

SIGNPOSTS FOR A SUSTAINABLE OUDLANDPOLDER



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Dear reader,

On 18 December 2020, the Flemish government approved the **Oudlandpolder land development project**. This was the official kick-off for a future-oriented project to make the Oudlandpolder a resilient and climate-resistant area where it is pleasant to live, work and spend time.

Given that various paths lead to a future-proof Oudlandpolder, 4 workshops were organised on 24 and 25 March 2021. A diverse group of people reflected on and discussed the future of a number of elements that are highly specific to the polder: the polder villages, the dune-polder transition, the nature areas and agricultural areas. Each of the workshops focused on one of these elements and aimed to put forward five shared principles. **Signposts**, as it were, that the participants intend to follow **in the further development of the Oudlandpolder**.

These signposts are presented in this publication. For each signpost, it is also explained how there is a link to the actions already agreed upon in the context of the land development project. Furthermore, the insights from the future scenarios are also relevant to include in this context (see also the publication "What future do you want for the Oudlandpolder?"). Finally, in two intermezzos we will look at how the agreed principles fit in with the objectives put forward in the European Green Deal.

READER'S GUIDE

This publication consists of 4 parts in which the signposts that followed from the 4 workshops can be found in succession. You can read these parts separately or see them as a larger whole. If you do go through the entire publication as a whole, you will notice that in the various workshops principles were put forward that fully or partially overlap. It was a conscious decision not to merge them, and thus present these principles multiple times. In this way, the themes emerge clearly where the participants can find common ground over the boundaries of the different workshops.

For information: The following organisations participated in these workshops for the Oudlandpolder: Municipality of Jabbeke, Municipalities of Zuienkerke, City of Bruges, New Polder of Blankenberge, Province of West Flanders, Services of the Governor of West Flanders, Environment Department, Department of Agriculture and Fisheries, ANB, VLM, VMM, SERV, VLAKWA, POM West Flanders, Ostend Science Park, VLIZ, ILVO, inagro, University of Antwerp, MBZ NV (Port of Zeebrugge), Boerenbond, Natuurpunt, Natuurpunt Uitkerkse Polder and 4 different independent agricultural companies.

The workshops were moderated by VLM and VITO.



WORKSHOP 1

**NATURE DEVELOPMENT IN
A MULTI-LAYERED AND
MULTIFUNCTIONAL LANDSCAPE**

24 MARCH 2021
(9.30 a.m. - 12.00 p.m.)

IN THE POLDER REGION, THE MAIN FOCUS IS TO PRESERVE AN OPEN, PEACEFUL LANDSCAPE.

Explanation

The Oudlandpolder has an open landscape, characterised by fields, meadows, natural brushwood and small polder villages along old agricultural roads. Except around higher elevated farms, there are hardly any trees or bushes to be seen. The haphazard spatial organisation that characterises Flanders - with its typical ribbon development and parcelling of land - has not afflicted this area. As a result, hydrological, agricultural and natural elements that have structured the landscape since time immemorial can still be found in many places in the Oudlandpolder: (Old) dykes, ditches at the site of former gullies, plots with irregular shapes, historical grasslands, etc.

The future developments in the Oudlandpolder must be focused as much as possible on the **preservation - and restoration - of the historically grown open landscape**. This means that canal structures, linear elements such as dykes and agricultural roads, vistas, agricultural patterns, etc. are used as a framework when designing new spatial interventions in the region. **Buildings that cannot be reconciled with this objective, such as isolated villas in the greenery, will be demolished.** A restoration, and therefore a revalorisation, of the characteristic polder landscape will not only contribute to the tourist attractiveness of the Oudlandpolder, but will also increase the potential for achieving sustainable agricultural and natural structures that allow for a climate-resilient water policy.

How does this link to the objectives of the land development project?

Preserving the open landscape in the Oudlandpolder is not put forward as a separate objective in the land development project, but it can be found in other objectives, such as valorising and protecting the heritage, including heritage landscapes and areas with cultural-historical value, and improving the quality of life in the polder villages.

"Quality of life" has various dimensions, including environmental quality. The land development project has the ambition to focus on the environmental quality of the polder villages. Most of these villages have retained their small-scale character and have important heritage value. Among other things, this 'village feeling' stems from the relationship that the villages have with the surrounding landscape: the contrast with the open landscape is precisely what expresses the typical identity of the polder villages. Through targeted interventions, such as more greenery in the village centres, the upgrading of historical landscape elements and the visual 'finishing' of the periphery of the villages, the aim is to further reinforce this identity. The ambition is also to stop further atomisation, caused among other things by parcelling out the polder villages and encroaching construction from the urbanised coastal area.



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THAT WAY

What can we learn from the scenarios for the Oudlandpolder?

All scenarios assume a significant **increase in the number of inhabitants** in Flanders. This rise in the population will also be felt in the polder and coastal areas. Depending on the scenario, and thus on factors such as migration and economic growth, it is assumed that the population in the polder and the coastal area will grow by 11% to 33%, or that the population in the project area will increase by 10,000 to 25,000 people. Only in the 'anti urban sprawl' land-use scenario (see also scenario 'integrated sustainability') is such population growth not accompanied by further encroachment of the open space. So only in a scenario in which the extra land take is reduced to 0 ha by 2035, and in the subsequent years even paved surfaces are returned to agriculture and nature, can the expected population growth be reconciled with the preservation (and restoration) of the open polder landscape.

Putting this principle into practice, and thus preserving and restoring the open, peaceful landscape of the Oudlandpolder, means that **stringent measures will have to be devised in accordance with a spatial policy that focuses on the densification of places with a high nodal value**, as in the 'anti-urban sprawl' scenario. **Only then will it be possible to accommodate the expected population growth in the area without further damage to the landscape value of the Oudlandpolder.** In the polder villages, the demand for densification will be a significant challenge - preserving the typical structure and identity of the polder villages can only be reconciled with further densification of the villages through intelligent, targeted interventions - meaning that attention will automatically turn towards the urbanised coastal periphery and the city of Bruges.

NATURAL STRUCTURES START FROM 4 MAJOR CORE AREAS THAT ARE CONNECTED BY A CONTINUOUS NETWORK OF NATURAL ELEMENTS.

Explanation

Besides a large amount of smaller, dispersed nature areas, the Oudlandpolder currently encompasses four larger nature areas: the Uitkerkse Polder, the Meetkerkse Moeren, the polder grasslands between Klemskerke and Vlissegem and 't Pompje. These areas consist partly of plots designated and/or managed as nature reserves and expansive pastures managed by farmers, partly of land in agricultural use that is largely managed as pasture.

These larger nature areas will serve as the basis for the **development of four large, delineated core areas of nature in the Oudlandpolder**. **Access** to these core areas should ideally be **restricted**, so that nature can flourish there relatively undisturbed. A **contiguous network of smaller natural elements** will be developed complementary to these core areas, passing through agricultural areas and interwoven with the more urbanised areas in the coastal strip and the polder villages. They are natural 'stepping stones' along which species can migrate from one core area to another. In addition, the brushwood, permanent grasslands, ponds, herb and flower strips, dune bushes and other natural elements that make up these migration corridors should also relieve some of the pressure from predators in the core areas and help the populations of agricultural species, such as meadow birds and field herbs, to thrive. This means that the natural network outside the core areas is developed **according to the migration routes of agricultural and other (less mobile) plant and animal species**. In this context, it is emphasised that the Blankenbergse Vaart should not be administratively disconnected from smaller polder watercourses that flow into it. This natural

network also creates additional breeding and foraging areas, so that more resilient and climate resilient ecosystems can develop.

How does this link to the objectives of the land development project?

One of the aims of the land development project is to achieve the conservation objectives for the coastal polders. The following of these conservation objectives clearly have spatial implications:

- An increase of the saline grasslands (by extension or conversion) by 20 ha. Since on average only 7% of a plot actually consists of saline grassland, this de facto amounts to an additional 285 ha of saline grassland.
- The development of 5 - 10 ha of reed marshes and large sedge vegetation in order to preserve the spotted crane as a breeding bird in the Oudlandpolder.
- The preservation of 8,000 - 10,000 ha of permanent grassland with ditches and micro-relief throughout the East Coast polders for the wintering of species such as the white-fronted goose, the pink-footed goose and the Eurasian wigeon. In this respect, core areas will be delineated where these birds will be disturbed as little as possible at the Uitkerkse Polders, Klemskerke - Vlissegem and the Meetkerkse Moeren.

For the other conservation objectives, no expansion or preservation of given areas is envisaged, but the aim is to improve or maintain the quality of existing habitats. In this context, concluding management agreements with farmers is one of the options being considered.

This means that the concept of 'core areas' is clearly reflected in the objectives formulated in the land development project. It also

recognises the importance of natural elements outside core areas and the role that farmers play in managing them. However, the question of seeing the preservation and development of natural structures in the Oudlandpolder also as a function of the migration of plant and animal species - as in this principle - and thus to enhance the potential for climate-resilient ecosystems to develop, is only implicitly mentioned. The ambition to maintain current populations of e.g. marsh harrier, bluethroat, pied avocet and kingfisher automatically implies that the ecosystems in which these birds function are targeted, and thus that the conservation of all plant and animal species in these ecosystems is targeted. The fragmentation of natural areas hinders the migration of species, especially plants and less mobile (small) animals such as amphibians or ground beetles. Isolated populations are less resilient because they have difficulty recovering from drought, disease or other stressors. Preserving resilient, climate-proof ecosystems in which the current population of marsh harriers, kingfishers or pied avocets can be maintained therefore requires the development of the above-mentioned 'stepping stones' for species. However, this is not explicitly mentioned in the nature objectives.

The land development project also makes a clear link between nature management and water management by further compartmentalising water management, thus better aligning water management with the needs of agriculture and nature. Linking nature management and water management through further compartmentalisation of the polder reinforces the principle of core areas.

For water management and the associated compartmentalisation, the vision outlined here that "the water management of the Blankenbergse Vaart cannot be seen in isolation from the water management of the adjacent smaller polder watercourses" is a bottleneck, if this is interpreted as setting the same water level on the Blankenbergse Vaart as on the adjacent watercourses (which partly irrigate compartments with the main purpose of nature). Indeed, compartmentalising the polder means that the main ditches (Blankenbergse Vaart - Noordeede)

can have a different water level management from the connecting compartments.





