completed in 12 knowledge circles
31/12/2023	MC4.1.3 Eight study groups installed.
31/12/2023	MC4.1.4 Meeting of all 'Knowledge Circle'/study group experts conducted
31/12/2025	MC4.1.5 Meeting of all 'Knowledge Circle'/study group experts conducted



## C4.2 Netherlands Nature Network - impact of climate change on ecologic functioning of verges, in the soil and on the surface

### **Beneficiary responsible for implementation:**

Lead: MinlenW (RWS), in cooperation with PZH, Limburg, N-Brabant, Gelderland and Fryslan

### **Description (what, how, where and when):**

PAF references: section A4.2, E.2.

#### **What**

The Ministry of Infrastructure and Water Management / Rijkswaterstaat (MinlenW - RWS) is responsible for the main road network, the main waterway network and main water systems in the capacity of manager, contractor, policy support and as partner in the region. In these capacities and associated tasks, RWS contributes to the conservation and development of nature as one of the functional aspects of the area under its management.

Rijkswaterstaat is responsible for the management and maintenance of green areas along this infrastructure. This includes grasses and herbs in the road verges, floodplains, water features and (along some canals) nature friendly banks. RWS draws up green areas management plans and conducts monitoring of flora along the main road network.

With their intricate network, road verges play an important role in landscape connectivity. They constitute green connections of fragmented habitats of species. A variety of animal species, including insects, small mammals and reptiles, uses road verges as a migration route. The green areas of RWS host valuable natural capital. Natural capital is the supply of flora, fauna, soil, water, clean air and minerals and the services provided by such natural capital. Well-maintained road verges and dykes not only promote biodiversity, but also contribute to, for example, biomass production, pollination, pest management and erosion control, buffering against extreme weather.

#### **How**

Climate change affects all networks. This assessment will thoroughly investigate the extent of climate effects on the ecological functions of the road verges in the main road network, approach and effectiveness of the roadside management, and the quality of grassland vegetation types, ecosystem services and biodiversity. Therefore an assessment will be carried out in verges of the main road network to investigate the impact of climate change on the biodiversity of the vegetation and the insect fauna and soil conditions. Also will be examined which management measurements are most successful to diminish the impact of climate change and to promote biodiversity in the verges. This assessment will be undertaken in several representative situations in road verges and by experiments.

#### **Where**

The action will be coupled with the pilot Natura 2000 sites, focusing on options of improving connectivity between these sites and adjacent nature areas will be assessed and concrete measures will be implemented.

#### **When**

The action will start in June 2020 and will continue throughout phase 1 and phase 2. In phase 3, the results will be shared and replicated to the national level (see also Action E.3). Monitoring of the impacts of the measures that are implemented in phase 1 will continue in subsequent years, to enable assessing longer-term impacts on biodiversity and ecosystem services.

### **Reasons why this action is necessary:**

The total length of the road network in the Netherlands (national, provincial and local roads) is about 140.000 km and the road verges occupy about 2% of land surface area in the

Netherlands. This area concerns a large potential on top of the Natura 2000 network in the Netherlands for improving biodiversity. Therefore, if the road verges are connected, wide enough and managed appropriately, they can become valuable elements in the landscape and habitat for many species unable to find sufficient food and/or not present in the surrounding landscape. Research has shown that about half the number of all wild plant species occur in the verges of main roads. Additionally, several threatened and protected plant species and many insect species occur in the road verges.

### **Constraints and assumptions**

#### *Constraints*

- Maintenance of verges is often outsourced to contractors; these will have to be carefully instructed and educated on the adapted management measures and intended impacts.
- Measures will need to be carefully coordinated with the actions conducted in and around the pilot areas (Action C.1).

#### *Assumptions*

An integrated set of management measures can be developed fostering conditions for a range of target species.

#### **Expected results:**

Insight in biodiversity impacts and climate related benefits of adapted management of road verges, in qualitative as well as in quantitative terms (e.g. species benefitting, including expected increase in population, climate

#### **Cost estimation:**

Personnel: the action will be implemented by coordinator and assistant, both spending two person-months, in close cooperation with a senior ecologist (devoting 3 person-months to the action). Additional inputs will be provided by a range of experts (ecologists, environmental and communication experts) totalling 117.5 person-days of work.

External assistance: outsourcing of field experiments – costs are based on discussion with potential suppliers and previous experience.

Safety plan: cost estimate requested.

Laboratory analysis costs: based on previous experience.

#### Durable Equipment:

A prototype climate glasshouse will be built in the road margins including equipment, specifically created for the implementation of the field measurements and – experiments. Costs estimation is based on discussions with potential suppliers.

#### **Deliverables:**

30/11/2020	DC4.2.1 Assessment plan (overview of areas, habitats and species targeted)
30/01/2021	DC4.2.2 Implementation plan: overview of management measures phase 1 and 2
28/04/2024	DC4.2.3 Report on results of experiments and different management measurements, lessons learned and upscaling potential
30/09/2024	DC4.2.4 Report on implementation of management measures

#### **Milestones:**

31/03/2025	MC4.2.1 Management measures fostering biodiversity in road verges implemented
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**D. Monitoring of the impact of the project actions (obligatory)**

*D1: Implementing a framework to monitor the results of the integrated approach.*

**Beneficiary responsible for implementation:**

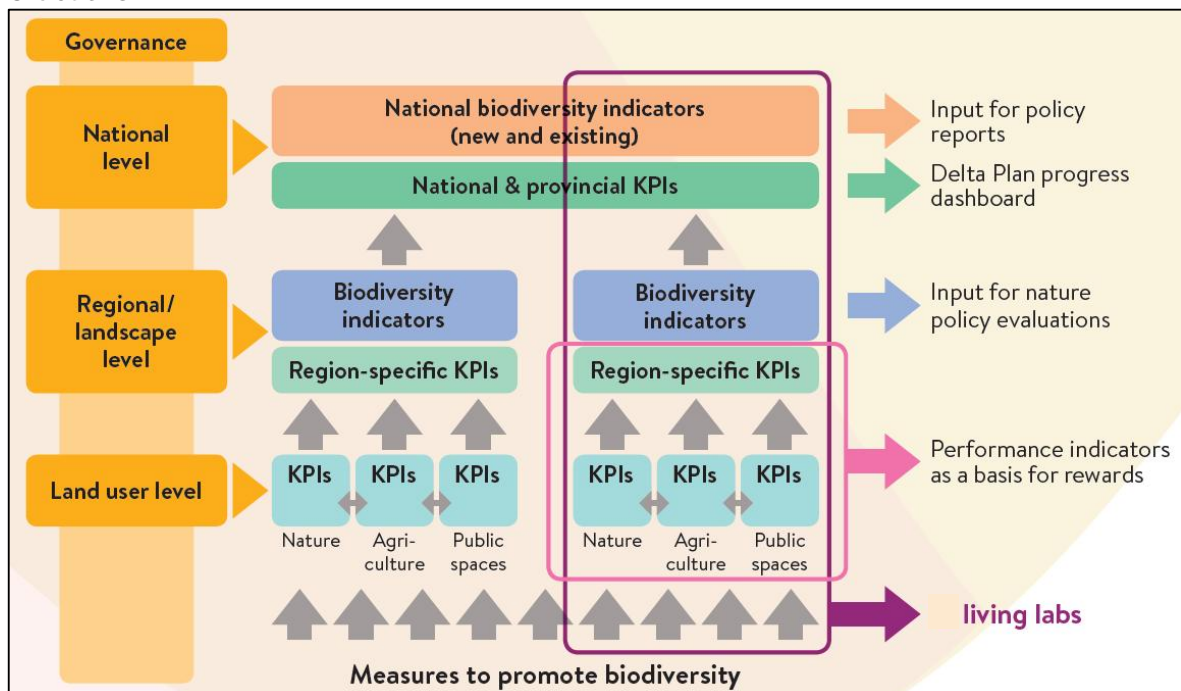
Stichting Deltaplan Biodiversiteitsherstel

**Description (what, how, where and when):**

PAF references:

*What*

The All4Biodiversity LIFE IP project will develop and implement a monitoring framework that, in addition to standard issues such as capacity building and impact on mobilisation of and coordination with complementary funds aims to make sure that the integrated governance approach developed by All4Biodiversity has the intended positive effects on Natura 2000 species and habitats and more general, biodiversity at large. The framework aims to ensure effective monitoring of the obligatory indicators. The framework represents a two-tiered approach with monitoring of all standard obligatory indicators in all sites in which the project will be active and a more in-depth learning-by-doing approach in a small subset of areas. In these so-called Living Labs (see also Figure 13), All4Biodiversity will develop and testing an integrated set of KPIs and biodiversity indicators to link the implementation of actions on the ground, through the changes these actions achieve in specific areas to the realized impact on biodiversity. The inclusion of KPIs in monitoring is important because this quantifies to what extent actions have been successful in restoring the environmental conditions required for fulfilment of the PAF objectives. KPIs will also play an important role in the development of biodiversity-based business models, which are essential to engage stakeholders whose activities currently indirectly reduce the quality of N2000 areas. The overall monitoring framework will be used to determine the effects of implementing the N2000 stress test (A1) but will also function as the basis for the development of monitoring plans for area-based conservation approaches (C1) and other C-actions.



**Figure 13 Proposed structure for the monitoring framework**

### **How**

The LIFE-IP steering committee, under the lead of Stichting Deltaplan Biodiversiteitsherstel, will design the two-tiered general monitoring framework which will also be part of the LIFE-IP plan of action (composed as a deliverable of Action F1). The basic tier monitoring approach ensures the collection of all obligatory indicators on the project's contribution to the implementation of the targeted plan or strategy, its environmental impact and socio-economic impacts following standard available methodologies (e.g. MAES). The high tier monitoring approach will be carried out in 2-3 Living Labs and is based on biodiversity indicators and KPIs and is outlined in Fig XX and will be implemented as complementary action YY. The selection of biodiversity indicators will be integrated as much as possible with the existing monitoring systems as described in the PAF (chapter H). The relationship between biodiversity indicators, KPIs and actions will be studied in case study areas with the aim to continuously improve the ecological effectiveness of management of Natura 2000 areas. Besides all Natura 2000 habitats and species, biodiversity indicators will include additional species groups that provide important information on the health of the system (e.g. insect biomass, soil biodiversity). Selection of biodiversity indicators, KPIs and case study areas to be used will be coordinated by Stichting Deltaplan Biodiversiteitsherstel and will be completed in the first year of the project. The monitoring framework will furthermore specify the exact methods to be used, how baseline conditions need to be determined, timelines for data collection as well as responsible beneficiaries.

Stichting Deltaplan Biodiversiteitsherstel will coordinate the annual reporting of the monitoring results throughout the lifetime of All4Biodiversity. The results will be fed back to national and regional project partners to inform them of the impact of their efforts to evaluate the effectiveness of the integrated governance approach and to step up where necessary. As such the monitoring is at the heart of the learning-by-doing approach of the project. This furthermore will help with (i) the removal of barriers, (ii) facilitate implementation of (more) effective measures and (iii) analyse and predict governance related impediments.

The general monitoring framework will furthermore act as a basis for project specific monitoring plans at each All4Biodiversity project site (C1-actions), which will be drafted as part of Action D2. Monitoring results will also be used to continuously improve the integrated governance approach at LIFE-IP project sites (C1-actions), thereby further stimulating stakeholder collaboration and creating synergy and connectivity between existing executive programs.

