From Landscape to Landscape

Multifunctional adaptation strategies for the Scheldt estuary

Stefano Agliati
4807820
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First mentor:
Dr. Diego A. Sepulveda Carmona

Second mentor:
Dr. Alexander Wandl

Delegate of the Board of Examiners:
Prof. Dr. Paul W. Chan

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Department of Urbanism

Data source presentation cover: EEA, retrieved from:
https://www.eea.europa.eu/
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Silo mentality - a definition:

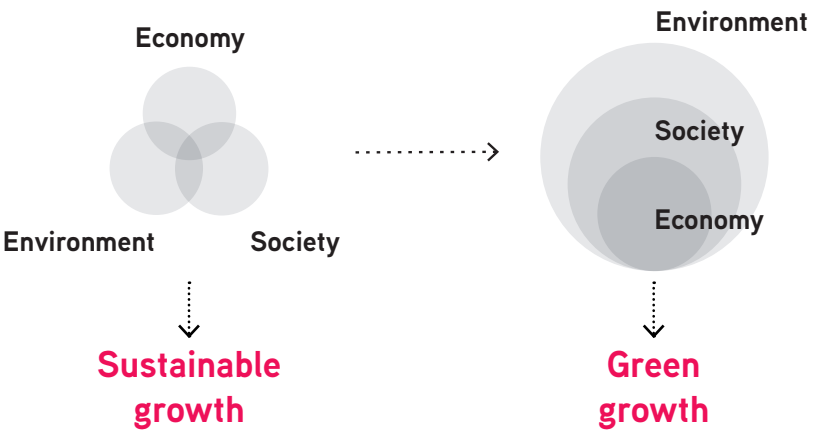
Silo mentality is a mindset present when certain departments or sectors do not [willingly or not] share information with others. This type of mentality will reduce efficiency in the overall operation.

As in: http://www.businessdictionary.com/

WHAT?

Moving beyond silo mentality in spatial planning

Moving from silos to gradients



From weak to strong sustainability. Based on the work on sustainable development by Giddings et al. (2002) and on socio-ecosystemic sustainability by Morandín-Ahuerma et al. (2019)

Moving from silos to gradients

Conceptual silo
Artificial/natural

Spatial silo
Urban/rural

Governance silo
Border regions

Strategic planning
To integrate environmental and spatial planning in a cross-border region

From weak to strong sustainability. Based on the work on sustainable development by Giddings et al. (2002) and on socio-ecosystemic sustainability by Morandín-Ahuerma et al. (2019)

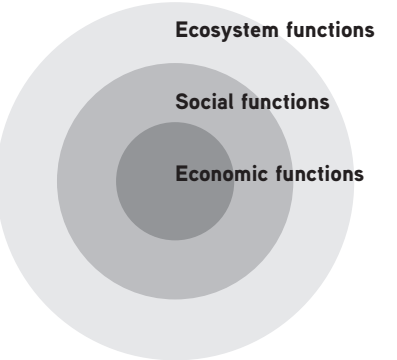
From modernising to ecologising. Based on the work on network interactions by Latour (2007)

Strategic planning. Based on the work by Albrechts (2006, 2009, 2013)

(Landscape) Multifunctionality - a definition:

Multifunctionality in landscapes is the ability of the landscape to provide multiple functions and uses, while managing trade-offs and synergies between various services.

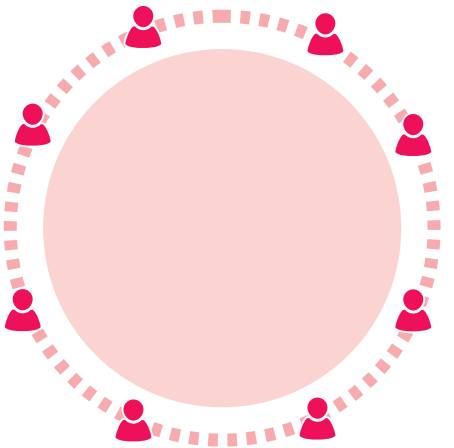
As in: Fagerholm et al. (2019)



Multi-actor partnerships - a definition:

Multi-actor partnerships [...] are collaborative processes involving a diversity of actors in order to address complex problems together. They acknowledge the complexities and interconnectedness of issues.