THAT WAY

What can we learn from the scenarios for the Oudlandpolder?

In the fourth scenario, called 'Technological Optimism', the development of **four core nature areas** is taken as a guideline, which is also reflected in the principle mentioned here. In order to make a realistic estimation of the location of these core nature areas, the **existing nature reserves and all adjacent plots of land that occur in the search zones** were identified as possible compensation areas for the expansion of the port of Zeebrugge. According to this scenario, the development of these 4 core areas will therefore increase the area of nature in the Oudlandpolder by about 1,300 ha (an increase of 84%). This is land that is still officially classified as agricultural land, but is sometimes de facto managed as natural grassland. In this scenario, this entire area becomes an official nature

reserve. This is accompanied by a reduction of just under 12% in the agricultural area.

Connecting these core areas with each other and thus developing **a continuous natural network** - as well as the development of the core nature areas themselves - appears to be feasible only when looked at from a **land sharing** perspective. Or in other words, if agricultural land can also be used for nature and climate objectives, and farming can be done in nature areas. The Oudlandpolder has traditionally been an environment formed by man, where agriculture became possible only by slowly reclaiming land from the sea. Throughout this process over centuries, a specific fauna and flora has developed in the polder, a large part of which is dependent on agriculture. Birds such as black-tailed godwits, pied avocets and skylarks, wintering geese, or field herbs such as poppies and cornflowers, cannot live without fields and grasslands. **Maintaining** this kind of **'farmer's nature' is not possible without agriculture**. In addition, managing such an interwoven natural network also appears to be an important reason for looking at how nature and agriculture objectives can go hand in hand in some places. Ultimately, the **efforts of farmers will therefore be necessary** to manage both core areas and nature connection areas. New business models in which farmers earn fair remuneration for the ecosystem services they support, and tools such as the management agreements, may then be a key element in realising such a natural network.

PRESERVATION OF ALL REMAINING HISTORICALLY PERMANENT GRASSLANDS IN COOPERATION WITH EXTENSIVE LIVESTOCK FARMING.

Explanation

Currently, 820 ha of grassland in the Oudlandpolder are protected as environmentally sensitive permanent grassland (ESPG). The following is applicable to these grasslands:

- no mechanical modification.
- no modification of the relief.

For 1,930 ha of grassland in the Oudlandpolder, the following is applicable:

- no mechanical modification.
- no chemical modification.
- no burning.
- no modification of the relief.
- no overseeding.

This is protection via agricultural legislation, which essentially means that the only sanction that can be taken is loss of income (due to no longer being able to receive some premiums).

There are also 8 ha of grassland in the Oudlandpolder for which the following must be requested:

- permit for mechanical modification.
- permit for chemical modification.
- permit for burning.
- permit for modifying the relief.
- permit for overseeding.

Finally, another 117 ha are protected as permanent grassland under the Flemish Ecological Network (VEN). The protection status of these grasslands is identical to that of ESPG.

There are also historically permanent grasslands that are not protected at all, because they are located in an area that is not zoned for agriculture or nature. The total area of this is not known, but it will be limited.

A total of 2,875 ha of grasslands are therefore protected in one way or another as historical permanent grassland. The relatively light penalties for encroaching on historical permanent grassland that is only protected under agricultural legislation means that modifications are still being made. **Given the nature and landscape objectives, it is therefore advocated that all historically permanent grasslands should be protected under nature legislation.**

How does this link to the objectives of the land development project?

The intention is, linked to the land development project, to achieve a complete delineation of the natural and agricultural structure in the Oudlandpolder. This is to offer legal certainty to farmers with regard to the future use of land and the conditions that will apply in this regard. These AGNAS (delineation of natural and agricultural structure) processes will include a possible extension and better protection of the area of historically permanent grasslands.

Achieving the conservation objectives for the coastal polders is also one of the stated objectives. This implies preserving 8,000 - 10,000 ha of permanent grassland with ditches and micro-relief in the entire East Coast polders for winter guests such as the pink-

footed goose, Eurasian widgeon and white-fronted goose. However, it has not yet been determined how many of these 8,000 - 10,000 hectares must be in the Oudlandpolder.

Finally, this principle also ties in with the ambitions expressed in the Framework Agreement for the Oudlandpolder to increase the total buffer capacity of the water system in the region, as well as the total storage capacity, including by supplementing the groundwater reserves through the infiltration of rainwater.

What can we learn from the scenarios for the Oudlandpolder?

In the Oudlandpolder, a large part of the wetlands that were still present in the 1950s could be restored, so that a total wetland area of almost 5,200 ha is achieved (1). These wetlands were - and the remaining grasslands still are - wet meadows and hay meadows on the clay lands that were kept open by farmers through extensive grazing and judicious mowing management. The groundwater level of these wetlands changed with the seasons: in winter it was high and the grasslands were difficult to access, during spring the water level dropped, and the grasslands could be grazed.

The 'integrated sustainability' scenario aims for a **wetland area of 4,400 ha**, or 86% of the above-mentioned potential. **This is presumably close to the proportion of permanent grassland with ditches and micro-relief that will have to be realised** in the Oudlandpolder in order to achieve the 8,000 - 10,000 ha proposed for the entire East Coast polders (see conservation objectives for the coastal polders).



THE AIM IS TO ACHIEVE GOOD WATER QUALITY THROUGHOUT THE POLDER.

Explanation

The ecological status of the surface water in the Oudlandpolder is currently "insufficient" or "poor" throughout. The physical and chemical condition of the watercourses also varies from "insufficient" to "poor". The latter is due to measurements of 'total phosphorus'. If this parameter is left out, the physical-chemical condition of the watercourses is "good" to "very good".

Sustainable water management focuses not only on the quantitative aspect of water management, to which the Oudlandpolder justifiably devotes a lot of attention, but also on improving the quality of the water.

How does this link to the objectives of the land development project?

According to the Water Framework Directive, all European waters must achieve "good status" by 2027 at the latest. Or, if due to natural circumstances it is not possible to reach this target in time, by 2027 all measures must be in place to achieve good water quality in the long run. The land development project endorses this European water quality objective.

In the Oudlandpolder land development project, the aspect of water quality is less emphasised because the water quality policy is fully integrated in existing policy (policy on water treatment, policy on sewerage, policy on combating pollution of surface water and groundwater (e.g. Manure decree, VLAREM, etc.)). Moreover,

there is little room for differentiating water quality policy and no additional incentives from land development funds for works aimed at improving water quality.

THAT WAY

What can we learn from the scenarios for the Oudlandpolder?

Since the water quality objectives stated above also need to be met in Flanders, this objective is included in all scenarios as a reference. There is no variation between the scenarios. What does differ between the scenarios is the way in which this objective is achieved.

Within the broad spectrum of measures that can be taken, it is therefore interesting to look at the scenarios 'integrated sustainability' and 'technological optimism' - the two scenarios that each position themselves at a different extreme of this spectrum. In the latter scenario, natural systems (e.g. natural areas or natural cycles such as the water cycle) are separated as much as possible from man-made systems. This is done through technological solutions implemented by specialised, large-scale and capital-intensive (agricultural) companies, such as smart, computer-controlled systems that use sensors to allow fertilisation and pest control to be tailored to exactly what plants can absorb, thereby avoiding the infiltration of chemical residues into groundwater bodies, for example. At the other end of the spectrum, the 'integrated sustainability' scenario primarily explores 'nature-based solutions', incorporated into an agricultural model based on family farms that seek to close cycles locally and minimise costs. Crops and farming practices are

selected according to e.g. soil conditions and the available water. Animal breeds are used that are hardy, require little in the way of intervention by the veterinarian and are largely fed with what the Oudlandpolder can produce.

One of the things we can observe from these scenarios is that the technologies that can help achieve better water quality have existed for a long time, no matter at what extreme of the spectrum you look for a solution. The reason why the condition of the watercourses in the Oudlandpolder is still substandard is therefore not technological, but must be sought in the agreement framework that governs how water is managed in the polder, the way in which this agreement framework has been drawn up, and its enforcement. Using specific technologies is part of such an agreement framework.

Water is part of the commons, with specificities according to its use. For example, water used by one person cannot be used by another. And water polluted by one person is no longer available in its initial quality to another. At the same time, it is not self-evident to deny someone access to water. Water management therefore comes with certain challenges, which are not the case in the management of private goods, for example. To get a better idea of the criteria that governance systems that do succeed in managing such commons in a sustainable way need to meet, we can refer to the work of e.g. Elinor Ostrom and colleagues (2).

WATER LEVELS ARE SET ACCORDING TO THE DEVELOPMENT OF A RESILIENT AND CLIMATE-RESISTANT WATER SYSTEM, TAKING INTO ACCOUNT THE NEEDS OF NATURE, AGRICULTURE, RESIDENTIAL AREAS AND OTHER AREAS IN THE OUDLANDPOLDER.

Explanation

The impact of **climate change** is already being clearly felt in the Oudlandpolder. For example, the polder has been confronted with **more frequent and more intense droughts in recent years**. The impact of these droughts is worse than in other areas for the following reasons:

- the polder does not have its own water sources,
- there is almost no usable groundwater (because it is saline), and
- when the water level in polder watercourses is too low, and the flow rate too low, salinisation of both surface water and soil occurs.

Another consequence of changing weather patterns is an **increase in the number of intensive rain showers with large peak flows**. Together with the fact that the sea level is rising and there are therefore fewer possibilities to drain the excess water using gravity, this creates greater challenges in terms of flood protection. Besides climate adaptation, the different water needs of the various users in the polder also means that the **water level management needs to be adapted**.

This new water level management **needs to take into account the needs of the different areas in the Oudlandpolder**, both now and in the coming

decades. In nature areas, this means that it should be possible for water levels to vary according to the rhythm of the seasons: high water levels in the winter, with a wetland condition that can be maintained until at least the beginning of June, and lower levels in the summer, taking into account the impact of climate change.

A new water level management in the polder will need to go hand in hand with the **creation of more buffer capacity**. For this, wetlands outside the nature core areas are being looked into. The area in which this buffer capacity is created needs to be large enough to create a buffer that makes it possible to bridge dry periods without having to bring in water from outside the polder. At the same time, it also needs to be possible for these buffers to reduce flood risks during periods of intense rainfall.



How does this link to the objectives of the land development project?