### **Where**

The development of the general monitoring framework will be coordinated centrally from Wageningen with the actual work being done locally by beneficiaries or other stakeholders. The monitoring framework will be applied wherever All4Biodiversity is active (e.g. at local All4Biodiversity project sites). Monitoring will be done in the targeted Natura 2000 sites but also in a buffer of the agricultural landscape that is surrounding them to better understand how conditions outside Natura 2000 areas influence management success inside these areas.

### **When**

The monitoring system will be developed and approved in the first year of the project. Developing a framework for the obligatory indicators is relatively straight-forward but linking this to the more detailed indicators in the Living Labs requires more thought and therefore time. We estimate a year will be required to select, together with all stakeholders in individual project sites, the KPIs as they potentially represent the basis for rewards by societal partners. Monitoring will be carried out throughout the lifetime of All4Biodiversity. Baseline conditions will be established at the start of the project and biodiversity indicators will be monitored three times during the course of the project. In the third year after the end

of the project a final survey will be done to embed the monitoring approach not only in All4Biodiversity projects (C-actions) but also at the sites of All4Biodiversity complementary actions and newly identified Natura 2000 actions (see Action A3).

**Reasons why this action is necessary:**

A key objective of All4Biodiversity is to remove governance barriers that frustrate the implementation of Nature2000 measures and/or reduce their ecological effectiveness. Monitoring the effects of new or enhanced integrated governance approaches, such as initiatives that include the agricultural landscape surrounding Natura 2000 areas, is key to determine whether these approaches succeed in achieving PAF objectives more efficiently or successfully. Continuous monitoring is necessary to modify and improve governance approaches once barriers have been identified and test the subsequent outcome in an iterative way.

**Constraints and assumptions**

*Constraints*

Biodiversity monitoring is time-consuming and depends on the active participation of stakeholders at various levels. Citizen science approaches are pivotal for some biodiversity indicators (birds, butterflies). The Netherlands has one of the best citizen science biodiversity monitoring networks in the world, but in some specific projects or situations reliance on volunteers may constrain our possibilities for monitoring because the available number of volunteers may be insufficient for All4Biodiversity monitoring requirements.

*Assumptions*

All4Biodiversity assumes that we will be able to measure significant improvements in the quality of Natura 2000 areas and population size of species by targeting conservation governance integrally over protected areas and the surrounding agricultural landscape. Furthermore, we assume that continuous monitoring and feedback of results will increase awareness about the process that is required to achieve successful Natura 2000 management, facilitate removal of barriers and speed up implementation. This will ultimately reduce threats and pressures, as identified in chapter B.3 of the PAF.

**Expected results (quantitative information when possible):**

1. General framework for the monitoring of integrated governance approaches.
2. A coherent and integrated set of Key Performance Indicators (KPIs).
3. Periodic monitoring reports that will fuel an iterative process of continuous improvement of the integrated governance approaches throughout project lifetime.
4. Overarching analysis of governance related barriers that may hamper the implementation of Natura 2000 measures.

**Cost estimation:**

- Staff costs are based on average wages and salary scales as used at the organisations involved. However, for each and every employee involved in the project own terms and conditions may apply. During the financial reporting actual costs will be used to determine hour and day rates.
- At least 50% of staff will be additional.
- External costs are estimated on previous experience with external assistance provided by consultancy agencies and divided over the participating beneficiaries.

**Deliverables:**

- |            |   |
|------------|---|
| 31/11/2020 | DD1.1 Report describing the general framework for the monitoring of integrated governance approaches.                     |
| 31/08/2021 | DD1.2 Report describing the process and outcome of KPI selection.   |
| 31/02/2025 | DD1.3 Annual (4 years) overall monitoring reports that feed back into All4Biodiversity C-actions.                         |
| 31/02/2024 | DD1.4 Report on overarching analysis of governance related barriers for effective implementation of Natura 2000 measures. |

**Milestones:**

- 31/08/2020 MD1.1 Outline of general framework for the monitoring of integrated governance approaches approved by All4Biodiversity steering committee.
- 31/02/2021 MD1.2 Final stakeholder workshop on KPI selection completed
- 31/12/2024 MD1.3 Annual (4 years) monitoring data to be reported in annual reports collected and compiled
- 31/08/2023 MD1.4 Analysis completed for report on governance related barriers for effective implementation of Natura 2000 measures.

## D2: Monitoring of the impact of the project actions and compilation of indicator tables.

### **Beneficiary responsible for implementation:**

Stichting Deltaplan Biodiversiteitsherstel, with input from PZH, Limburg, N-Brabant, Gelderland and Fryslan.

MinlenW – RWS: Short term results of the assessment and experiences of management practices will be communicated at the annual consultation meeting with all other stakeholders (Infranatuur).

### **Description (what, how, where and when):**

PAF references: cPAF Chapter H, pp. 55

#### **What**

Most All4Biodiversity projects represent multi-stakeholder approaches that require landscape-level collaboration between partners that rarely work together with the intent to conserve biodiversity. The success of the integrated governance of these new collaborations will have a large impact on the extent to which projects succeed in removing barriers in the implementation of Natura 2000 measures and therefore in achieving PAF objectives. To determine the in-situ effects of the integrated governance approaches and to gather information to complete the LIFE-IP indicator tables, biodiversity indicators and KPIs will be monitored systematically.

#### **How**

Each All4Biodiversity project site that is listed under the C1-actions will develop a site-specific monitoring plan, founded on the basic principles as set out in the general monitoring Framework in Action D1. In addition, monitoring of road verges will be conducted by MinlenW as part of action C4.2. Each monitoring plan will describe the change in measures that need to be implemented, the governance bottlenecks that need to be solved to achieve this, the expected results and an estimate of when (first) results can be expected. The plan will furthermore describe the methods, tools, frequencies, data management and reporting associated with the monitoring of result achievement. Site specific monitoring plans will adhere to SMART principles as far as possible and will provide concrete information on which Natura 2000 habitats and species will be targeted by implementing measures, how this will link to measures in the wider landscape and which governance related bottlenecks are planned to be resolved. The All4Biodiversity steering committee, under the lead of Province Zuid-Holland, will support each C Action with drafting the necessary site-specific monitoring reports and will guard the incorporation of the iterative monitoring scheme as describe in Action D1.

Site specific monitoring will, as much as possible, make use of existing monitoring systems as described in the PAF (Chapter H, page 55) and will complement this with KPI monitoring. Where relevant, additional biodiversity indicators will be collected to obtain information on ecosystem functioning and health. Monitoring will include parts of the landscape outside Natura 2000 areas that directly or indirectly affect habitat quality of these areas.

#### Monitoring indicators will include but are not limited to:

1. Increase in area under sustainable forest management (% change in ha)
2. Areas of agricultural land under sustainable management (% change in ha)
3. Soil Surface improved (% change in ha)
4. Areas progressing towards improvement or restoration or in a favourable conservation status (% change in ha)
5. Number of threatened species in improved or secured status (% change in population size)
6. Change in key ecosystem services provided as estimated by MAES (%)
7. Number of entities/individuals reached/ made aware
8. The trends in biodiversity indicators in Living Labs.

9. The trends in KPIs
10. The number of different stakeholders participating in site projects
11. The frequency with which each stakeholder participates
12. The number and type of barriers addressed per project site and the percentage successes

#### Sources of verification

Baseline conditions of all monitoring indicators will be assessed when each project site will be involved in the All4Biodiversity project, except the Living Lab Biodiversity Indicators which are too labour intensive to be assessed outside the three Living Labs. Baseline conditions will act as a reference for improvement. In addition, habitat and species assessments have been performed for the Natura 2000 sites that will be used to measure the implementation of the Natura 2000, PAF and Directives. For the governance approach, Action A1 describes the procedure for baseline measurements and follow up (2 assessment rounds on local and national level).

#### Indicator tables

In order to complete the obligatory indicator tables for the first Interim report and the Final report, the local monitoring strategies will include a specific task that targets on the collection and analysis of data on indicator table parameters, which will be gathered at each project site so they can be collated centrally and used to complete the indicator tables.

#### **Where**

All4Biodiversity is implemented in three phases. In the initial phase (year 1-2) monitoring will focus on 15 pilot areas, in the second phase year (3-4) monitoring will be upscaled to in total 44 areas and in the final phase the project will be upscaled to all Natura 2000 areas. Monitoring will at that stage be integrated in overall monitoring activities as part of the N2000 management plans. In all cases monitoring will include the buffer areas of agricultural land directly bordering Natura 2000 areas. Detailed monitoring aimed to elucidate the relationship between biodiversity indicators, KPIs and actions will be done in a limited number of case study areas described in complementary action XX that is subject to additional funding.

#### **When**

For each All4Biodiversity project site a monitoring plan will be developed in the first nine project months and finalized within three months of completion of the general monitoring framework. Baseline conditions will be established in the first year or, if development of the monitoring plan doesn't allow this, the second year of the project. Subsequently, monitoring of indicators will be done annually during the lifetime of the project.

#### **Reasons why this action is necessary**

Current developments with the Dutch court's ruling that N deposition is too high to achieve Natura 2000 objectives which resulted in a stop of all infrastructural works and housing development in Dutch society clearly indicate that it is almost impossible to achieve biodiversity objectives in Natura 2000 areas without addressing land-use outside Natura 2000 areas. This considerably increases the number of stakeholders that need to be involved, the regulations that are applicable and the economic activities that are affected. Effective conservation requires intensive collaboration of parties within and outside Natura 2000 areas for which we currently do not yet have productive strategies and procedures. All4Biodiversity aims to develop governance approaches that can be used for such integrated conservation strategies. To test whether this approach has the intended positive effects on the target species groups, a detailed monitoring plan is required. Additionally, to learn how effects were achieved so that these insights can be applied more generally to Natura 2000 areas, detailed effect monitoring will take place in 2-3 Living Lab case study areas.



**Constraints and assumptions:**

*Constraints*

Timely drafting of the site-specific monitoring plans will be dependent on the timely drafting of the overarching monitoring plan in Action D1.

*Assumptions*

By producing site specific monitoring plans we assume to create more awareness and ownership amongst stakeholders, thereby creating a continuously improving collaboration that will lead to the accelerated removal of bottlenecks and barriers for the implementation of wet Natura 2000 measures. Furthermore, by doing detailed effect-monitoring in Living Labs we showcase the approach and its results which we assume will enhance acceptance of conservation management inside and outside Natura 2000 areas. The beneficiaries also assume that by creating added value, the threats and pressures, as identified in the PAF, p18-20, will decrease.

**Expected results (quantitative information when possible):**

- a. Site specific monitoring plan and structure that feed into the overarching monitoring strategy (see Action D1).
- b. Baseline and follow up measurements
- c. Periodic monitoring reports that include an analysis of the collaborative process as well as a progress report on the expected effects of the implemented measures
- d. Input for the core analysis of governance related barriers that can hamper the implementation of wet Natura 2000 measures see Action D1).
- e. Positive improvements in both habitats and species in the selected Natura 2000 LIFE-IP project sites.
- f. Data for the obligatory LIFE-IP indicator tables.
- g. Uptake of useful knowledge and experiences in the new RPF strategy (DGNR/14201790).