Revising the water level management in the Oudlandpolder is part of one of the main objectives of the land development project, namely to achieve climate resilient water management:

- maximum storage and buffering of water in the water system and soil,
- guaranteeing (emergency) drainage possibilities of surface water towards the sea, and
- the efficient use of the available water in the polder.

In connection with this objective, several concrete actions have already been set out in the Framework Agreement for the Oudlandpolder, both research work, such as investigating the desired ground and surface water system in the Oudlandpolder, and actions in the field, such as installing equipment that makes it possible to permanently record flow rates, modernising water intake infrastructure and making formal arrangements on the permitted flow abstractions. (A complete overview of all proposed actions can be found in Chapter 4.2.8 of the report 'Oudlandpolder land development project Phase 1.).

To further underpin area-specific choices in water management, a study is currently underway regarding the drafting of a water assessment for the Oudlandpolder and, on the other hand, the drafting of a desired ground and surface water system for the Oudlandpolder.

What can we learn from the scenarios for the Oudlandpolder?

The scenarios did not look into water level management in the Oudlandpolder. The scenarios are at a higher level of abstraction, so partial aspects of water management that are at this level of detail were not included.



THAT W

INTERMEZZO 1 – GREEN DEAL

Are the signposts for nature development in the Oudlandpolder in line with the European Green Deal? What can the biodiversity strategy tell us?

In December 2019, the European Commission presented its Green Deal, a new growth strategy for Europe. This Green Deal has the ambition to make Europe the first climate-neutral continent by 2050, stimulate the economy, improve public health and quality of life and protect nature, with no-one left behind. Divided into various policy areas, the Green Deal is currently being worked out in more detail and anchored in European legislation.

The objectives of the Green Deal – and more specifically the biodiversity strategy that is part of it – are briefly presented below, and these objectives can be linked to the signposts presented on the previous pages. The question here is whether these objectives are on the same path that we need to be taking according to the European Green Deal.

Green Deal objective: Preserving and restoring ecosystems and biodiversity

The European Commission wants to help ensure that by 2050 all ecosystems worldwide are restored, resilient and adequately protected. There must be no more extinction of species on account of human activity, at least insofar as this can still be avoided. Europe's biodiversity must therefore be on the road to recovery by 2030 at the latest.

To make this possible, at least 30% of the land and 30% of the sea in the EU will be transformed into effectively managed protected areas. One third of this area, i.e. 10% of the land and 10% of the sea will be strictly protected. In the first instance, the following will be looked at:

- (1) areas of very high biodiversity value or very high potential, and
- (2) ecosystems that absorb carbon from the atmosphere and store significant carbon stocks, such as peatlands, grasslands and wetlands.

The European Biodiversity Strategy emphasises the importance of providing the necessary ecological corridors. Only when protected areas are interconnected, thereby facilitating the migration of species, can a truly coherent and resilient trans-European nature network be achieved.

In the following way, the above-mentioned signposts and these objectives from the Green Deal can be linked together:

- › **The goal of creating four large core nature areas in the Oudlandpolder, connected by a continuous network of natural 'stepping stones', is fully in line with the European objective of developing a trans-European nature network.**
- › **When the delineation of the natural and agricultural structure of the Oudlandpolder has been realised and the four core nature areas have been further developed, the area of strictly protected nature in the Oudlandpolder will be larger than it is today. This is in line with the objective of expanding the area of natural land in Europe.**
- › **The signpost in which the preservation of all remaining historically permanent grasslands is put forward is in line with the European objective of (strictly) protecting ecosystems that absorb carbon from the atmosphere and store significant carbon stocks.**

Green Deal objective: Bringing nature back to agricultural land by improving the condition and diversity of agro-ecosystems.

At least 10% of the agricultural area will have to be transformed into landscapes with high biodiversity. It is up to the Member States to translate this EU 10% target to a lower geographical scale to create links between habitats and reconcile this nature objective with agricultural practices in an area.

- > **The principle of developing a continuous network of natural elements in the Oudlandpolder, integrated into agricultural land, in order to connect the core nature areas, can make an important contribution to this objective of improving the diversity of agro-ecosystems.**
- > **If all remaining historically permanent grasslands are protected more strictly than is currently the case, and are also adequately managed, this will create opportunities to evolve into plots with high biodiversity. If we go a step further and a section of permanent grassland with ditches and micro-relief is also created in the Oudlandpolder, in accordance with the 8,000 - 10,000 ha that needs to be created throughout the East Coast polders, this European objective can easily be achieved.**

Green Deal objective: Restoring freshwater ecosystems

The water quality objectives imposed by the Water Framework Directive are fully adopted in the European Green Deal. The Commission recognises the need to step up the efforts to restore freshwater ecosystems, thereby implementing the Water Framework Directive.

- > **The development of a diversified water level management throughout the polder, which in addition to agricultural needs also responds to water needs in nature areas, supports the objective of restoring freshwater ecosystems.**





WORKSHOP 2

POLDER VILLAGES WITH A FUTURE

24 MARCH 2021
(1.30 p.m. - 4 p.m.)

EXPANDING POLDER VILLAGES MUST BE POSSIBLE AS LONG AS THE AUTHENTICITY OF THE VILLAGES IS RESPECTED.

Explanation

There is vocal demand to preserve, and where possible restore, the open landscape in the Oudlandpolder. When it comes to the polder villages, this question translates into calls for no further spatial expansion of the latter. Of course, **the polder villages can continue to develop and grow, but this should be within the area they already occupy.**

Not expanding almost automatically means “internal expansion” and densification. In other words, building more housing units, shops, space for water and greenery, and other facilities within the existing built environment. However, this must be done with respect for traditional village views, old linear structures such as dykes, lanes and agricultural roads leading to important viewpoints (old farms, mills, etc.), and thus the characteristic elements in the polder villages. Building conventional apartments is therefore out of the question. Rather, the aim is to look at more collective forms of housing in larger, historical buildings and on larger plots of land, which will make it possible to expose the blue-green criss-crossing of the polder villages once again. There is no doubt that this will be a challenge that will require an intelligent vision at the village level. The limits of such an internal expansion model are also evident.

How does this link to the objectives of the land development project?

The land development project is in line with the broader objective of preserving and reinforcing the identity of the historical polder landscape in the Oudlandpolder, a man-made landscape where agriculture and nature together forge the identity, and where water management has been a guiding element for centuries. At the level of the polder villages, this means that there will be more of a focus on public greenery in the village centres, intelligent paving choices, the construction of ‘village diversions’ or, in other words, connecting the villages with recreational walking and cycling networks, revalorising historical landscape elements and tackling ‘scruffy peripheries’ outside the village centres.



AFFORDABLE LIVING WILL BE THE NORM.

Explanation

The prices of family homes are rising so much in the polder villages that it is impossible for most young people growing up there to stay. By way of comparison: The average selling price for a house in Bruges in the period 2019-2020 was €308.490. In the coastal region, the average selling price for houses was €253.459 (Ostend), €267.275 (Bredene), €308.202 (De Haan) and €291.602 (Blankenberge). Finally, in Zuienkerke, a municipality consisting exclusively of polder villages, an average of €377.876 was paid for a house (3).

The high pressure on the real estate market in the polder villages could be largely attributed to the number of dwellings bought as second homes or as income-generating properties, for example to operate a B&B. Polder villages where you can live, however, require a minimum critical mass, a minimum number of actual residents from different age categories, so that a healthy social fabric can form. As such, demands have been made to **put a brake on the number of second homes, B&Bs and other income-generating properties in the polder villages.**

This is possible if the **government regulates, invests and stimulates.** Introducing leasehold arrangements is one possible way of creating **affordable housing for young families,** as is currently happening in Koksijde. Here, priority is given to young families and to people who have been living in Koksijde for a long time. Family composition and income also play a role. Other ways in which governments can have an impact on the affordability of housing include, for example, creating more social housing, buying a façade or a share in a house, imposing preconditions regarding collective facilities within housing projects and neighbourhoods, preventing the merging of urban plots for the construction of apartments, etc.

How does this link to the objectives of the land development project?

The liveability of the polder villages cannot be considered from this perspective in the Oudlandpolder land development project. Affordable housing is a problem that cannot be solved by land development measures.



EACH VILLAGE WILL HAVE MEETING PLACES TO ALLOW THE DEVELOPMENT OF A SOCIO-CULTURAL FUNCTION IN THE VILLAGES.

Explanation

Meeting places where residents can go for a daily chat, organise the local football team's BBQ or let their children play on the swing are invaluable for the quality of life in the polder villages. But along with the small shops, schools, sports clubs and other organisations that are moving out of the polder villages, many meeting places are also disappearing. As such, there are calls for the spatial interventions in the Oudlandpolder to always incorporate this shared demand for more meeting places, so that there are **sufficient places** again **where villagers can have contact with each other**.

However, more is needed than just interventions in the public space. In villages where it is pleasant to live, certain **basic services** are also available, such as a shop where you can find a simple range of food (so that you can quickly go and get some flour, etc.), a childcare centre, a playground, a bike shop, and all the other things you need in your immediate vicinity - because it is not always straightforward to go to another village for these.

In this context, reference is made to DORV, a concept of cooperative '**village points**' developed in Germany where villagers can go for fresh produce and additional services such as an ATM, applying for and collecting an identity card, medical care, etc. The DORV concept is based on five pillars: food, services, socio-medical care, cultural events and communication. The offering in a village point is based on local needs, and therefore also in line with the village demographics.

Complementary to basic services such as those on offer in a village centre, there is also a clear demand in the Oudlandpolder for a wider range of **non-essential services**, such as a library, sports infrastructure, cultural activities, a tourist service, schools, etc. Such services could be offered on a **network** basis. Activities would then be organised alternately in the various polder villages. Or the villages agree among themselves on who will do what. Thanks to digital tools that are becoming easily accessible to an ever-growing number of people, it is no longer so difficult to set up this kind of **cooperation** in a network and make it accessible to villagers. Of course, this is only possible if the competition and outbidding between the polder villages stops and a step is taken towards a constructive cooperation in which the villages work together on the quality of life there.

How does this link to the objectives of the land development project?

The land development project will also focus on creating village meeting areas, both on public and private property. The focus of the land development grants will be on sustainability and visual quality.

THE VILLAGES ARE NODES FOR THE TRANSITION TO SLOW MOBILITY AND (PRIVATE) SUBSYSTEMS.

Explanation

The distance from Ostend to Zeebrugge is a little over 20 km. Bruges is also not much further than 20 km away from Ostend and Zeebrugge. All in all, the Oudlandpolder is not such a large area. The green core is relatively close to the urbanised coastal periphery and the historic city centre of Bruges. Given the current evolutions in, for example, electric (cargo) bikes, this means that for a large part of the daily functional journeys in the Oudlandpolder, e.g. to the shops, school, work, etc., in theory a car is no longer necessary. The transition to more sustainable mobility systems, based on combinations of public transport, electric (sharing) cars, bikes and/or walking, is therefore also feasible in the Oudlandpolder.

The current **network for functional bicycle traffic**, which consists of cycling highways connecting Bruges, Ostend and Zeebrugge and the supra-local functional bicycle network, already connects some of the polder villages. However, this network is currently not sufficiently connected to support the transition to a more sustainable mobility in the Oudlandpolder. As such, there are calls to develop **each of the polder villages** into a **node in this network**. In such a node, certain **public services** can be offered, such as a bike repair point and public toilets, the transition to different modes of public transport (bus, taxi services) can be made and (private) partial mobility sites can be integrated. All this could then be made accessible to a wide target audience through digital services, such as a mobility app.

At the same time, recreational cyclists will also use these nodes. Thanks to the many agricultural roads, church paths and dykes, more and more people come to enjoy the polder landscape in the

Oudlandpolder. A **denser network of mobility services** will make the polder area even more attractive to tourists visiting Bruges or the coast.

How does this link to the objectives of the land development project?

One of the main objectives of the Oudlandpolder land development project is to achieve a mobility shift by focusing on bicycle mobility and by keeping non-local motorised traffic off local roads. Improving the environmental quality of the polder villages also implies focusing on infrastructure for basic accessibility and working on improving the safety of the functional bicycle network, which at the Oudlandpolder level is especially problematic in the relationships between the polder villages and the relationships between the villages and the coastal urban network.

THE LIVEABILITY OF POLDER VILLAGES AND HAMLETS SUCH AS ZWANKENDAMME, BREDENE-DORP AND LISSEWEGE MUST BE GUARANTEED BY SUFFICIENT BUFFERING WITH REGARD TO INDUSTRIAL AND LOGISTICAL PORT ACTIVITIES.

Explanation

The Oudlandpolder is bordered on its east and west side by the port of Zeebrugge and the port of Ostend respectively. These are 2 ports that each combine logistical and industrial activity, and therefore generate a lot of flows to the hinterland. These are absorbed by the Baudouin canal, the Bruges-Ostend canal and numerous road and rail connections.

In order to facilitate the further growth of the port of Zeebrugge, there is a need for a second fully-fledged access to this port. Consequently, on 28 June 2019, the Flemish government took a preferential decision, in which the 'Visart scenario' is put forward as the best solution for the construction of a new lock complex. Together with the new lock, it is also being examined what the new road infrastructure should be. In the first instance, this equates to construction of the 'NX', a new road connection between the N31 (express road) and the N350 (Alfred Ronsestraat) for through traffic and port traffic.

Port-related activities undeniably have an impact on the lives of people in the surrounding villages, such as Zwankendamme and Lissewege (port of Zeebrugge) and Bredene village (port of Ostend). Consequently, a widely shared demand is to envisage **more buffers between these villages and the adjacent industrial and logistics activities.** These can consist of green and blue structures, such

as the planting of trees, or a noise barrier, so that the villages are better protected from the noise and light pollution they are currently subjected to, and the visual quality of the landscape in these villages is optimised.

How does this link to the objectives of the land development project?

Focusing on the environmental quality of polder villages situated in the vicinity of port activities (Zwankendamme, Lissewege, Bredene) implies focusing on multifunctional buffer greenery for these centres. In this way, in addition to buffering, meeting places and village diversions can be created.

What can we learn from the scenarios for the Oudlandpolder?

The future scenarios for the Oudlandpolder were conceived at the regional level. The challenges facing the polder villages are therefore not addressed in sufficient detail to assess each of the principles separately against these scenarios. Therefore, a



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more general summary is provided here of the relevant insights the scenarios produce in relation to the polder villages.

As already indicated in relation to the first principle set out in the workshop on nature, all scenarios assume a significant increase in the number of inhabitants in Flanders. This **population increase** will also be felt in the polder and coastal areas. Depending on the scenario, and thus on factors such as migration and economic growth, it is assumed that the population in the polder and the coastal area will grow by 11% to 33%, or that the population in the project area will increase by **10,000 to 25,000 people**. In addition, the fact that Flemish households

are becoming smaller as a result of, for example, divorces and the rising proportion of people living alone must also be taken into account. Together with the possible continued development of tourist and recreational possibilities in the Oudlandpolder (see also the scenarios 'integrated sustainability' and 'who doesn't choose loses'), this means that a relatively large number of additional people will have to be accommodated in the project area.

Only in the 'anti urban sprawl' land-use scenario (see also scenario 'integrated sustainability') **is this not accompanied by further encroachment of the open space**. Only in this scenario in which the extra land take is reduced to 0 ha by 2035, and in the subsequent years paved surfaces are returned to agriculture and nature, can the expected population growth be reconciled with the preservation (and restoration) of the open polder landscape.

Putting this principle into practice, and thus preserving and restoring the open, peaceful landscape of the Oudlandpolder, means that **stringent measures** will have to be devised **in accordance with a spatial policy that focuses on the densification of places with a high nodal value**, as in the 'anti-urban sprawl' scenario. Only then will it be possible to accommodate the expected population growth in the area without further damage to the landscape value of the Oudlandpolder. In the polder villages, the demand for densification will be a significant challenge - preserving the typical structure and identity of the polder villages can only be reconciled with further densification of the villages through intelligent, targeted interventions - meaning that attention will automatically turn towards the urbanised coastal periphery and the city of Bruges.



WORKSHOP 3

CLIMATE-RESILIENT AGRICULTURE

25 MARCH 2021
(9.30 a.m. - 12.00 p.m.)

ANY SPATIAL DEVELOPMENT MUST CONTRIBUTE TO THE LEGAL CERTAINTY, INCOME SECURITY AND FUTURE VIABILITY OF AGRICULTURE IN THE OUDLANDPOLDER, AS WELL AS STRENGTHEN SOCIAL AND TECHNOLOGICAL INNOVATION IN AGRICULTURE WHEREVER POSSIBLE AND DESIRABLE.

Explanation

Farmers need space to farm. Despite the emergence of less land-bound and more intensive agricultural practices, the vast majority of agricultural businesses remain dependent on relatively large areas of farmland, not only in the Oudlandpolder, but also through the supply chains elsewhere in Flanders and abroad.

It is important to envisage sufficient space for agriculture throughout Flanders, and thus also in the Oudlandpolder. In this way, the risks can be spread - e.g. droughts, floods or agricultural pests do not occur everywhere to the same extent - and Flanders can be partly independent in its food production. Flanders' strategic location cannot be overlooked either. More than half of the European population lives within a radius of 500 km, and a large sales market can be served via the ports and an extensive network of (railway) roads and canals, which can keep the environmental impact of the transportation of food produced in Flanders relatively low.

Due to increasing urbanisation from the coastal region and the urban area around Bruges, changes in the (European) environmental policy and the demand for more recreational possibilities, the agricultural area in the Oudlandpolder is under pressure. The future of many agricultural businesses is shrouded in a great deal of uncertainty. The agricultural sector is therefore calling for **clarity**, including

on the subject of spatial planning. In which areas will farming be possible in the future? What is the intention with the Birds Directive area? How far do they want to go with the expansion of the port of Zeebrugge? There is a need for a **definitive delineation of the agricultural structures throughout the Oudlandpolder**, so that the pressure on agriculture through recreation, port development, residential expansion areas and the expansion of nature reserves can be eased. A clear and long-term delineation of the agricultural structure will also create legal certainty for the farmers who want to invest in the Oudlandpolder, and reduce speculation on land prices.

There are calls, during the implementation of these processes for the demarcation of the areas of the natural and agricultural structure (AGNAS) to apply a region-oriented approach, in which a **consistent vision** is developed **based on the specificities of the Oudlandpolder**. This includes taking into account the **necessary interweaving of green, blue and agricultural functions** in the area. Indeed, the effects of climate change are already being felt in the polders: winters are becoming milder and wetter, summers drier, and there are more and higher rainfall peaks. Farmers want certainty in terms of their revenues, which means anticipating the more frequent weather extremes brought about by climate change. In particular, it should be possible to avoid conditions that are too wet, too dry and too salty. At the region-level, this prompts a rise in demand for **water buffering** in watercourses and natural areas. The integration of small nature elements in the agricultural area could also be part of the **adaptation strategy** for agriculture in the Oudlandpolder.

Besides clarity regarding future spatial planning in the Oudlandpolder, the agricultural sector is also asking for **time to adapt**. To ensure the future of agriculture in the area, spatial choices will have to be made that will have an impact on some farms. It is only fair that they be given the time necessary to adapt and, if necessary, be **compensated for the damage suffered**.

How does this link to the objectives of the land development project?

In the Oudlandpolder framework agreement, it was explicitly agreed that discussions on the development and use of natural and agricultural areas should be held simultaneously, and that compartmentalisation should be applied as much as possible. This involves dividing the polder into hydraulically separate areas where water management is focused on the water management needs of the main use of the area. As such, the discussions on development must be conducted in the context of drawing up land development plans, which are drawn up in parallel with the spatial implementation plans.

The aim is to divide the complete demarcation of the natural and agricultural structure in the Oudlandpolder into several phases:

- Phase 1 (2020-2025) with a focus on:
 - Uitkerkse Polder (first part)
 - Oudemaarspolder
- The following will be addressed in the subsequent phases (the timing will be agreed in the next five-year programme for the Oudlandpolder):
 - Uitkerkse Polder (second part)
 - Meetkerkse Moeren
 - Klemskerke - Vlissegem
 - Zwankendamme - Lissewege - Ter Doest
 - All other remaining areas



What can we learn from the scenarios for the Oudlandpolder?

The spatial demarcation of natural and agricultural structures is closely linked to the debate about what type of agriculture we want to have and where in Flanders, and thus to the discussion about the advantages and disadvantages of a land sharing and a land sparing strategy. The latter is a strategy, based on further intensification of agriculture, which follows the rationale that if we can achieve higher food production per hectare, less space is needed to produce the same amount of food. The freed-up space could then be given over to nature. With land sharing, different functions are combined: land is then used for e.g. food production and nature purposes.