**Cost estimation:**

Drafting a site-specific monitoring plan and structure for 34 sites (on average 2 weeks per site) – total time required approximately 17 person-months.

Compiling Deliverable 1 based on the specific monitoring reports of the first 7 sites (2 weeks) – total time required 0.5 person-months

Two years of collecting monitoring indicators in 15 Natura 2000 sites, four years of collecting monitoring indicators in 44 Natura 2000 sites. Size of the sites and numbers and densities of threatened species varies a lot between sites. In each site, the first year is most costly as baseline conditions have to be surveyed. Monitoring is easier in subsequent years as changes can be monitored (on average 1 week per year per site, including the drafting of a simple report) – total time required 38 person-months.

Total time required: ca. 50 Person Months

Travel costs estimated based on number of site visits needed.

Note: the practical work can be done by relatively low-cost personnel

**Deliverables:**

- 31/02/2021 DD2.1 Report with site specific monitoring plan
- 31/02/2025 DD2.2 Annual monitoring reports
- 31/02/2023 DD2.3 LIFE-Indicator tables completed, in time for the First Interim Report
- 31/02/2026 DD2.4 LIFE-Indicator tables completed, in time for the Final Report

**Milestones:**

- 31/12/2020 MD2.1 Draft report on site specific monitoring plan ready for feedback by all relevant stakeholders
- 31/12/2024 MD2.2 Site specific monitoring data to be reported in annual reports collected and compiled
- 31/02/2023 MD2.3 Data for Interim Report indicator tables compiled and ready for analysis
- 31/02/2026 MD2.4 Data for Final Report indicator tables compiled and ready for analysis

## **E. Public awareness and dissemination of results**

### **Beneficiary responsible for implementation:**

The Delta Plan Biodiversity Recovery, in collaboration with all other associated beneficiaries.

### **Overall approach**

Throughout the entire project period, it is important to create awareness and support for this LIFE-IP project, followed by disseminating results. Societal and stakeholder support is essential for achieving the project ambitions and goals. Dissemination of project results is key in order to realize replication of the demonstrated approaches and measures for nature conservation and biodiversity restoration. In addition, dissemination will lead to continued stakeholder awareness and ownership during the LIFE-IP project and beyond.

This LIFE-IP project will involve a wide variety of co-beneficiaries and secondarily involved stakeholders. All these parties have different communication needs and creating broad support among them requires a well-considered approach. In order to streamline and guide the communication efforts, a comprehensive communication and dissemination strategy and plan will be developed at the start of the project.

The strategy will provide insights in the best way to deploy specific communication activities and instruments in order to raise public awareness and disseminate knowledge on this project among the following target groups:

- Stakeholders directly involved in this project: provinces, Ministries of LNV and IenW / RWS, agricultural sector organisations, nature conservation organisations and knowledge institutes.
- Other stakeholders: recreation and leisure organisations.
- General public, including people living near or visiting the Natura 2000 sites involved.
- International stakeholders: other relevant LIFE IP projects working on similar topics.

Drafting the strategy will start with the further identification and specification of these target groups. This will point out best ways to communicate/reach specific target groups and estimate the response of communication and dissemination activities and tools. The outcomes will be matched with the available communication and dissemination budget and will result in applicable and affordable communication and dissemination instruments.

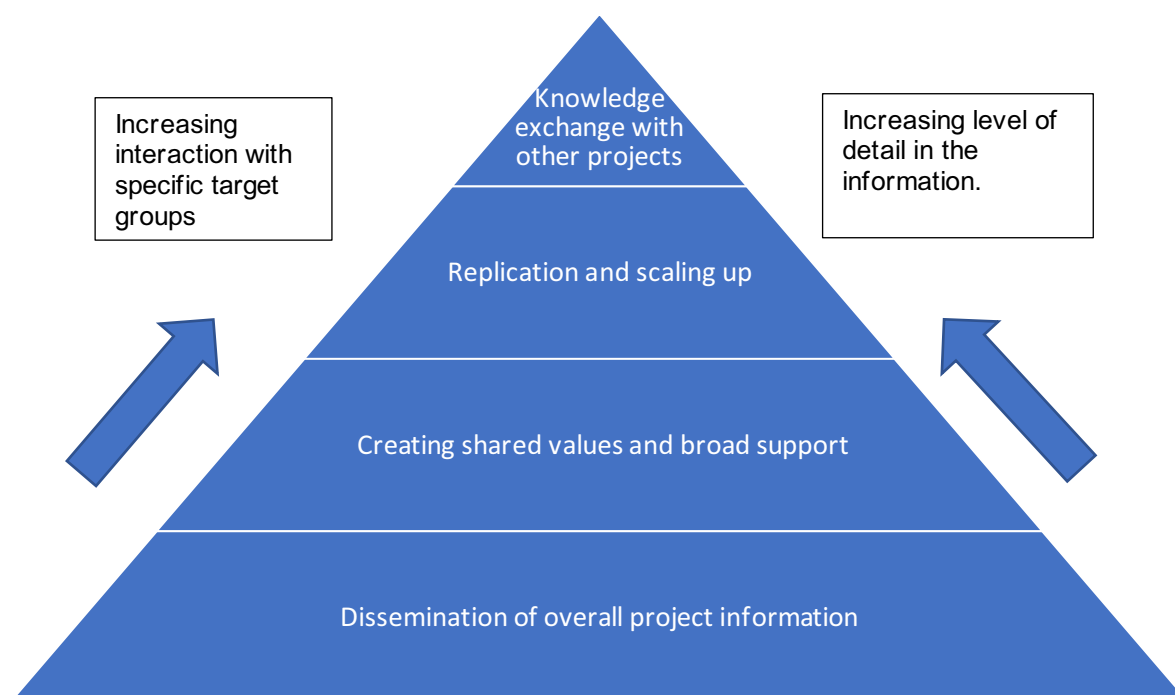
The communication and dissemination plan is about ground level execution. It will point out in detail actions, means and planning for the communication and dissemination activities throughout the duration of the LIFE-IP project and beyond. The plan and strategy will be drafted within the first six months of the project.

### **Overall strategy**

The communication and dissemination strategy is based upon the following communication pyramid with four elements:

1. **Dissemination of overall project information:** generally accessible activities and tools sharing the basic information and updates of the project (E3).
2. **Creating shared values and broad support:** mobilising support and creating a broadening momentum amongst stakeholders to participate and take action (E1).
3. **Replication and scaling up:** providing insight in the results and lessons learned of the project (E2).
4. **Networking and knowledge exchange:** cooperation and knowledge exchange with other LIFE IP projects, ongoing or under development (E4).

Going from the bottom to the top of the pyramid, the goal, target group and message gets more specific.



The communication and dissemination strategy is aligned with the three phases in this LIFE-IP project:

- Phase 1: Pilots in 15 Natura 2000 sites (2020-2021)
- Phase 2: Extending to 44 Natura 2000 sites (2022-2023)
- Phase 3: Scaling-up to national level (all 167 Natura 2000 sites; 2024 - 2026)
- Whole project: Networking and knowledge exchange with international projects (2020 - 2026).

Below, an overview is given of the communication activities and instruments related to the different elements of the communication pyramid. As mentioned above, a more detailed elaboration will be included in the communication and dissemination strategy & plan.

The use of the LIFE-IP and Natura 2000 logo will be described in the communication and dissemination plan. The beneficiaries will set out to use these logos on all official LIFE-IP documents, presentations, notice boards, websites and social media accounts to clearly specify the LIFE contribution to the project activities.

## E1 Creating shared values and broad support

### **Beneficiary responsible for implementation:**

The Delta Plan Biodiversity Recovery, in collaboration with all other associated beneficiaries.

Natuurmonumenten will coordinate the campaign on biodiversity and food.

### **Description (what, how, where and when):**

The partners participating in the LIFE IP have initiated their cooperation based on shared values and function as a core group. Acting as ambassadors for the Delta Plan Biodiversity Recovery philosophy to actively mobilise other stakeholders around the common vision. Thus creating a broadening momentum amongst stakeholders to participate and take action on improving biodiversity.

### Media work

We will implement a media strategy consisting of sharing press releases to relevant media (national, regional and trade media) at relevant moments (general start, highlight moments of the projects and results) and organising field visits. We envisage a minimum of 10 press releases and 5 field visits by media on appropriate moments. Also, news will be shared with websites that publish on the topic of nature conservation and biodiversity restoration.

Targeted audience: professionals/policy makers and the general public.

Envisaged reach: an average of 100 journalists informed by each press release. An average of 5 journalists informed by each field visit.

### LIFE-IP conferences

After the first year, we will organize an annual conference at national level. This will include result workshops and progress updates.

Target audiences: key stakeholders.

Envisaged reach: an average of 200 visitors informed at each conference.

### Communication multimedia campaign

We will develop a multimedia campaign to engage the Dutch citizens on the value of biodiversity and the important role of land users in biodiversity restoration. The campaign will include a mix of tools and activities such as a social media campaign to inform and engage people, field visits/excursions to pilot areas and media work. This campaign will start in one province and rolled-out in all 5 provinces with LIFE IP living labs.

Target audience: general public, regional stakeholders.

Envisaged reach: 2 million people informed about the value of biodiversity and the important role of land users in biodiversity restoration.

### Communication campaign on biodiversity and food

In addition, a campaign will be developed and implemented on the relation between food production and biodiversity.

The campaign will be aimed at consumers and producers, to enhance the support for farmers that contribute to improving biodiversity and landscape.

Main activities are:

- Development of a campaign strategy
- Develop communication material, -platform and other content
- Campaign activities

- Local, regional and national collaboration with producers, retailers and other stakeholders

Target audience: general public in their role as consumers, food industry, retail, farmers.

#### Open days

The partners will organize open days for the general public interested in the demonstrated nature conservation and biodiversity enhancement approaches at selected project sites.

Targeted audience: general public.

Envisaged reach: 1000 persons are informed and engaged per open day.

#### ***Reason why this action is necessary***

Awareness of the importance, and broad support for biodiversity improving measures (by people involved professionally and by the public at large), is essential to the success of the project.

#### ***Constraints and assumptions***

The topic of biodiversity and the impacts of agriculture on Natura 2000 areas are prominently in the news as a consequence of the discussion regarding nitrogen deposition and measures needed to safeguard the quality of nature areas. On the one hand this has led to some polarisation, on the other hand there is a strong sense of urgency that measures are needed to improve the quality of Natura 2000. In our communication we will stress that the project is pre-dominantly focusing on a sustainable way to move forward, for nature as well as for agriculture and other forms of land use. We assume that this will be recognised by the target audiences.

#### ***Expected results***

See above under 'Envisaged reach' of each specific communication measure.

#### ***Cost estimations***

Personnel costs are estimated on basis of resources required for each specific activity, staff category conducting the work and related daily fee rates.

External assistance is foreseen for conference organisation, campaign support and website related activities, costs are estimated based on previous experience with this type of activities.

Consumable costs are foreseen for communication / dissemination materials, based on type of material and (where relevant) number of copies foreseen.

#### ***Deliverables:***

28/02/2021	DE 1.1 Communication material biodiversity and food campaign
08/03/2026	DE 1.2 Ten press releases and five media location visits
08/03/2026	DE 1.3 Five conference proceedings
08/03/2026	DE 1.4 One communication multimedia campaign

**Milestones:**

28/02/2021	ME1.1 Launch of the biodiversity and food campaign
31/12/2021	ME1.2 First press release drafted and released
31/12/2021	ME1.3 First media location visit organised and visited
31/03/2022	ME1.4 Biodiversity and food campaign successfully finalised
31/12/2022 - 08/03/2026	ME1.5 Five annual conferences
31/12/2022 - 08/03/2026	ME1.6 Ten open days in five provinces (two in each province)
08/03/2026	ME1.7 Multi-media campaign finished

## E.2 Replication and scaling-up of results and lessons learned

### **Beneficiary responsible for implementation:**

Delta Plan Biodiversity Recovery, in collaboration with all other associated beneficiaries.  
MinlenW: scaling up implementation in infrastructure, with external stakeholders and cooperation partners (ProRail, water authorities).

### **Description (what, how, where and when):**

We will provide insight in the results of the actions conducted in the 15 selected pilot sites and ensure that these are communicated to relevant target audiences in an appealing manner (2020-2021). The results in 15 selected Natura 2000 pilot sites (including surroundings) will be used to scale up to 44 Natura 2000 sites (including surroundings) (2022-2023). After that scaling-up to national level (all 167 Natura 2000 sites) will be organized (2024 - 2026).

In phase 2 furthermore the results of the road verge assessment (conducted by MinlenW) will be shared with a variety of organizations responsible for infrastructure management (like provinces, ProRail and regional water authorities) and together effective management measurements will be worked out to increase the impact on biodiversity alongside regional and national infra networks.

The communication will be focused on:

- exchange of knowledge and lessons learned (results) between the selected areas,
- scaling up: knowledge transfer to areas that are comparable in terms of nature values and economic activities
- broad dissemination to stakeholders / decision makers at national and EU-level.

The following communication instruments will be developed:

### LIFE-IP stakeholder platform and use of existing stakeholder platforms

To foster an integrated approach at landscape scale, we need to bring together stakeholder groups. A stakeholder platform will be developed, that can be used nationally and for each pilot area separately. Important goal of these platforms is to create awareness and understanding for each other's objectives, finding synergies and learning from previous experiences. The national platform will ensure knowledge exchange between the local platforms, and consolidation of lessons learned – used as input for actions A2/A3.

In order to streamline this, a two-pronged approach will be used:

1. Existing stakeholder fora will be contacted and asked to disseminate information using their communication and dissemination infrastructure.
2. New and existing stakeholder groups on a variety of organization levels (local and national level) are brought together on the Dutch LIFE-IP stakeholder platform to foster an integrated approach for spatial interventions. Important elements of these stakeholder platforms are to create awareness and understanding for each other's objectives, finding synergies and learning from previous experiences. First, an overview of representatives of stakeholder groups at national, area and project level will be made. After this, stakeholders will be invited to join the platform and activities will be organized (e.g. network events, webinars, knowledge exchange) through the stakeholder platform.

Target audience: national and local stakeholders in each of the pilot areas.

Envisaged reach: 2.000 stakeholders informed and engaged.

### Visitors programs & excursions

The project partners will organize visitor programs and excursions for interested parties, such as stakeholders' representatives, government officials, researchers and consultants.



During phase 2, interested parties (including visitors from the European Union) may visit the demonstration sites to have a look at the implemented measures and the integrated governance approach in action.

Targeted audience: national and local stakeholders (see above).

Envisaged reach: 20-30 persons/visit or excursion, total of 300 professionals and policy makers in 10 visits/excursions.

#### Toolbox best practices

We will develop a toolbox on best practices to provide insights in the lessons learned and guidelines how other initiatives can develop similar projects. The toolbox will be shared online and in workshops

Target audience: other LIFE-IP and Nature 2000 projects and organisations

Envisaged reach: 2.500 people informed about guidelines and lessons learned.

#### Ambassadors

In order to scale up, ambassadors will be selected in the 6 pilot areas and will be asked to share their experiences with key stakeholders in the 34 Nature 2000 areas

Target audience: key stakeholders in the 34 Nature 2000 sites

Envisaged reach: 50 key stakeholders in the 34 Nature 200 sites

#### Publishing of articles

Focused on professionals in the field of nature conservation and biodiversity restoration, articles will be offered to international and national media outlets. These articles are addressed to and read by people working in the field as well as policy makers. We assume that this will promote quick and wide spreading of the results. Published articles will also be shared on the web, either on the LIFE IP PAF Delta Nature website, or on websites related to nature conservation and biodiversity restoration.

Goal: at least 4 published articles.

Targeted audience of professionals and policy makers: 10.000 persons.

#### ***Reason why this action is necessary***

This action is mainly geared towards the further upscaling of the methodology after successful demonstration in phase 2 of the project and is therefore essential for the contribution of the project towards achieving the objectives of the PAF.

#### ***Constraints and assumptions***

The main constraint is the timely availability of results from phase 2, to be replicated further to all N2000 sites in the Netherlands.

#### ***Expected results***

See above under 'Envisaged reach' of each specific communication measure.

#### ***Cost estimations***

Personnel costs are estimated on basis of resources required for each specific activity, staff category conducting the work and related daily fee rates.

External assistance is foreseen for support from experts that assist in conveying the essential messages to the target audiences.

Consumable costs are foreseen for communication materials, based on type of material and (where relevant) number of copies or events foreseen.

***Deliverables:***

31/12/2020	DE2.1 LIFE-IP stakeholder platform and report on accompanying platform activities
31/12/2026	DE2.2 Toolbox on best practices
08/03/2026	DE2.3 At least 4 published articles for professionals in nature conservation international and national media outlets

***Milestones:***

30/06/2021	ME2.1 Existing stakeholder platforms contacted and willing to disseminate information.
31/12/2021	ME2.2 LIFE-IP stakeholder platform developed and live
01/03/2022	ME2.3 Ambassadors selected
31/12/2024	ME2.4 Visitor programmes and excursions performed
08/03/2026	ME2.5 Toolbox with all added elements finalised
08/03/2026	ME2.6 Visitor programmes & excursions for professionals organised

### E3 Dissemination of overall project information

#### **Beneficiary responsible for implementation:**

Delta Plan Biodiversity Recovery, in collaboration with MinLNV and all other associated beneficiaries.

#### ***Description (what, how, where and when):***

To share the general information and regular updates of the project, the following communication instruments will be developed.

#### LIFE-IP website

A website will be developed to promote and share the progress and results of the entire LIFE IP project. The LIFE logo and contribution will be clearly visible on the website. The website will be used as a tool to disseminate information to stakeholders and target audiences. It will consist of a general outline of project, major news updates results & publications. The website will link to the webpages about the LIFE-IP the project of the involved partners for more detailed information. The web site shall be regularly updated during the project period and shall be maintained on-line for at least 5 years after the project's end.

The (protected) partner area of the website will be used by the partners and actively involved stakeholders. It will facilitate sharing information, results and experiences, including templates and tools that can be used in pilot projects. It can also be used for project management purposes.

Targeted audience: professionals, policy makers and the general public interested in nature conservation and biodiversity restoration.

Envisaged reach: an average of 300 website unique visitors/month.

#### Partners websites

All partners will publish the actual progress and results of the project on their own website, alongside presentations on the website of this project.

Targeted audience: professionals, policy makers and the general public interested in nature conservation and biodiversity restoration.

Envisaged reach: an average of 300 website unique visitors/month for each website.

#### E-newsletter

A bi-monthly e-newsletter will be developed for all key stakeholders directly and indirectly involved in the LIFE IP programme with updates, links to publications and news of partners. This online newsletter will contain on average 6-8 articles and link to more information on the project website.

Targeted audience: key stakeholders and general public who are interested.

Envisaged reach: every 2 months an average of 1000 newsletters distributed.

#### Social media

Partners will use their existing social media accounts to promote the project activities and share milestones achieved, using for example LinkedIn, Twitter, Instagram and Facebook. Goals is to keep stakeholders and interested parties informed about project progress and results. Links to social media will be shared on the website, for easy accessibility.

These existing channels have a relevant 'fanbase' and positive interaction, so we will not start new social media channels specific for this project.

Target audiences: any interested parties, including but not limited to stakeholders, target audiences, the general public and network relations.

Envisaged reach: an average of 2500 people informed for each post related to the project.

#### Notification panels

Each Natura 2000 site involved in the LIFE-IP project will erect a notification board at strategic locations, easy to access for the public. It will provide information on LIFE-IP project activities in the area. The LIFE-IP and Natura 2000 logo will be displayed on these notice boards to indicate LIFE-IPs contribution to the activities.

Target audience: visitors of the Natura 2000 site.

Envisaged reach: an average of 5.000 people informed for each notification board.

#### Brochure and leaflets

We will develop a generic brochure explaining the project and the LIFE-IP contribution. To support local pilots and its visitor programmes and open days, we will develop additional leaflets for each pilot. Digital copies of these materials will also be made available on the project website for interested parties. The amount of copies depending on the scale of the event.

Target audience: general public, professionals and policy makers.

Envisaged reach: brochure: 10.000 people informed by the general brochure (5.000 print and 5.000 downloads). Leaflets on pilots: 2.000 people informed by each leaflet (1.000 print and 1.000 downloads).

#### Opening event

We will organize an opening event to initiate the LIFE project. Visitors will be provided with information on the project and can visit some of the targeted locations.

Target audience: The event will be accessible to the general public, stakeholders, target audiences and any other interested parties

Envisaged reach: approximately 300 people informed about the goal and activities of the project.

#### EU conferences / Common Agricultural Policy

Two international conferences will be organised to ensure that the lessons learned in The Netherlands are shared with other European member states and policy makers and interest groups at the EU level. Main focus will be on the effectiveness of agricultural measures for biodiversity improvement in nature reserves and on sharing ideas about the possible use of CAP resources for this purpose. The conferences will be organised at the end of phase 1 (2022, sharing first experiences, exchanging ideas) and 2 (2024, lessons learned/ opportunities related to main international frameworks such as the EU Biodiversity Strategy and the Convention on Biological Diversity). Main target audiences are policy makers and representatives of relevant interest groups in other Member States and at the EU level.

As a follow-up of the conference knowledge transfer visits will be organised to individual Member States to exchange knowledge (phase 1), and vice versa – Member States officials and stakeholders visiting the demonstration sites of the LIFE IP in the Netherlands (phase 2). Conference proceedings will be made available in Dutch, English, French and German. The information package will include a toolbox providing guidelines on how other initiatives

can develop similar projects. The toolbox will be explained in conference workshops and shared online and will include a short promotion film, GIS cards and a brochure.

Envisaged reach: 100 participants at each conference and 1000 interested parties in the circle around the participants.

#### Layman's report

This non-technical summary report will inform general public, policy makers, partners and other stakeholders on the project objectives and outcomes. It shall be presented in Dutch and English. This report shall be 5 to 10 pages long and present the project, its objectives, its actions and its results to a general public. The report will be compiled after the project has been evaluated and final conclusions and recommendations have been drawn up. The report will be printed for distribution at events and will be available on the LIFE-IP website for other interested parties.

Target audience: broad audience, general public and members of stakeholder groups.

Envisaged reach: 10.000 persons informed (2.000 copies and 8.000 downloads).

#### ***Reason why this action is necessary***

The project is of great importance for achievement of a good and productive relation between nature management and surrounding land-use. It is therefore of importance to ensure main stakeholders and target audiences are aware of the project and its contents.