In the 4 scenarios that were elaborated for the Oudlandpolder, different degrees of land sharing and land sparing were played with in the demarcation of natural and agricultural areas. From these scenarios, it can be concluded that **for both agriculture and nature, a land sharing approach in the Oudlandpolder is preferable**. As mentioned above, in an area such as the Oudlandpolder, which due to its geographical features is more vulnerable to changing climatic conditions, agricultural businesses benefit from natural elements that allow water to be buffered in the vicinity of fields and meadows. Not only to absorb excess rainfall in intensely wet periods, but also to have enough water available as drinking water for livestock or for irrigation in dry periods. Ecosystem services such as pollination, pest control or water treatment, which are provided by healthy and biodiverse ecosystems, also benefit agriculture. (Why a land sharing perspective is also preferable for nature in the Oudlandpolder can be read under the second principle that followed the workshop on nature).

Just like the demand to develop some larger nature cores in the Oudlandpolder, **a land sharing strategy does not prevent the development**

of some larger cores of agricultural land. Additional research into both the (future) hydrology of the Oudlandpolder and the preconditions for healthy and climate-proof agro-ecosystems will have to demonstrate how large these cores can be, and how the zones in which nature and agriculture are interwoven can best be interpreted. Once clear agreements have been made about this interpretation, the boundaries between 'nature' and 'agriculture' in these zones will probably also become less sharp. Whether this area is then officially labelled as 'agricultural land' or 'nature reserve' will hopefully be less important.



PRESERVING THE OPEN POLDER LANDSCAPE IN THE OUDLANDPOLDER IS CRUCIAL, AND IS LINKED TO THE DEVELOPMENT OF THE LOCAL REGIONAL IDENTITY, CONSCIOUSLY ADDRESSING WITH THE POLDER PERIPHERIES, AND LOOKING FOR SYNERGY WITH RECREATION.

Explanation

The principle referred to here is fully in line with the following principle formulated during the workshop on nature: *In the polder area, maximum effort is made to maintain an open, peaceful landscape.* As such, the interpretation of this principle is reproduced here in full.

The Oudlandpolder has an open landscape, characterised by fields, meadows, natural brushwood and small polder villages along old agricultural roads. Except around higher elevated farms, there are hardly any trees or bushes to be seen. The haphazard spatial organisation that characterises Flanders - with its typical ribbon development and parcelling of land - has not affected this area. As a result, hydrological, agricultural and natural elements that have structured the landscape since time immemorial can still be found in many places in the Oudlandpolder: (Old) dikes, ditches at the site of former gullies, plots with irregular shapes, historical grasslands, etc.

Future developments in the Oudlandpolder should focus as much as possible on **preserving - and restoring - the historically grown open landscape**. This means that canal structures, linear elements such as dykes and agricultural roads, vistas, agricultural patterns, etc. are used as a framework when designing new spatial

interventions in the region. **Buildings that cannot be reconciled with this objective**, such as isolated villas in the greenery, **will be demolished**. A restoration, and therefore a revalorisation, of the characteristic polder landscape will not only contribute to the tourist attractiveness of the Oudlandpolder, but will also increase the potential for achieving sustainable agricultural and natural structures that allow for a climate-resilient water policy.

How does this link to the objectives of the land development project?

Preserving the open landscape in the Oudlandpolder is not put forward as a separate objective in the land development project, but it can be found in other objectives, such as valorising and protecting the heritage, including heritage landscapes and areas with cultural-historical value, and improving the quality of life in the polder villages.

"Quality of life" has various dimensions, including environmental quality. The land development project has the ambition to focus on the environmental quality of the polder villages. Most of these villages have retained their small-scale character and have important heritage value. Among other things, this 'village feeling' stems from the relationship that the villages have with the surrounding landscape: the contrast with the open landscape is precisely what expresses the typical identity of the polder villages. Through targeted interventions, such as more greenery in the village centres, the upgrading of historical landscape elements and the visual 'finishing' of the periphery of the villages, the aim is to further reinforce this identity. The ambition is also to stop further atomisation, caused among other things by parcelling out the polder villages and encroaching construction from the urbanised coastal area.



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What can we learn from the scenarios for the Oudlandpolder?

All scenarios assume a significant increase in the number of inhabitants in Flanders. This **rise in the population** will also be felt in the polder and coastal areas. Depending on the scenario, and thus on factors such as migration and economic growth, it is assumed that the population in the polder and the coastal area will grow by 11% to 33%, or that the population in the project area will increase by 10,000 to 25,000 people. Only in the 'anti urban sprawl' land-use scenario (see also scenario 'integrated sustainability') is such population growth not accompanied by further encroachment of the open space. Only in this scenario in which the extra land take is reduced to 0 ha by 2035, and in the subsequent years even paved surfaces are returned to agriculture and nature, can the expected population growth therefore be reconciled with the preservation (and restoration) of the open polder landscape.

Putting this principle into practice, and thus preserving and restoring the open, peaceful landscape of the Oudlandpolder, means that **stringent measures will have to be devised in accordance with a spatial policy that focuses on the densification of places with a high nodal value**, as in the 'anti-urban sprawl' scenario. **Only then will it be possible to accommodate the expected population growth in the area without further damage to the landscape value of the Oudlandpolder.** In the polder villages, the demand for densification will be a significant challenge - preserving the typical structure and identity of the polder villages can only be reconciled with further densification of the villages through intelligent, targeted interventions - meaning that attention will automatically turn towards the urbanised coastal periphery and the city of Bruges.

WATER MANAGEMENT AND AGRICULTURAL DEVELOPMENT IN THE OUDLANDPOLDER ARE INCORPORATED AS A COMMON AND SHARED MISSION IN COOPERATION AND MUTUAL SOLIDARITY WITH REGIONS FURTHER UPSTREAM.

Explanation

Developing a climate-resilient water system that anticipates problems caused by flooding or drought is about more than demarcating hydrological compartments, regulating water levels, maintaining and deepening canals, demarcating buffer areas that are allowed to flood, etc. It is about decisions that are taken on a daily basis by a wide range of people: A member of the public paving his driveway and building a large terrace, a local authority deciding whether or not to invest sooner in sewers, a farmer growing more drought-resistant crops, a seaside hotel deciding to invest in a swimming pool and extra rooms, a water company wanting to pump more water from the canal to produce drinking water, a campsite owner investing in softening and water treatment, etc. As such, many actions and decisions are taken with an impact on the water supply and/or water demand in the Oudlandpolder.

As a region that is particularly vulnerable to water-related problems, further development of the water governance system should be an integral part of a climate-resilient water system. Indeed, sustainable water management is also about **proactively matching water supply and demand**, both within the region and across regional boundaries.

The Oudlandpolder itself, on account of its geographical characteristics, is less suitable for building large water buffers -

although it is not impossible - which raises the question of whether **cooperation with other regions** should not be considered. Based on a well-designed assessment framework, in which both social costs and benefits are taken into account, it can then be determined whether it would be appropriate to also involve regions upstream of the Oudlandpolder in the polder's water supply.

How does this link to the objectives of the land development project?

Through the land development project, the aim is to create a basic infrastructure that will allow for more area-specific water management. Such basic infrastructure can then be used for both agricultural and natural purposes, for water distribution and water storage, for water drainage and water buffering. In other words, it is the water management that will be applied with this infrastructure that will determine the effects on the water supply, both over time and for the various target groups.

As this management will be so crucial, and because it is suspected that the area is and will remain dependent on water supply from other areas, two studies are currently being conducted in the context of the land development project:

- Water assessment of the Oudlandpolder: current water demand and supply as well as various future scenarios.
- Drawing up the desired ground water and surface water system: Which water management is best for the Oudlandpolder?

These two studies form the basis from which the necessary infrastructure will be defined and the corresponding management agreements.

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What can we learn from the scenarios for the Oudlandpolder?

The current scenarios, which only outline possible futures for the Oudlandpolder in terms of quality, do not yet address the governance questions raised here. However, these scenarios are also taken as a starting point for the development of more detailed, quantitative scenarios and (policy) actions linked to a system dynamics model. This model will make it possible to estimate the impact that some governance decisions might have. The results of this study will be published in the spring of 2022.

ANY DEVELOPMENT IN THE OUDLANDPOLDER WILL CONTRIBUTE TO A CLIMATE-RESILIENT WATER SYSTEM IN WHICH BETTER ACCESS AND AVAILABILITY OF GOOD QUALITY WATER IS CRUCIAL.

Explanation

The principle mentioned here is fully in line with the following principle that was formulated during the workshop on nature: *Water levels are set according to the development of a resilient and climate-resistant water system, taking into account the needs of nature, agriculture, residential areas and other areas in the Oudlandpolder.* As such, the interpretation of this principle is reproduced here in full.

The impact of **climate change** is already being clearly felt in the Oudlandpolder. For example, the polder has been confronted with **more frequent and more intense droughts** in recent years. The impact of these droughts is worse than in other areas for the following reasons:

- the polder does not have its own water sources,
- there is almost no usable groundwater (because it is saline), and
- when the water level in polder watercourses is too low, and the flow rate too low, salinisation of both surface water and soil occurs.

Another consequence of changing weather patterns is an **increase in the number of intensive rain showers with large peak flows**. Together with the fact that the sea level is rising and there are therefore fewer possibilities to drain the excess water using gravity, this creates greater challenges in terms of flood protection. Besides

climate adaptation, the different water needs of the various users in the polder also means that the **water level management needs to be adapted**.

This new water level management needs to **take into account the needs of the different areas in the Oudlandpolder**, both now and in the coming decades. In nature areas, this means that it should be possible for water levels to vary according to the rhythm of the seasons: high water levels in the winter, with a wetland condition that can be maintained until at least the beginning of June, and lower levels in the summer, taking into account the impact of climate change.

A new water level management in the polder will need to go hand in hand with the **creation of more buffer capacity**. For this, wetlands outside the nature core areas are being looked into. The area in which this buffer capacity is created needs to be large enough to create a buffer that makes it possible to bridge dry periods without having to bring in water from outside the polder. At the same time, it also needs to be possible for these buffers to reduce flood risks during periods of intense rainfall.

How does this link to the objectives of the land development project?