#### ***Constraints and assumptions***

Representatives of all main stakeholder groups are involved in the project; we assume that their participation and support will be a major success factor for the dissemination of the results.

#### ***Expected results***

See above under 'Envisaged reach' of each specific communication measure.

#### ***Cost estimations***

Personnel costs are estimated on basis of resources required for each specific activity, staff category conducting the work and related daily fee rates.

External assistance is foreseen for a website developer and conference organiser, costs are estimated based on previous experience with this type of activities.

Consumable costs are foreseen for communication / dissemination materials, based on type of material and (where relevant) number of copies foreseen.

#### ***Deliverables:***

01/03/2021 - 31/12/2026	DE3.1 Bi-monthly e-newsletter
01/03/2021 - 31/12/2026	DE3.2 Approximately weekly posts on social media accounts
01/03/2021	DE3.3 15 sets of notification panels in Natura 2000 pilot areas
30/06/2021	DE3.4 General brochure (5.000 copies)
31/03/2022	DE3.5 Leaflet on each pilot
30/06/2022	DE3.6 44 sets of notification panels in N2000 demonstration areas
30/06/2022	DE3.7 Proceedings 1 <sup>st</sup> EU conference (Ne/En/Fr/De)

30/06/2024 DE3.8 Proceedings 2<sup>nd</sup> EU conference (Ne/En/Fr/De)  
08/06/2026 DE3.9 Layman's report

**Milestones:**

01/09/2020 ME3.1 LIFE IP website online  
01/03/2021 ME3.2 Partners websites online with article on LIFE IP project  
01/03/2021 ME3.3 Start of Bi-monthly E-newsletter published  
01/03/2021 ME3.4 Social media accounts live, first posts  
31/03/2021 ME3.5 LIFE IP opening event organised; 300 participants present  
31/03/2021 ME3.6 Notification panels installed in the field  
30/06/2021 ME3.7 General brochure produced (5000 copies)  
31/12/2022 ME3.8 Leaflets on pilots produced (1000 copies each)  
08/03/2026 ME3.9 2.000 copies of Layman's report distributed and 8000  
downloads  
08/03/2026 ME3.10 5.000 general brochure downloaded  
08/03/2026 ME3.11 1.000 leaflets on each pilot downloaded  
08/03/2026 ME3.12 Web content on LIFE-IP website and partner websites  
updated (website will be kept online at least until 8/3/2031)

*Deliverables for phase 2 and 3 will be further specified at the end of phase 1.*

#### E4 Networking and knowledge exchange with other LIFE projects

##### **Description (what, how, where and when):**

Dissemination of knowledge and project results is essential to promoting replication of the demonstrated approaches and measures for nature conservation and biodiversity restoration. This action will include intensive cooperation and knowledge exchange with:

- The ongoing LIFE15 IPE NL016 DELTA Nature - Integrated approach Natura 2000 Delta Nature to catalyse the implementation of the Netherlands' Prioritised Action Framework (The Netherlands, 2016-2022) which focuses on wet Natura 2000 areas.
- The Danish ongoing, and highly relevant LIFE IP NATUREMAN - The Farmer as a Manager of Nature: aiming at a favourable conservation status for Natura 2000 sites by making nature management a sound branch of farming.
- Relevant LIFE IP's that are currently under development, including an IP on the topic 'Sustainable conservation of the Black-tailed Godwit in meadow bird core areas' (Niedersachsen, Germany).
- Other projects in the EU working on similar topics, establishing contacts and setting up a knowledge exchange programme.
- Relevant 'traditional' LIFE projects, including:
  - LIFE17 CCA/NL/093 Farming the Future – Building Rural Networks for Climate-Adaptive Agriculture.
  - Farm LIFE - Farming the Future Building Rural Networks for Climate-Adaptive Agriculture (Belgium and The Netherlands, 2018-2023)
  - Fish migration & BirdLIFE - A new approach: a gradual, ecological freshwater-saltwater transition between Wadden Sea, IJsselmeer and the hinterland (The Netherlands, 2018-2024)
  - LIFE NARD-US - Restoration and conservation of semi-natural and natural habitats in eastern Ardennes (Belgium, 2016-2023)
  - LIFE Pays Mosan - Connectivity of the Natura 2000 network across the Belgian-Dutch borders in the Meuse basin (Belgium and The Netherlands, 2014-2021)
  - LIFE+GP - More water, more raised bogs in the Groote Peel (The Netherlands, 2014-2018)

##### Coordination with LIFE IPC NL-NASCELLERATE proposal:

When receiving financing from the LIFE-IP program, the IPC NL-NASCELLERATE proposal will improve the climate change resilience of the Netherlands by accelerating the National climate Adaptation Strategy (NAS). The following main actions will be developed:

1. Development of accessible knowledge products and tools
2. Increase of awareness and sense of urgency for climate change adaptation
3. Enhancement of an integral approach towards climate change adaptation and development of corresponding governance frameworks
4. Develop new business and financing models
5. National monitoring system
6. Impact monitoring and evaluation
7. Replication strategy

Since writing the Concept Note both project proposals were aligned to find synergy and prevent duplication of efforts. In particular, it was discussed how the development of business models could be organised in a mutually reinforcing manner and how knowledge on the impacts of climate change on biodiversity can best be exchanged.

##### Coordination with LIFE IPC BREL (Belgian Resilience through Ecosystem based adaptation LIFE IP) proposal:

Partners from Flanders, Wallonia, Brussels and the federal government are currently developing the LIFE IPC BREL project. The scope of the project proposal is "nature-based solutions for climate adaptation" in which the focus is on both the urban environment (climate buffers) and the rural environment (green-blue networks through agricultural areas,

cooperation with farmers). We will establish contacts with this project, pre-dominantly to cooperate and exchange information on the latter topic.

#### Interactive workshops and network events

To inform and interact with stakeholders and create broad support to participate and take action, we will organise and attend workshops and network events. Depending on the aim and topic, the event will be aimed at a specific target group (e.g. farmers or regional government officials) or for a regional target group (e.g. stakeholders in a specific province). A specific programme/presentation will be developed for each event. Additionally, we will give presentations and workshops at events organised by stakeholders themselves (e.g. farmer events or study circles).

Target audiences: key stakeholders, that is: regional government officials, agricultural stakeholders (farmers, their suppliers and advisors) and public and private land users.

Envisaged reach: 500 stakeholders are informed and engaged.

#### Webinars

From the second year, we will organise a webinar to exchange knowledge and lessons learned of the LIFE-IP project and specific topics. This webinar will be organised twice a year. A webinar is very (time) efficient tool to reach and engage a very specific target group. It allows them to ask questions, or pose questions of our own to the participants. Thanks to the interaction during a webinar, we can gain deep insights into our stakeholders. Each webinar will be recorded and shared on the project website after the event.

Target audience: national stakeholders, staff involved in other LIFE-IP projects.

Envisaged reach: 100 participants are informed in each webinar (in total 8 webinars will be organised).

#### Contributing to conferences and seminars

Project partners will use their wide (inter)national network to select the right time and place to present data and results of the project at seminars and lectures. By doing so, many experts and interested parties in the field of nature and biodiversity conservation can be reached at once.

Goal: contribution to at least 2 conferences/lectures each year.

Targeted audience of professionals and policy makers: 1.000 persons informed.

#### ***Reason why this action is necessary***

The LIFE programme offers a wealth of previously developed knowledge and experience acquired in similar projects. Networking with LIFE-projects pursuing similar goals is considered to be of great mutual value.

#### ***Constraints and assumptions***

Main constraint is the active participation of representatives of the other LIFE projects we foresee to interact with, first contacts are very promising and productive.

#### ***Expected results***

See above under 'Envisaged reach' of each specific communication measure.

#### ***Cost estimations***



Personnel costs are estimated on basis of resources required for each specific activity, staff category conducting the work and related daily fee rates.

***Deliverables:***

- 08/03/2026 DE4.1 Contribution to and/or organisation of 10 workshops and lectures and network events.
- 08/03/2026 DE4.2 Eight webinars organised and performed, joined by 100 participants in each webinar.
- 08/03/2026 DE4.3 Ten contributions to conferences on nature and biodiversity conservation.

***Milestones:***

- 31/12/2022 ME4.1 First two webinars organised, joined by 100 participants each.
- 08/03/2026 ME4.2 Ten interactive workshops and network events organised or visited.
- 08/03/2026 ME4.3 In total 8 webinars organised, joined by 100 participants each.
- 08/03/2026 ME4.4 Ten contributions to conferences on nature and biodiversity conservation.

## **F. Project Management and monitoring of project progress**

### *F1: Overall coordination and knowledge exchange*

#### **Beneficiary responsible for implementation:**

Province of Zuid Holland (PZH) is the coordinating beneficiary, but all co-beneficiaries are involved.

#### **Description (what, how, where and when):**

##### *What*

The purpose of project management is to ensure the successful coordination and management of the different project activities. Within the proposed project, project management will comprise the technical, administrative and financial management of the project and the management of dissemination via networking and information exchange amongst the beneficiaries as well as decision-making.

- A management structure will be set up, including a steering group with an executive committee, an advisory group and every (sub)action will have dedicated project teams. Activities will include the organisation of regular project meetings to discuss progress, ensure coordination between the aforementioned actions and to take corrective measures where necessary in case actions are not leading to the expected results.
- Coordinate the evaluation at the end of each phase and make sure these lessons are used for the implementation of the next phase
- Connecting with and supporting project management of the separate (sub)actions
- Administrative management
- Financial management

##### *How*

The beneficiaries have extensive experience in project management, including other EU funded projects. The coordinating beneficiary will appoint a full-time senior project director within the partner organisation. For support on administrative LIFE IP issues he or she will be supported internally and by an external, specialized consultant. All associated beneficiaries will also appoint a project manager within their own organization supported by their administrative staff.

The associated beneficiaries are organized in a Steering Committee (SC) which is responsible for the overall implementation of the LIFE IP. All beneficiaries will appoint a senior project manager to become a member of the SC. An executive committee under supervision of the project director will be appointed for the project management and coordination of the LIFE IP and will be a subgroup of the steering committee.

The SC will be supported by an Advisory Board comprising other important stakeholders that are not directly represented in the project as associated beneficiaries. Bi-annual Advisory Board meetings will be held at which project progress is discussed; in addition the executive committee may consult the Advisory Board on an ad hoc basis with regard to specific issues that arise during project implementation.

In addition, the beneficiaries responsible for the area specific measures (Action C.1) will convene during bi-monthly meetings to exchange experiences gained from the activities conducted in their respective N2000 sites.

PZH will appoint a **project director**:

- Be the contact point for the EU
- Be responsible for completing the project within constraints concerning quality, time and costs as overall project manager and coordinator.
- Be overall responsible for the development of the risk management strategies at the action level and for the identification and management of risks at the IP level.
- Be responsible for the fulfilment of the obligations of the LIFE contract including reporting to the EU.
- Install the SC and nominate members; SC will meet at least semi-annually.
- Form the project team and nominate the team members.
- Prepare for and meet with the LIFE IP monitor.
- Prepare an operational project planning, set up a project administration and assign tasks and budgets.
- Be responsible for the active management of networking activities and 'promoting' of the proposed LIFE IP project. This includes active knowledge exchange and dissemination efforts via social networks and new media.

The appointed project director will have extensive project management experience and will be supported by an external consultant for evaluation and reporting purposes.

The project director will have regular meetings (at least semi-annual) with the steering committee (see below). The progress of tasks and contracts will be monitored quantitatively from a financial and a technical point of view. Furthermore, project elements such as organisation, legislation, communication, finance, administration and time management will be monitored and evaluated qualitatively. Semi-annual management interim reports will be prepared for the SC.

The project director will be supported by, and/or have the possibility to consult the following governing bodies:

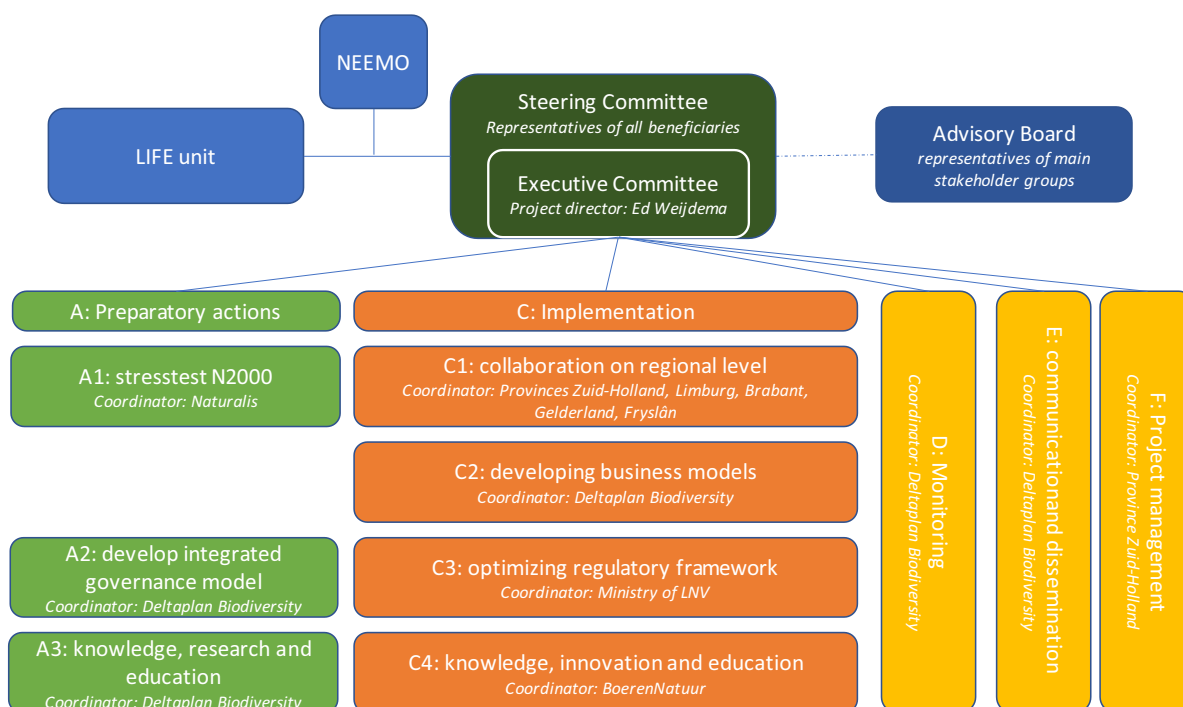
- **Steering Committee:**
  - comprising representatives of management and middle management of all associated beneficiaries.
  - responsible for: monitoring the progress of the implementation of LIFE IP actions and taking appropriate action when difficulties are encountered; reporting on progress to the LIFE Unit; and the broader dissemination and rollout of the lessons learned in the LIFE IP.
- **Executive Committee:**
  - comprising management and semi-management of all partners and parties crucial to programme implementation but not co-beneficiaries of the LIFE IP (e.g. the agricultural and recreation sectors). A query has been sent to all activity leaders (see below) to gain further insight into the parties essential to LIFE IP implementation that should take join the management platform.
  - focuses mainly on discussing relevant developments within the programme and the application of lessons learned.
- **Advisory Board:**

An Advisory Board will be installed comprising representatives of stakeholder groups that are not participating in the project as Associated Beneficiary. The Advisory Board will meet every six months, at these occasions the Steering Committee will present relevant issues and ask input and opinions from the Advisory Board.

Activity and responsibility matrix and report:

The steering committee will develop an activity and responsibility matrix, outlining per action, activity and sub-activity which partner is overall responsible, which partners will contribute / provide input and feedback and what the detailed planning of the activity is – including intermediary results and final output (deliverables). This matrix will be further

detailed in a report including a chapter explaining the above per Action. The matrix and report will be updated at the end of each phase of the project.



**Figure 14 Overall organisation structure**

#### *When*

This action will run throughout the duration of the project. The overall management structure and main positions (see Figure 14) have been decided upon between the partners during the proposal stage, adaptations may be made in the course of the project where required.

#### **Reasons why this action is necessary:**

Good project management in all its facets is essential in order to fulfil all requirements set by the EU, and to guarantee replicability and transferability.

#### **Constraints and assumptions**

##### *Constraints*

This LIFE-IP is a complex project with many partners. Good project management will have to be supported by all parties involved.

##### *Assumptions*

Project management requires cooperation of all project beneficiaries to provide information timely and in the required format, we assume – based on the experience during the proposal phase – that this will be done by each partner.

#### **Expected results (quantitative information when possible):**

1. A detailed Plan of Action for the LIFE-IP project.
2. Sound project management.
3. The finished project will comply with the technical specifications set out in this document.
4. The LIFE-IP project will be successfully finalised by 08/03/2026.

#### **Cost estimation:**

Project management will primarily be performed by the coordinating beneficiary, PZH. To this end, PZH will appoint an experienced project director out of its permanent staff, with

the responsibility to steer the project during its lifetime. Costs of the project director, who will be involved on a full-time basis are included in the personnel costs for PZH.

The project director will be supported by a project administrator/financial expert who has specific expertise regarding the administrative and financial provisions of the LIFE programme – this person will be part of the additional staff of PZH assigned to the project. The support provided by the additional staff member will comprise specialised assistance to the overall project manager in setting up the project administration and financial systems, ensure reporting requirements are well-addressed (ensuring the required information is available timely for the LIFE interim and final reports, see also next section), and to support beneficiaries in complying with the LIFE requirements.

The daily rates applied for the project director (full-time, permanent staff) and financial manager are based on average wages and social charges for the categories of staff concerned, taking into account predictable salary increases.

***Deliverables:***

30/06/2020	DF1.1 Activity and responsibility matrix and report
30/06/2020 - 31/12/2025	DF1.2 Quarterly technical and administrative reports
09/09/2020 - 08/03/2026	DF1.3 Agenda and minutes of SC meetings
30/04/2020 - 28/02/2026	DF1.4 Agenda and minutes of Executive Committee meetings

***Milestones:***

09/03/2020	MF1.1 LIFE IP started
30/04/2020	MF1.2 Project Director nominated
30/06/2020	MF1.3 Steering and Executive Committee established
30/09/2020	MF1.4 Advisory Board established
09/06/2020	MF1.5 Activity and responsibility report approved by all partners
08/03/2026	MF1.6 All project actions successfully finalised by the end date

## F2 Monitoring progress of the project actions and reporting to the EU

### **Beneficiary responsible for implementation:**

PZH

### **Description (what, how, where and when):**

#### *What*

Monitoring and reporting project progress will be an integral part of project management. This action consists of:

- A management structure will be set up allowing the monitoring of progress, facilitating the above coordination process and providing input at a broader level for reporting to the EU. Detailed progress updates for these reports will be provided by the person in charge of the respective action.
- Annual evaluation of regional and local initiatives, living labs and projects of research institutes.

#### *How*

##### *Monitoring*

Monitoring of the project consist of measuring, documenting and controlling the effectiveness of the project actions compared to the existing situation. Objectives and expected results will be integrated in the overall project management activities and tools. The breakdown of the project in clearly specified actions related to deliverables and milestones makes monitoring a transparent and retraceable activity. This will help the project when writing internal and external reports, which will allow anyone to compare the status-quo at any time with the nominal conditions proposed by the work plan. Therefore, the defined actions, deliverables and milestones will serve as the so-called “monitoring indicators” whose progress can be measured against the work plan. Monitoring within this project will comprise both internal and external reporting as well as project meetings. Each of these activities comprises “monitoring indicators” and “sources of verification”. Reports and meeting minutes will form the required “monitoring protocols”.

In addition, the compulsory pre-identified programme indicators will be monitored as described in action D2, in order to be able to compile the information and add it to the LIFE Interim and Final Reports (see Action F1).

Monitoring and evaluation also provides an allocation for regular joint monitoring missions together with the EU LIFE team (and their external advisors). Terms of Reference for these monitoring missions will be developed and agreed upon with the LIFE team. These reviews will mainly focus on (a) assessing project progress and (b) providing guidance to all concerned parties on project implementation (especially regarding administrative provisions). The requirements for, and terms of reference of, external evaluations would be determined principally by the LIFE program and will be included in the LIFE IP Plan of Action as compiled by the SC as part of action F1.

##### *Reporting*

While it is the partners project managers' task to control project progress within their own organisation, it is the project director's responsibility to monitor and control overall project progress by contacting the individual project managers' on a three-monthly basis to check the progress made at each organisation. In return, the partners are required to (a) monitor the status of all work and financials of their respective activities and (b) to inform the project director regularly on the status quo of the activities carried out at their organisation. Most importantly, each partner has the responsibility to report immediately to the project director if any risk situations emerge that may conflict with the project's objectives or the successful completion of the assigned tasks. A further inventory of risks and related mitigation strategies at the level of the C-actions and at the overall project level will be conducted at the beginning of the project as foreseen in action F.1. As such, critical issues will become apparent very quickly in the context of the day-to-day communication between the partners.

Risk situations that may emerge include changes in scheduling of deliverables and/or allocated funding, the loss of a partner, the loss of an expert or project manager and possibly but highly unlikely the failure to obtain relevant authorization or approval. Where necessary, possible solutions will be found through discussion amongst all partners concerned. The project director will chair the discussions and set the schedule for solution-finding. In the case of critical deviations from the work plan, the European Commission will be informed and consulted by the project director.

Reporting to the EU will also take place on a regular basis, as described by LIFE IP. Set up of LIFE reporting will be supported by an external consultant. Since reporting within the LIFE framework requests specialized knowledge this seems to be a sound investment. Reports however, will be fully endorsed and signed off by the beneficiaries. Reporting will include two Interim Reports and a Final report. The Final LIFE report will include the Layman's report and the Financial Statement. The financial Statement will be audited by an independent auditor (see also following paragraph). Updated indicator tables will be enclosed with the first Interim Report and the Final LIFE-IP Report, input will be provided by the monitoring activities in Action D.2.

#### *Audit*

The project implementation and expenditures will be submitted to a management and financial audit, which will be outsourced to an external audit office. The aim of this audit is to adapt or reorient the project management based on the recommendations made by the auditors. As required by the LIFE procedures an audit report will be submitted with each request for payment.

#### *When*

The management structure will be set up well in advance of the start of this project. Monitoring and reporting activities will start immediately after project inception with increasing priority at the end of each phase.

#### ***Reasons why this action is necessary:***

Monitoring of project progress is mandatory and required in order to report said progress to the EU LIFE unit.