Revising the water level management in the Oudlandpolder is part of one of the main objectives of the land development project, namely to achieve climate resilient water management:

- maximum storage and buffering of water in the water system and soil,
- guaranteeing (emergency) drainage possibilities of surface water towards the sea, and
- the efficient use of the available water in the polder.

In connection with this objective, several concrete actions have already been set out in the Framework Agreement for the Oudlandpolder, both research work, such as investigating the desired ground and surface water system in the Oudlandpolder, and actions in the field, such as installing equipment that makes it possible to permanently record flow rates, modernising water intake infrastructure and making formal arrangements on the permitted flow abstractions. (A complete overview of all proposed actions can be found in Chapter 4.2.8 of the report 'Oudlandpolder land development project Phase 1.).

To further underpin area-specific choices in water management, a study is currently underway regarding the drafting of a water assessment for the Oudlandpolder and, on the other hand, the drafting of a desired ground and surface water system for the Oudlandpolder.

What can we learn from the scenarios for the Oudlandpolder?

The scenarios did not look into water level management in the Oudlandpolder. The scenarios are at a higher level of abstraction, so partial aspects of water management that are at this level of detail were not included.



IN AGRICULTURAL AREAS, ECOSYSTEM SERVICES (WATER BUFFERING, POLLINATION, FOOD PRODUCTION, CARBON STORAGE, ETC.) ARE FURTHER DEVELOPED. THE FARMERS IN QUESTION ARE ADEQUATELY REMUNERATED IN THIS REGARD.

Explanation

As a result of globalisation and liberalisation, agro-production systems are under increasing pressure. The majority of farmers produce for the European and, by extension, the world market, so their products are also priced on international markets. Cost efficiency, and consequently mass production, intensification and economies of scale, therefore become ever more important. As a result of this evolution, it is not always straightforward to generate a decent income from an agricultural business in Flanders. Farmers prefer to dispose of activities that do not directly contribute to the profitability of their business.

On the other hand, climate change, loss of biodiversity and increasing pressure on our water systems are creating new social needs in rural areas that are closely linked to what farmers have traditionally done, namely, managing soils, water systems and landscapes according to human needs. It is therefore logical to look to the agricultural sector to play a role in implementing climate-resilient nature and water management plans. A large proportion of the farmers in the Oudlandpolder are also willing to adjust and/or supplement their farming practices. **Agriculture and nature** could join forces to tackle major societal challenges such as declining biodiversity, climate adaptation and mitigation. However, setting up such **cooperation** is very difficult under the current agricultural economic models.

A significant proportion of the farmers in the Oudlandpolder are therefore demanding that **new business models** be developed that are **tailored to the social needs and ecosystem services linked to polder systems**. These are business models that compensate farmers for the contribution they make to maintaining meadow bird populations and carbon storage in soils, e.g. by managing permanently historic grasslands with traditional cow breeds. Or farmers who receive adequate remuneration for the water buffering capacity they provide through the ponds, reed beds and wetlands they manage. These are just a few examples... In addition, farmers are also asking for **adequate support in their business operations**. Indeed, it is not always clear how in a specific local context, and within a specific company, such expansion can be done in a cost-effective way.

The importance of **freedom of choice** is underscored here. Farmers want to be able to choose the direction their businesses take. Some businesses will focus on expanding and responding to new developments in the countryside, while other businesses will continue to hold their own in the international and especially European market through technological innovation, intensification and expansion. This freedom of choice should, if the right preconditions (including business models) are created, lead to a diverse agricultural landscape in the Oudlandpolder where **different business models can co-exist**. This diversity will **contribute to the resilience of polder agriculture** and help the sector meet the challenges of the 21st century.

How does this link to the objectives of the land development project?

As indicated above, it was agreed in the framework agreement for the Oudlandpolder that the AGNAS processes should run parallel to the land development project. In this way, the compartmentalisation of the polder into hydraulically separate areas can be linked to the water requirements in a given area. The development of new business models that can support the natural and agricultural organisation in the Oudlandpolder, however, falls outside the scope of a land development project, because of the rules on income support. These rules mean that no subsidies can be given to farmers that could be considered as income support, unless these support measures have been effectively notified and approved by the EU. In Flanders, such support measures are coordinated through the VLIF (Flemish Agricultural Investment Fund), which means that no support measures other than VLIF aid may be given to farmers.

What can we learn from the scenarios for the Oudlandpolder?

The scenarios do not elaborate on the exact impact of new business models for the sustainable development of the Oudlandpolder. It is only asserted that to make a future possible as proposed in the 'integrated sustainability' scenario, it is necessary to introduce business models that valorise ecosystem services. The scenarios are at a higher level of abstraction, so the characteristics of agricultural economic models are at a level of detail that was not incorporated.



INTERMEZZO 2 – GREEN DEAL

Are the signposts for a more sustainable and future-oriented agriculture in the Oudlandpolder in line with the European Green Deal? What can the Farm to Fork (F2F) strategy tell us?

Below is a brief list of the objectives from the European Farm to Fork Strategy that can be linked to the guiding principles formulated during the workshop 'climate-resilient agriculture'. The question here is whether these principles are on the same path that we need to be taking according to the European Green Deal.

Green Deal objective: Towards a new and better balance between nature, food systems and biodiversity.

Food systems are still seen one of the main causes of climate change and environmental degradation, even though the transition to more sustainable food systems has already begun in many areas. The Commission stresses that the quality of agricultural products is important, but also the preconditions under which they are produced. That is why the F2F strategy puts forward the following objective: Land, freshwater and marine resources on which the food system depends must be preserved and restored. Agriculture, and by extension the entire food system, must contribute to climate adaptation and mitigation, protect the land, soil, water, air and well-being of plants and animals, and reverse the loss of biodiversity.

- › **The ambition to develop more ecosystem services in the Oudlandpolder supports the objective of developing land and freshwater resources on which food systems depend, climate adaptation and mitigation. Whether agriculture in the Oudlandpolder will contribute to these objectives will depend, among other things, on the extent to which**

existing agreements are honoured (e.g. with regard to the protection of historically permanent grasslands), the degree of interweaving between nature and agriculture that can be achieved, and the development of new business models that make it possible for farmers to devote themselves to nature management and restoration.

- › **The calls to develop a climate-resilient water system in the Oudlandpolder are also in line with this objective; at least when 'climate-resilient' is interpreted in a way that meets the water needs of both agriculture and nature. In hydraulic compartments that are uniformly interpreted as nature or agriculture, this would appear to be easily achievable. In compartments where nature and agriculture are strongly interwoven, this will not always be easy.**

Green Deal objective: Foster ecological business models.

In the F2F strategy, two ecologically oriented business models are explicitly referred to. The first is carbon sequestration by farmers, which will be further elaborated through the European Climate Pact. In particular, the Commission undertakes to develop a regulatory framework for the certification of carbon sequestration. In this regard, there will be a focus on robust and transparent carbon accounting, making it possible to monitor and verify carbon storage. Organic farming is also highlighted as a model that has a positive impact on biodiversity, creates jobs and attracts young farmers. The goal is to have at least 25% of the European agricultural area devoted to organic farming by 2030.

Such eco-schemes, as they are called in the F2F strategy, will, according to the Commission, trigger a major funding stream to promote sustainable agricultural practices. In this regard, the Commission indicates that it will support the introduction of an earmarked budget that must be spent at least on eco-schemes. The Commission will also

review marketing standards for sustainable agricultural products and strengthen the role of sustainability criteria.

- › The European Commission recognises the key role that new business models play in the transition to a more sustainable and climate-resilient agricultural system. As such, not only in the Oudlandpolder, but also at higher policy levels, it is recognised that the contribution that agricultural businesses make to climate adaptation and mitigation and to restoring biodiversity must be reflected in a fair income for farmers. The calls from farmers to be adequately remunerated for the contribution they make to the development of ecosystem services are entirely consistent with this.
- › The European Commission is placing additional focus on business models that promote carbon storage. Such business models are in line with the ambition to ecologically manage more historically permanent grasslands in the Oudlandpolder via extensive livestock farming.
- › By 2030, at least 25% of the European agricultural land must be used for organic farming. This objective is also in line with the principle that farmers will invest in the development of ecosystem services and will be adequately remunerated in this regard.





WORKSHOP 4

DUNE-POLDER TRANSITION AS A CONNECTING ELEMENT

25 MARCH 2021
(1.30 p.m. - 4.00 p.m.)

ALL REMAINING OPEN SPACE IN THE DUNE-POLDER TRANSITION WILL BE PRESERVED AND, WHERE POSSIBLE, EXPANDED ACCORDING TO NATURAL CONNECTIONS AND AGRICULTURE.

Explanation

The coastal region between Ostend and Zeebrugge has a high density of functions. During the last century, this led to the stretch of land along the sea gradually becoming more and more built-up. The seaside resorts grew, a wall of apartment buildings rose along the dykes, holiday parks were built, the (yachting) harbours became larger and more business zones were created. Nature and agriculture disappeared into the background. What remains is encapsulated in a network of orbits and are poorly connected to each other.

There is therefore significant demand to **preserve the remaining open spaces** on the coastal strip. Both towards the polder periphery and between the different coastal municipalities, there are still smaller areas that have not been built on. With these open spaces as a starting point, it could be examined how **natural corridors** could be created between the remaining chunks of nature. In this way, species will migrate more easily along the coast and towards the polder, which will enhance the resilience of the remaining ecosystems. It should also be examined, according to the **(urban) agriculture**, how a partial recovery of the open space, and an upgrading of the coastal landscape, can go hand in hand with the demand for space emanating from this region.

How does this link to the objectives of the land development project?

Preserving and strengthening open space functions is a basic objective of any land development project. In the specific context of the coast, the remaining open space has a highly efficient protection status (through regional plan zoning and other protection statuses on top) meaning that development in these areas is actually no longer possible. The only exception to this is the TRP zone of Blankenberge where developments are still possible. A land development project with the aim of implementing the current spatial planning can therefore be used to strengthen the open space functions in areas that have an open space zoning.

What can we learn from the scenarios for the Oudlandpolder?

As in the rest of Flanders, the preservation of open space in the Oudlandpolder is under pressure. Owing to demand for holiday homes and second homes, this pressure on space is even worse in the coastal region than elsewhere in the area. Preserving the open space is therefore something that must be actively pursued, and supported through appropriate policies (incl. concrete objectives).