#### ***Constraints and assumptions***

The applicants do not see any constraints concerning the monitoring and reporting of project progress.

#### ***Expected results (quantitative information when possible):***

1. Internal project reports – quarterly, including technical and financial information.
2. EU and NEEMO External Monitoring team are well informed on project progress.
3. Interim reporting after phase 1 and 2.
4. Amendment requests including an updated plan of action and budget for Phase 2 and 3 of the LIFE-IP, submitted 3 months prior to the end of the preceding phase.
5. Interim report 1 and audited financial statement, including an updated LIFE-IP indicator table and
6. Interim report 2, including an updated plan of action and budget for Phase 3 of the LIFE-IP.
7. Final LIFE report and audited financial statement, including a Layman's report.

#### ***Cost estimation:***

Staff costs are based on average wages and salary scales as used at the organisations involved. However, for every employee specific terms and conditions may apply. During the financial reporting actual costs will be used to determine hour and day rates. Specialised support on reporting in accordance with the LIFE Common Provisions is foreseen under 'External Assistance'.

**Deliverables:**

- 30/06/2020 – DF2.1 Internal, quarterly project progress reports.  
31/12/2025  
30/11/2020 – DF2.2 Annual update on project expenditure to the EU (end November each year).  
30/11/2025  
31/12/2020 – DF2.3 Report on visit of EU External Monitoring Team.  
08/03/2026  
08/12/2021 DF2.4 Amendment request with updated implementation plan and budget for phase 2.  
08/06/2022 DF2.5 Interim report 1, with audited financial statement and indicator table.  
08/12/2023 DF2.6 Amendment request with updated implementation plan and budget for phase 3.  
08/06/2024 DF2.7 Interim report 2 with audited financial statement and indicator table.  
08/06/2026 DF2.8 Final LIFE report and audited financial statement, including a Layman's report.

**Milestones:**

- 08/06/2026 MF2.1 All compulsory reports submitted on time, complete and of good quality.



### F3 After-LIFE plan

#### **Beneficiary responsible for implementation:**

Province of Zuid-Holland

#### **Description (what, how, where and when):**

The After-Life Plan will be developed to ensure the sustainability of the actions carried out within the IP. It will be developed during the last year of the IP and presented as a separated annex of the final report. The After-LIFE Plan will describe the actions to be undertaken by the beneficiaries in active collaboration with the stakeholders involved in the IP. The After-LIFE plan will focus on the actions developed during the IP: further implementation of the governance assessment tool and integrated governance approach to minimise fragmentation and optimise stakeholder collaboration, creating synergy between executive programs, working towards a widely accepted long term vision and ambition for Natura 2000 implementation, continuation of capacity building and of communication, dissemination of tools and documents, updating the website, improving and developing monitoring tools, create synergy between nature conservation and economic functions, stimulate new stakeholder collaborations that will work towards Natura 2000 implementation etc.

#### **Reasons why this action is necessary:**

During the IP the main focus lies on the development of plans, tools and instruments for implementation and for follow-up of status and trends of habitats and species towards the achievement of the nature conservation objectives. It is obviously necessary to pursue transferability of the different lessons learnt during the IP. Given the fact that the concrete actions will not be carried out for all habitats and species of community interest, it is therefore necessary to continue after the LIFE project to ensure the achievement of favourable conservation status for all habitats and species in the Dutch Natura 2000 sites.

#### **Constraints and assumptions**

The success of the After-LIFE plan depends on the dedication of the relevant stakeholders. Since this LIFE IP is specifically about creating long-term business models it is intrinsically well-suited for continuation after the LIFE project.

#### **Expected results (quantitative information when possible):**

- An After-LIFE plan
- Experience, guidance documents, instruments and tools, available for further Natura 2000 implementation at other sites.
- Dissemination of lessons learned and transferability of best practices.

#### **Cost estimation:**

Since the After-LIFE plan is developed by the lead beneficiary, the only budget taken into account is the cost for person-hours.

#### **Deliverables:**

08/06/2026 DF3.1 After-LIFE plan (submitted with the Final Report).

#### **Milestones:**

08/06/2026 MF3.1 After-LIFE plan finalised.

## DELIVERABLE, MILESTONES AND REPORTING SCHEDULE

## MAIN DELIVERABLE PRODUCTS OF THE PROJECT

Name of the Deliverable	Code of the ass. action	Deadline
DA1.1 Quick-scan tool (web-based form and printed version)	A1	31/12/2020
DA1.2 Training materials for workshops	A1	28/02/2021
DA1.3 Report on quick-scan method	A1	30/11/2021
DA1.4 Manual on the use of the quick scan	A1	31/01/2022
DA2.1 Manual area specific approach N2000 and surroundings	A2	31/01/2022
DA2.2 Report: governance integration supporting N2000 policy	A2	31/01/2022
DA3.1 Paper: definition of knowledge gaps	A3	01/03/2021
DA3.2 Research agenda (updated annually)	A3	01/06/2021
DA3.3 LIFE IP pages on OBN website online	A3	01/09/2021
DA3.4 Five targeted knowledge exchange products published	A3	31/12/2022
DC1.1.1 Overview of technical measures	C1.1	30/04/2020
DC1.1.2 Stress test report N2000 sites 153 and 157	C1.1	30/09/2020
DC1.1.3 Plan of Action and Cooperation Agreement	C1.1	31/12/2020
DC1.1.4 Report on lessons learned in phase 1 of the project	C1.1	28/02/2022
DC1.1.5 Report on the most promising new crops for the project area, new cultivation methods and new business models	C1.1	28/02/2022
DC1.2.1 Stress test report all seven N2000 sites VGNP	C1.2	30/09/2020
DC1.2.2 Area activity plan including roles and responsibilities	C1.2	31/12/2020
DC1.2.3 Area specific monitoring plan	C1.2	28/02/2021
DC1.2.4 Update of technical and financial progress	C1.2	31/10/2021
DC1.2.5 Concluding report (input for F.2 Interim Report 1)	C1.2	28/02/2022
DC1.3.1 Stress test report N2000 site Landgoederen Brummen	C1.3	30/09/2020
DC1.3.2 Area activity plan including roles and responsibilities	C1.3	31/12/2020
DC1.3.3 Area specific monitoring plan	C1.3	28/02/2021
DC1.3.4 Business plans supporting nature/biodiversity	C1.3	31/03/2021
DC1.3.5 Report on local market for biodiversity enhancing products	C1.3	31/07/2021
DC1.3.6 Update of technical and financial progress	C1.3	31/10/2021
DC1.3.7 Concluding report (input for F.2 Interim Report 1)	C1.3	28/02/2022
DC1.4.1 Stress test report N2000 site Rijntakken	C1.4	30/09/2020
DC1.4.2 Area activity plan including roles and responsibilities	C1.4	31/12/2020
DC1.4.3 Nature inclusive farming area plan	C1.4	31/12/2020
DC1.4.4 Area specific monitoring plan	C1.4	28/02/2021
DC1.4.5 Nature business plans including realisation strategy	C1.4	30/06/2021
DC1.4.6 Marketing strategy biodiversity improving products	C1.4	30/06/2021
DC1.4.7 Update of technical and financial progress	C1.4	31/10/2021
DC1.4.8 Concluding report (input for F.2 Interim Report 1)	C1.4	28/02/2022
DC1.5.1 Stress test report N2000 sites Terschelling, Ameland and Schiermonnikoog	C1.5	30/09/2020
DC1.5.2 Area activity plan including roles and responsibilities	C1.5	31/12/2020
DC1.5.3 Area specific monitoring plan	C1.5	28/02/2021
DC1.5.4 Update of technical and financial progress	C1.5	31/12/2021
DC1.5.5 Concluding report (input for F2 Interim report 1)	C1.5	31/12/2022
DC1.5.6 Area specific After Life conservation plan (input for F3)	C1.5	31/12/2022

DC1.6.1 Stress test report N2000 site 107 “Donkse Laagten”	C1.6	30/09/2020
DC1.6.2 Area activity plan including roles and responsibilities	C1.6	31/12/2020
DC1.6.3 Area specific monitoring plan	C1.6	28/02/2021
DC1.6.4 Update of technical and financial progress	C1.6	31/10/2021
DC1.6.5 Concluding report (input for F.2 Interim Report 1)	C1.6	28/02/2022
DC1.6.6 Report “Lessons learned”	C1.6	28/02/2022
DC1.7.1 Stress test report for each targeted Natura 2000 area	C1.7	30/06/2022
DC1.7.2 Implementation plan for each targeted Natura 2000 area	C1.7	31/10/2022
DC1.7.3 Technical and financial progress update I (consolidated for all targeted Natura 2000 areas)	C1.7	28/02/2023
DC1.7.4 Technical and financial progress update II (consolidated for all targeted Natura 2000 areas)	C1.7	28/02/2024
DC2.1 Assessment report – funding sources for biodiversity	C2	31/03/2021
DC2.2 Report on Biodiversity Monitor: system and KPI explanation	C2	31/03/2021
DC2.3 Report biodiversity business models	C2	31/03/2022
DC2.4 Evaluation of biodiversity business models	C2	28/02/2024
DC3.1 Report on mapping of regulatory barriers	C3	30/11/2021
DC3.2 Proposal for a multi-stakeholder process	C3	28/02/2022
DC3.3 Recommendations and best practices	C3	28/02/2022
DC4.1.1 Factsheets for the first five study themes	C4.1	31/12/2020
DC4.1.2 Ten short instruction videos	C4.1	31/12/2021
DC4.1.3 Complete curriculum for knowledge circles	C4.1	31/12/2021
DC4.1.4 Annual report (evaluation of results, recommendations for improvement)	C4.1	31/12/2021
DC4.1.5 Annual report	C4.1	31/12/2022
DC4.1.6 Annual report (training/curriculum evaluation, study groups)	C4.1	31/12/2023
DC4.1.7 Annual report	C4.1	31/12/2024
DC4.1.8 Overall evaluation report	C4.1	31/12/2025
DC4.2.1 Assessment plan (overview of areas, habitats and species targeted)	C4.2	30/11/2020
DC4.2.2 Implementation plan: overview of management measures phase 1 and 2	C4.2	30/01/2021
DC4.2.3 Report on results of experiments and different management measurements, lessons learned and upscaling potential	C4.2	28/04/2024
DC4.2.4 Report on implementation of management measures	C4.2	30/09/2024
DD1.1 Report describing the general framework for the monitoring of integrated governance approaches.	D1	31/11/2020
DD1.2 Report describing the process and outcome of KPI selection.	D1	31/08/2021
DD1.3 Annual (4 years) overall monitoring reports that feed back into All4Biodiversity C-actions.	D1	31/02/2025
DD1.4 Report on overarching analysis of governance related barriers for effective implementation of Natura 2000 measures.	D1	31/02/2024
DD1.1 Report on KPI selection for monitoring integrated governance	D1	31/08/2021
Report on governance related barriers for PAF implementation	D1	31/02/2024
LIFE-Indicator tables complete (For interim and final report)	D2	31/02/2023 - 08/06/2026
DD2.1 Report with site specific monitoring plan	D2	31/02/2021
DD2.2 Annual monitoring reports	D2	31/02/2025

DD2.3 LIFE-Indicator tables completed, in time for the First Interim Report	D2	31/02/2023
DD2.4 LIFE-Indicator tables completed, in time for the Final Report	D2	31/02/2026
DE1.1 Communication material biodiversity and food campaign	E1	28/02/2021
DE1.2 Ten press releases and five media location visits	E1	08/06/2026
DE1.3 Five conference proceedings	E1	08/06/2026
DE1.4 One communication multimedia campaign	E1	08/06/2026
DE2.1 LIFE-IP stakeholder platform and report on accompanying platform activities	E2	31/12/2020
DE2.2 Toolbox on best practices	E2	31/12/2026
DE2.3 At least 4 published articles for professionals in nature conservation international and national media outlets	E2	08/03/2026
DE3.1 Bi-monthly e-newsletter	E3	01/03/2021 to 08/06/2026
DE3.2 Approximately weekly posts on social media accounts	E3	01/03/2021 to 31/12/2026
DE3.3 15 sets of notification panels in Natura 2000 pilot areas	E3	01/03/2021
DE3.4 General brochure (5.000 copies)	E3	30/06/2021
DE3.5 Leaflet on each pilot	E3	31/03/2022
DE3.6 44 sets of notification panels in N2000 demonstration areas	E3	30/06/2022
DE3.7 Proceedings 1 <sup>st</sup> EU conference (Ne/En/Fr/De)	E3	30/06/2022
DE3.8 Proceedings 2 <sup>nd</sup> EU conference (Ne/En/Fr/De)	E3	30/06/2024
DE3.7 Layman's report	E3	08/06/2026
DE4.1 Contribution to and/or organisation of 10 workshops and lectures and network events.	E4	08/06/2026
DE4.2 Eight webinars organised and performed, joined by 100 participants in each webinar.	E4	08/06/2026
DE4.3 Ten contributions to conferences on nature and biodiversity conservation.	E4	08/06/2026
DF1.1 Activity and responsibility matrix and report	F1	30/06/2020
DF1.2 Quarterly technical and administrative reports	F1	30/06/2020 - 31/12/2025
DF1.3 Agenda and minutes of SC meetings	F1	30/06/2020 - 08/03/2026
DF1.4 Agenda and minutes of Executive Committee meetings	F1	30/06/2020 - 28/02/2026
DF2.1 Internal, quarterly project progress reports.	F2	30/06/2020 – 31/12/2025
DF2.2 Annual update on project expenditure to the EU (end November each year).	F2	30/11/2020 – 30/11/2025
DF2.3 Report on visit of EU External Monitoring Team.	F2	31/12/2020 – 08/03/2026
DF2.4 Amendment request with updated implementation plan and budget for phase 2.	F2	08/12/2021
DF2.5 Interim report 1, with audited financial statement and indicator table.	F2	08/06/2022
DF2.6 Amendment request with updated implementation plan and budget for phase 3.	F2	08/12/2023
DF2.7 Interim report 2 with audited financial statement and indicator table.	F2	08/06/2024
DF2.8 Final LIFE report and audited financial statement, including a Layman's report.	F2	08/06/2026

DF3.1 After-LIFE plan (submitted with the Final Report)	F3	08/06/2026
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### MAIN MILESTONES OF THE PROJECT

Name of the Milestone	Code of the ass. action	Deadline
MF1.1 LIFE IP All4Biodiversity starts	F1	09/03/2020
MA1.1. Workshop on available methods for stress test conducted	A1	30/09/2020
MA1.2. Quick-scan methodology finalised	A1	31/12/2020
MA2.1. Area governance teams installed and operational	A2	31/10/2020
MA2.2 Area specific approach successfully trialled in pilot sites	A2	28/02/2022
MA3.1 Person hired for knowledge assembly	A3	31/01/2021
MA3.2 Workshop on prioritization of research topics	A3	01/04/2021
MC1.1.1 Plan of Action and Cooperation Agreement signed	C1.1	31/12/2020
MC1.1.2 80 company visits completed	C1.1	31/12/2020
MC1.1.3 Signature 1st Light Qualitative Obligations	C1.1	31/03/2021
MC1.1.4 160 company visits completed	C1.1	31/12/2021
MC1.2.1 First meeting with stakeholders, intention to cooperate confirmed	C1.2	30/06/2020
MC1.2.2 Cooperation agreement signed	C1.2	31/08/2020
MC1.2.3 Activity plan adopted	C1.2	31/12/2020
MC1.2.4 Concrete measures implemented	C1.2	28/02/2022
MC1.3.1 First meeting with all stakeholders, intention to cooperate confirmed	C1.3	30/06/2020
MC1.3.2 Cooperation agreement signed, including 5-10 farmers willing to participate	C1.3	31/12/2020
MC1.3.3 Activity plan adopted	C1.3	31/12/2020
MC1.3.4 Concrete measures implemented	C1.3	28/02/2022
MC1.4.1 First meeting all stakeholders, intention to cooperate confirmed	C1.4	30/06/2020
MC1.4.2 Cooperation agreement signed, including 5-10 farmers per project area willing to cooperate	C1.4	31/12/2020
MC1.4.3 Activity plan adopted	C1.4	31/12/2020
MC1.4.4 Concrete measures implemented	C1.4	28/02/2022
MC1.5.1 First meeting with stakeholders, intention to cooperate confirmed	C1.5	31/06/2020
MC1.5.2 Cooperation agreement signed	C1.5	31/08/2020
MC1.5.3 Activity plan adopted	C1.5	31/12/2020
MC1.5.4 Concrete measures implemented	C1.5	31/12/2022
MC1.6.1 First meeting with all stakeholders, intention to cooperate confirmed	C1.6	30/06/2020
MC1.6.2 Cooperation agreement signed	C1.6	31/08/2020
MC1.6.3 Activity plan adopted	C1.6	31/12/2020
MC1.6.4 Concrete measures implemented	C1.6	28/02/2022
MC1.7.1 Implementation plans agreed upon by all stakeholders	C1.7	31/10/2022
MC1.7.2 Positive impacts on biodiversity measured in all 44 Natura 2000 sites	C1.7	31/03/2026
MC2.1 Biodiversity monitor operational	C2	31/03/2021
MC2.2 Biodiversity business models positively evaluated	C2	31/03/2024
MC3.1 Clear insight in regulatory barriers and mitigation plan available	C3	28/02/2022

MC4.1.1 Twelve knowledge circles operational	C4.1	31/12/2021
MC4.1.2 First training cycle completed in 12 knowledge circles	C4.1	31/12/2022
MC4.1.3 Eight study groups installed.	C4.1	31/12/2023
MC4.1.4 Meeting of all 'Knowledge Circle'/study group experts conducted	C4.1	31/12/2023
MC4.1.5 Meeting of all 'Knowledge Circle'/study group experts conducted	C4.1	31/12/2025
MC4.2.1 Management measures fostering biodiversity in road verges implemented	C4.2	31/03/2025
MD1.1 Outline of general framework for the monitoring of integrated governance approaches approved by SC.	D1	31/08/2020
MD1.2 Final stakeholder workshop on KPI selection completed	D1	31/02/2021
MD1.3 Annual (4 years) monitoring data to be reported in annual reports collected and compiled	D1	31/12/2024
MD1.4 Analysis completed for report on governance related barriers for effective implementation of Natura 2000 measures.	D1	31/08/2023
MD2.1 Draft report on site specific monitoring plan ready for feedback by all relevant stakeholders	D2	31/12/2020
MD2.2 Site specific monitoring data to be reported in annual reports collected and compiled	D2	31/12/2024
MD2.3 Data for Interim Report indicator tables compiled and ready for analysis	D2	31/02/2023
MD2.4 Data for Final Report indicator tables compiled and ready for analysis	D2	31/02/2026
ME1.1 Launch of the biodiversity and food campaign	E1	28/02/2021
ME1.2 First press release drafted and released	E1	31/12/2021
ME1.3 First media location visit organised and visited	E1	31/12/2021
ME1.4 Biodiversity and food campaign successfully finalised	E1	31/03/2022
ME1.5 Five annual conferences	E1	31/12/2022 to 08/03/2026
ME1.6 Ten open days in five provinces (two in each province)	E1	31/12/2022 to 08/03/2026
ME1.7 Multi-media campaign finished	E1	08/03/2026
ME2.1 Existing stakeholder platforms contacted and willing to disseminate information.	E2	30/06/2021
ME2.2 LIFE-IP stakeholder platform developed and live	E2	31/12/2021
ME2.3 Ambassadors selected	E2	01/03/2022
ME2.4 Visitor programmes and excursions performed	E2	31/12/2024
ME2.5 Toolbox with all added elements finalised	E2	08/03/2026
ME2.6 Visitor programmes & excursions for professionals organised	E2	08/03/2026
ME3.1 LIFE IP website online	E3	01/09/2020
ME3.2 Partners websites online with article on LIFE IP project	E3	01/03/2021
ME3.3 Start of Bi-monthly E-newsletter published	E3	01/03/2021
ME3.4 Social media accounts live, first posts	E3	01/03/2021
ME3.5 LIFE-IP opening event organised; 300 participants present	E3	31/03/2021
ME3.6 Notification panels installed in the field	E3	31/03/2021
ME3.7 General brochure produced (5000 copies)	E3	30/06/2021
ME3.8 Leaflets on pilots produced (1000 copies each)	E3	31/12/2022
ME3.9 2.000 copies of Layman's report distributed and 8000 downloads	E3	08/03/2026
ME3.10 5.000 general brochure downloaded	E3	08/03/2026
ME3.11 1.000 leaflets on each pilot downloaded	E3	08/03/2026

ME3.12 Web content on LIFE-IP website and partner websites updated (website will be kept online at least until 8/3/2031)	E3	08/03/2026
ME4.1 First two webinars organised, joined by 100 participants each.	E4	31/12/2022
ME4.2 Ten interactive workshops and network events organised or visited.	E4	31/12/2026
ME4.3 In total 8 webinars organised, joined by 100 participants each.	E4	31/12/2026
ME4.4 Ten contributions to conferences on nature and biodiversity conservation.	E4	31/12/2026
MF1.1 LIFE IP started	F1	09/03/2020
MF1.2 Project Director nominated	F1	30/04/2020
MF1.3 Steering and Executive Committee established	F1	30/06/2020
MF1.4 Advisory Board established	F1	30/09/2020
MF1.5 Activity and responsibility report approved by all partners	F1	09/06/2020
MF1.6 All project actions successfully finalised by the end date	F1	08/03/2026
MF2.1 All compulsory reports submitted on time, complete and of good quality.	F2	08/06/2026
MF3.1 After-LIFE plan finalised	F3	08/06/2026

#### **ACTIVITY REPORTS FORESEEN**

Type of report	Deadline
Interim report 1 with an audited financial statement	08/06/2022
Interim report 2 with an audited financial statement	08/06/2024
Final LIFE report and audited financial statement	08/06/2026





<b>E. Public awareness and dissemination of results :</b>																									
E.1 Creating shared values and broad support																									
E.2 Replication and scaling-up of results and lessons learned																									
E.3 Dissemination of overall project information																									
E.4 Networking and knowledge exchange with other LIFE projects																									
<b>F. Project management and monitoring of project progress:</b>																									
F.1 Overall coordination and knowledge exchange																									
F.2 Monitoring progress of the project actions and reporting to the EU									IR									IR							FR
F.3 After-LIFE plan																									