In the 'integrated sustainability' scenario, a spatial scenario is worked out in which the additional land take in Flanders is reduced to 0 ha by 2035. In this scenario, the open space is therefore systematically encroached upon less in the coming years, ending in 2035 with a net additional land take of 0 ha. In the years after 2035, space is even freed up for nature and agriculture. In the fourth scenario, referred to as 'technological optimism', the strategic vision for Flanders is applied, whereby the land take is gradually reduced to 0 ha by 2040. In the following years, the status quo is maintained. In the other 2 scenarios, open space will continue to disappear in the coming decades. Consequently, the spatial scenario from 'integrated sustainability' is the most compatible with the principle put forward here.

If we look at this 'integrated sustainability' scenario, it is striking that by 2050 the remaining open space in the coastal strip between Ostend and Zeebrugge on the sea side will be used exclusively for nature purposes, i.e. to extend the dune belt and connect it to the beach. In this scenario, marine ecosystems near the Uitkerkse Polder are also connected via the dunes to the polder nature behind. However, no space is given back to agriculture. Not only in this scenario, but also in the other three scenarios, the agricultural sector has to give up space each time. Creating additional space for (urban) agriculture on the polder side of the coastal strip is therefore not an extension of the current spatial dynamics (scenario 2), nor of the other spatial scenarios that were taken up.

As was the case for the polder, **preserving and restoring open space in the coastal strip will only be achievable if stringent measures are applied in accordance with a spatial policy that focuses on the densification of areas with a high nodal value.** Regardless of the scenario, the Belgian population is still expected to grow in the coming century. Also in the Oudlandpolder. It will only be possible to absorb this population growth and the related economic and other activities without further encroaching on the open space of the coastal strip if a very strict spatial policy is applied.

THIS WAY

INFILTRATION OF RAINWATER IS FACILITATED AS MUCH AS POSSIBLE IN THE DUNES ON CONDITION THAT THE INFILTRATED WATER DOES NOT HAVE A NEGATIVE IMPACT ON BIODIVERSITY. AT THE PERIPHERY OF THE COASTAL MUNICIPALITIES, WATER INFILTRATION IS ENCOURAGED BY EXPANDING THE BLUE-GREEN TRANSITION ZONE IN WHICH WATER FROM THE POLDER AND RAINWATER FROM THE SEPARATE SEWER SYSTEM CAN BE BUFFERED AND INFILTRATED.

Explanation

Due to the high level of paving in the coastal strip, the water storage capacity of this area is too low and rainwater cannot infiltrate sufficiently. Consequently, it is proposed that in the future (spatial) development of the coastal strip, the infiltration of rainwater should always be incorporated as an important criterion. In the dune belt, the quality of the water that will infiltrate must be monitored. Even slightly polluted water (e.g. due to traces of oil or plastic particles running off from the road surface) can have a significant impact on the biodiversity in the dunes.

Given that a fragmented, ad hoc approach will be insufficient to achieve sufficient water infiltration, a **large-scale, integral approach** is called for, whereby the 'scruffy periphery' towards the polder is given form **from Ostend to Zeebrugge**. It is advisable here to involve a range of expertise (water management, recreation, agriculture, nature, etc.) to look at this periphery. The coastal seafront is traditionally at beach level and consists of lively seaside resorts, a raised promenade with restaurants, boutiques, etc. But there

could be a **second seafront for the coastal strip on the polder side: a green-blue ribbon consisting of a park-like environment** with green and water buffers, a high landscape quality, space for urban agriculture, recreational spots, etc. Ultimately, rainwater from the seaside resorts and holiday parks could end up in this green periphery (via the separate sewer system). This can then infiltrate and thus help replenish the freshwater supply in the polder behind, but also reduce the activation of the sewage overflows at Wenduine, Bredene, De Haan and Blankenberge. But also in terms of nature development, recreation, flood risk management, etc., various win-win situations can be envisaged.

How does this link to the objectives of the land development project?

A green periphery is one of the basic principles for the development of the polder periphery at the coast. This will only be possible if sensible spatial decisions are taken, as the polder periphery usually has an open space purpose (agriculture or nature) that is not necessarily compatible with the development of a green periphery. The inhabitants of the polder periphery would also prefer to have their open views preserved, which is sometimes incompatible with a multifunctional green periphery. In this context, creating green peripheries is most realistic in more urban or industrial environments (Blankenberge, Bredene and Zeebrugge).

What can we learn from the scenarios for the Oudlandpolder?

The scenarios for the Oudlandpolder were elaborated prior to the workshops in dialogue with the VLM and organisations with specific expertise regarding the Oudlandpolder. This concept of a blue-green transition zone was not put forward during this process as an element to be incorporated. Therefore, the scenarios do not include a green-blue buffer ribbon at the transition from coast to polder.



A LESS 'ABRUPT' DUNE-POLDER TRANSITION WILL BE CREATED SO THAT BEACH, DUNE AND POLDER ECOSYSTEMS ARE CONNECTED AND THE NATURAL DYNAMICS OF DUNE SYSTEMS CAN BE RESTORED.

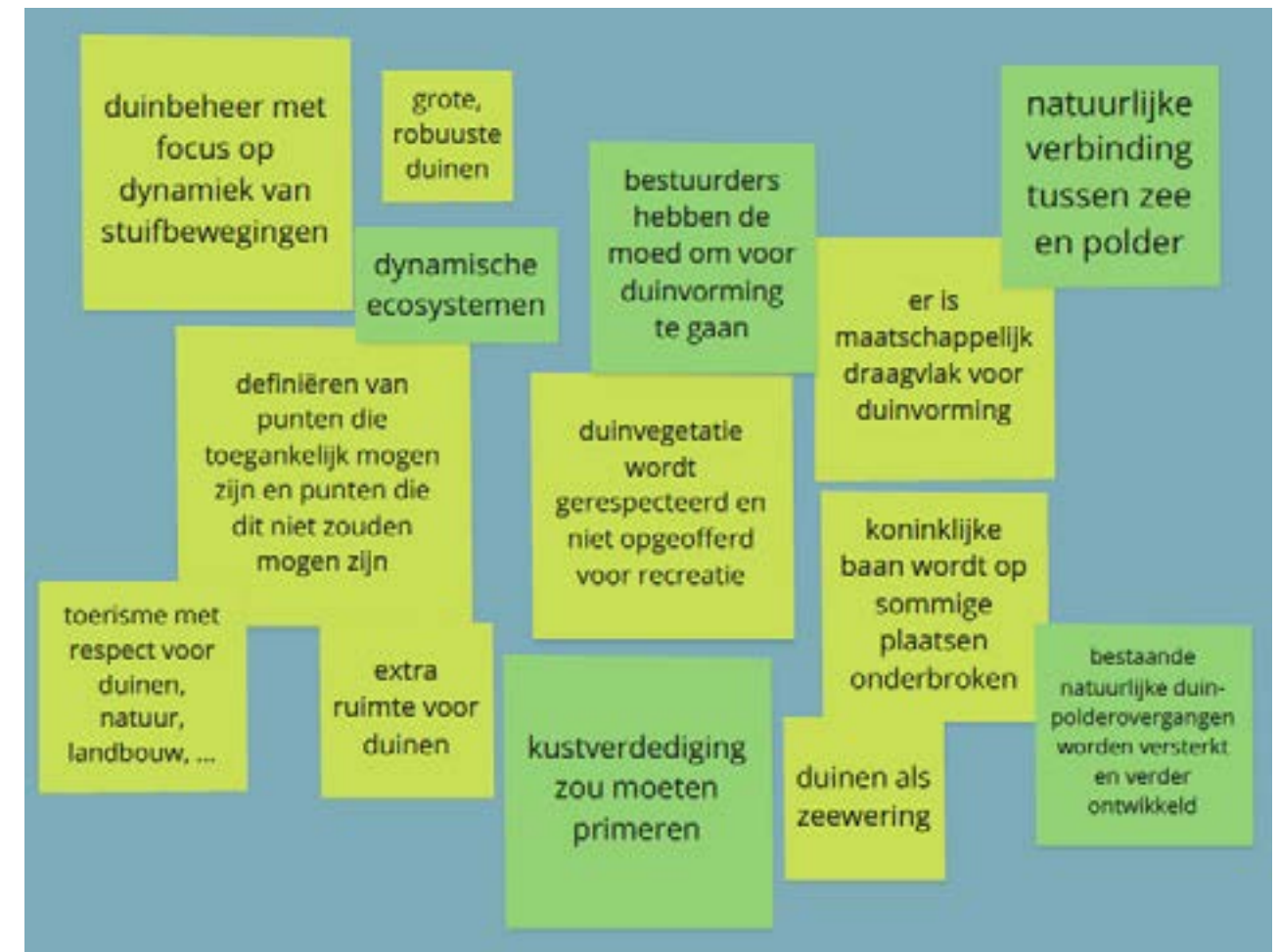
Explanation

Along the entire length of the coastline, from Ostend to Zeebrugge, the dune belt is closed off from the polders behind it by an abrupt barrier. With the exception of a few areas, where this barrier consists only of the N34 and a double tram track, it is a fairly wide ribbon of residential areas, holiday parks, shops, restaurants and a few remaining, isolated farms. The dunes themselves are fragmented by larger and smaller roads, ranging from the doubled-up N34 to a network of footpaths. On the sea side, the situation differs from municipality to municipality. In Ostend, for example, the dunes are separated from the beach by a dyke along their entire length, while in neighbouring Bredene there is no dyke, but the dunes and beach are connected.

Both for coastal defence (see also next principle) and the restoration of biodiversity in beach, dune and polder biotopes, it is advisable to **restore the connection between beach, dunes and polder**. Of course, this is no longer possible everywhere. But for a number of **specific areas** (e.g. near Haerendycke), it should at least be investigated how a **dynamic beach-dune-polder system** could be re-established (for example, ecoducts, relocation of (road) infrastructure and giving certain built-up areas back to nature) and what added value this might create.

As regards the latter, tourism and recreation are the first things that come to mind. But these also conceal pitfalls. Such dynamic beach-dune systems are vulnerable, subject to constant change and

therefore do not tolerate too much human interference. For the construction of mountain bike paths, bridleways and other activities that can damage the dune vegetation too much, it is better to look at other areas.



How does this link to the objectives of the land development project?

One of the aims of the Oudlandpolder land development project is to achieve the **conservation objectives**.

In the communication on these objectives, the dune belt between Ostend and Zeebrugge is divided into the following sub-areas:

- Sub-area 19: Duinreep Bredene, Paelsteenpanne, Spanjaardduinen, Golf Oostende, Duinreep Klemskerke, Duinbos Klemskerke, Duinbos Jan De Schuyter (west) and Driftweg (De Haan)
- Sub-area 20: D'Heye (Bredene)
- Sub-area 21: Duinbos (Wenduine, Vlissegem, Jan De Schuyter (east)), Zandpanne and Duinreep Vlissegem
- Sub-area 22: Fonteintjes
- Sub-area 32: Duinreep Wenduine

The following objectives were set for these different sub-areas:

	19	20	21	22	32
mudflats and sandflats	3 ha				
embryonic walking dunes			2 ha		
walking dunes on beach wall	61 ha		15 ha	12 ha	10 ha
established dunes with herb vegetation	67 ha	24 ha	22 ha	1 ha	1 ha
decalcified dunes		2 ha			
dunes with buckthorn	18 ha		11 ha		
wooded dune	32 ha		113 ha		

The areas where the dune dynamics are to be restored by connecting beach, dune and polder ecosystems are the sub-areas where the focus is the second objective listed in the table above, namely the areas where embryonic walking dunes are allowed to form. As can be seen from this table, this is the dune area between De Haan and Wenduine.

However, dune restoration in this area has obvious limitations. For example, this nature reserve is intersected by two major roads. The Koninklijke Baan runs parallel to the beach, separating the more mature dunes inland from the young dunes on the beach. In addition, the N34 motorway winds its way through this nature reserve, causing further fragmentation. On the polder side, residential areas and holiday parks prevent a connection to the polders behind. **It can therefore be concluded that the conservation objectives provide limited support for the principle set out here.**



THE OTHER WAY

THAT WAY

WAY

What can we learn from the scenarios for the Oudlandpolder?

For the elaboration of the scenarios, a conscious decision was made to incorporate the integration of beach, dune and polder ecosystems in working out the nature cores that could be created in the Oudlandpolder. Both the first scenario ('integrated sustainability') and the fourth scenario ('technological optimism') therefore feature a beach-dune-polder transition that is in line with the principle set out here. In order to develop this transition, the holiday parks near Harendijke were replaced with nature reserves in these scenarios. The main barrier to realising this vision is the coastal tram and the N34 (Koninklijke Baan), which in this scenario are either interrupted or tunnelled.

An important reason for choosing this area is the location of the Uitkerkse Polder. It is more advisable to create a dynamic dune-polder transition in connection with natural areas rather than agricultural areas. Production grassland and fields cannot be exposed to the drifting movements of sand dunes.

The conclusion that can be drawn from this is that **the area identified** for the scenarios in the Oudlandpolder **as having the greatest potential for linking beach, dune and polder ecosystems is not to be found in the sub-areas where the conservation objectives need to be achieved.**

COASTAL DEFENCE TAKES PRECEDENCE. THE FOCUS MUST BE ON PRESERVING AND REINFORCING THE NATURAL COASTAL DEFENCE BY THE DUNE BELT, INCLUDING BY ALLOWING (AND FIXING) EMBRYONIC DUNE FORMATION TOWARDS THE SEA. DEMARCATED AREAS ARE ENVISAGED IN WHICH RECREATIONAL USERS ARE WELCOME.

Explanation

As a result of climate change, sea levels will rise around the world. This will place additional demands on coastal defences. The Master Plan for Coastal Safety, coordinated by the Agency for Maritime Services and Coast, therefore combines the measures needed to protect our coast from a 1000-year storm surge. This takes into account a sea level rise of 30 cm. These are interventions such as raising and widening the beach near Ostend or building a higher storm wall in the port of Blankenberge.

With the project Kustvisie (Coastal Vision), coordinated by the Department of Mobility and Public Works, the Flemish government is going one step further. This project will investigate how our coast can be protected in the long term from a higher, accelerated and non-linear rise in sea levels. For this reason, the Coastal Vision project works with various scenarios and towards a coastal defence that can be readily adapted to cope with a sea level rise of up to 3m (in 2100). Part of the investigation is to find out what the tipping points are where scaling up is necessary.

Protecting the coast against such a rise in sea level requires measures that go far beyond those envisaged in the Master Plan

for Coastal Safety. It will involve technical solutions, but also interventions that allow nature to give us a helping hand. For example, the **dune belt** has traditionally formed a **natural defence against the sea**. Wind and sea currents scatter the sand over the seabed, beach and dunes. Under normal circumstances, when sand can move towards the beach and dunes, new dunes are automatically formed, which grow along with the rising sea level.

It is therefore advisable to allow (in certain areas) the coastal zone to become more dynamic, and **sandbanks, beaches and dunes** to move so that a **natural dam** is created **against powerful, high waves**. Embryonic dune formation on the beach should therefore be encouraged and made secure.

Restoring this natural barrier will not only upgrade the coastal landscape, but will also create opportunities for nature and recreation. However, given the density of the activities in the coastal strip between Ostend and Zeebrugge, coastal defence must take precedence. The **development of dune vegetation** must therefore be seen first and foremost as a function of coastal defence, and **must not be sacrificed for recreational purposes**. This could be possible, for example, by demarcating different types of recreation zones where it is clear to recreationists what is and is not allowed.

How does this link to the objectives of the land development project?

The Coastal Vision project will in principle map out the future of coastal defence on our coast. The current policy context assumes that the coastal defences will be reinforced locally or extended towards the sea (e.g. by stimulating dune formation in certain areas). The current policy vision implies that little in the way of impact is to be expected inland, such that the land development project will primarily work towards strengthening the current dune functions and infiltration of water. Land development does not appear to be necessary to support embryonic dune formation on the beach, as this is the autonomous policy of the Agency for Maritime Services and Coast, which is responsible for coastal defence.



What can we learn from the scenarios for the Oudlandpolder?

The scenarios elaborated for the Oudlandpolder take 2050 as their time horizon. This corresponds to the time horizon used in the Master Plan for Coastal Safety. As the measures included in the Master Plan for Coastal Safety do not have a large spatial impact, they were not included in the scenarios. Raising the beach, for example, will contribute to coastal defence, but will do little to change the functional organisation of the Oudlandpolder.

THE IMPACT OF THE CAMPSITES ON THEIR NATURAL SURROUNDINGS IS SUBSTANTIALLY REDUCED.

Explanation

The coast attracts many tourists, so part of the available space is automatically taken up by residential recreation. As a result, there are a large number of holiday parks, campsites, weekend residences and second homes between Ostend and Zeebrugge. Initially, a significant proportion of these were campsites. But over the years, they have evolved into parks with static caravans, where there is virtually no supply for passing campers with tents or caravans. In the meantime, these static caravans have also been replaced in many cases by holiday homes (fishermen's cottages), whether or not by large, international players in the tourism sector (e.g. Roompot). In other areas on the Belgian coast, it can already be seen how these holiday homes are evolving into principal residences.

These holiday parks are usually located on the polder side of the coastal strip, on the periphery of the urban area or even in the middle of the last remaining areas of polder. They not only contribute to the fragmentation of open space and the deterioration of spatial quality, but also have a significant impact on their natural environment. Due to shortcomings in the regulatory framework, these are relatively large, contiguous areas with a high proportion of paved surface, without adequate water treatment infrastructure, that form an impenetrable barrier between coast and polder.

The impact of holiday parks on their natural environment is too great, and must be mitigated. There are calls to do this via an integrated approach, starting from the question of which parks should remain and which not. In some sites, it would be advisable to let coastal defence and/or nature objectives take precedence, and thus

establish open corridors that allow beach and dune ecosystems to be connected with the polder grasslands that lie behind them. Outside these areas, the holiday parks can remain, albeit under certain conditions in terms of paving, water treatment, natural layout and use. Given the challenges in the coastal strip in terms of water storage, loss of biodiversity, etc., there are also calls to look towards more innovative holiday formulas, such as glamping and stilt houses, which would make it possible to reconcile recreational and nature objectives. 'Waterdunen', just across the border in Zeeland, could be a useful example for some parks.

Finally, **it is important not to overlook the social added value of some of these holiday parks.** Some of the static caravan parks make it possible for more socio-economically vulnerable groups to go on holiday. It is important to maintain an affordable offering for these people as well. Although this does not mean that these parks cannot evolve into green residential recreation. Social problems cannot be an excuse for doing nothing about the impact of these parks on their surroundings. There are already examples in the field of social policy that can provide a solution in this context (e.g. social tariffs for people from disadvantaged groups).

How does this link to the objectives of the land development project?

Through the land development project, our aim was to work together with the local authorities and campsite owners on softening and infiltration of water in camping areas, greening the camping sites, creating more public walking and cycling paths and public meeting areas through camping areas, greening the peripheries of camping areas and uncoupling rainwater from the campsites and other large-scale tourist infrastructure.

What can we learn from the future scenarios for the Oudlandpolder?

The four scenarios each incorporated a different spatial scenario. These spatial scenarios differ from each other in terms of densification, open space for nature, forest and agriculture, space for economic activities (e.g. business parks or port expansion), etc. What is striking is that in each of these scenarios the space for recreation in 2050 is drastically reduced compared to the present situation. **In each of the scenarios, the space for recreation is reduced by at least half by 2050.** In 3 of the 4 scenarios, it is reduced by about half. In the 'structural inequality' scenario, the reduction is almost 70%. It almost always involves the transformation of holiday parks into space that is given a different use.

In a densely populated and urbanised area such as Flanders, there is considerable pressure on the available space. And this pressure will only increase in the coming years. A growing population requires more space, climate-resilient nature and agriculture require more space, economic growth requires more space, etc. The scenarios show that, unless targeted flanking policies prevent this, a substantial proportion of holiday parks will disappear regardless of the spatial dynamics that will prevail in the coming decades. In a scenario where we continue down the same path, this is what will happen. But therefore also in a scenario in which there is more room for greenery and in scenarios where the focus is on densification. This finding underlines the **urgency of looking for formulas for the holiday parks in the Oudlandpolder that allow for multiple use of space**, i.e. formulas that allow for interweaving recreational functions with agriculture, water buffering, nature, coastal defence, etc. This would appear to be a necessary step to evolve towards a future-proof and sustainable tourist and recreational offering in the coastal region.

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