As in: https://www.civilsocietyacademy.org/

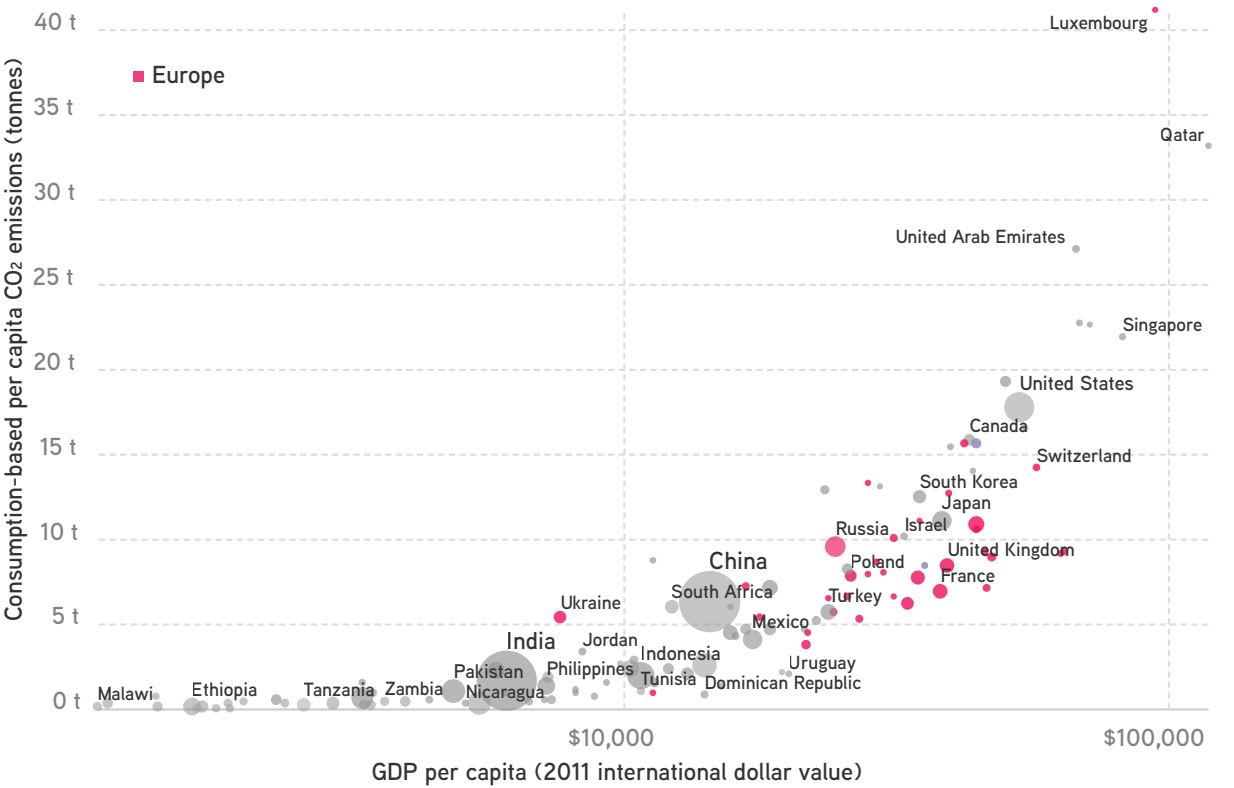


WHY?

To integrate environmental actions into cross-border spatial development

Artificial/natural

Because economic growth means more CO_2 emissions



OWID based on Global Carbon Project & UN Population (2017).
Retrieved from: https://ourworldindata.org/grapher/co-emissions-per-capita-vs-gdp-per-capita-international-?stackMode=absolute&time=1800..2016&country=NLD.

Artificial/natural

Nature thrives in the lockdown

Emboldened wild animals venture into locked-down cities worldwide

▲ Sika deer cross a road in Nara, Japan. The animals have been wandering through city streets and subway stations.
Photograph: Tomohiro Ohsumi/Getty Images

Wild boar sighted near Barcelona city centre looking for food

The animals, usually resident in nearby hills, are venturing close to the Sagrada Família

▲ Adult and young Wild boars searching for food on a street in Barcelona. Photograph: Alamy Stock Photo

Wild animals are slipping to explore empty streets of lock-downed cities

Thursday, April 2nd 2020 - 08:55 UTC **Full article**

Wild boar have descended from the hills around Barcelona in Spain while sika deer are nosing their way around the deserted metro stations of Nara in Japan.

Apr 9, 2020, 03:38pm EDT

As Humans Remain In Lockdown During Coronavirus Pandemic, Animals Roam

Carlie Porterfield Forbes Staff
Business
I cover breaking news.

Deer cross a road in Nara, Japan, where groups of deer have begun foraging in the city's residential ... [+] GETTY IMAGES

HOME » INTERNATIONAAL » LA'S SKIES ARE SMOG-FREE AND PEACOCKS ARE ROAMING THE STREETS OF DUBAI. PHOTO

LA's skies are smog-free and peacocks are roaming the streets of Dubai. Photos show how nature has returned to cities shut down by the coronavirus pandemic.

Taylor Nicole Rogers
20 Apr 2020

TWITTER FACEBOOK LINKEDIN WHATSAPP EMAIL PRINT

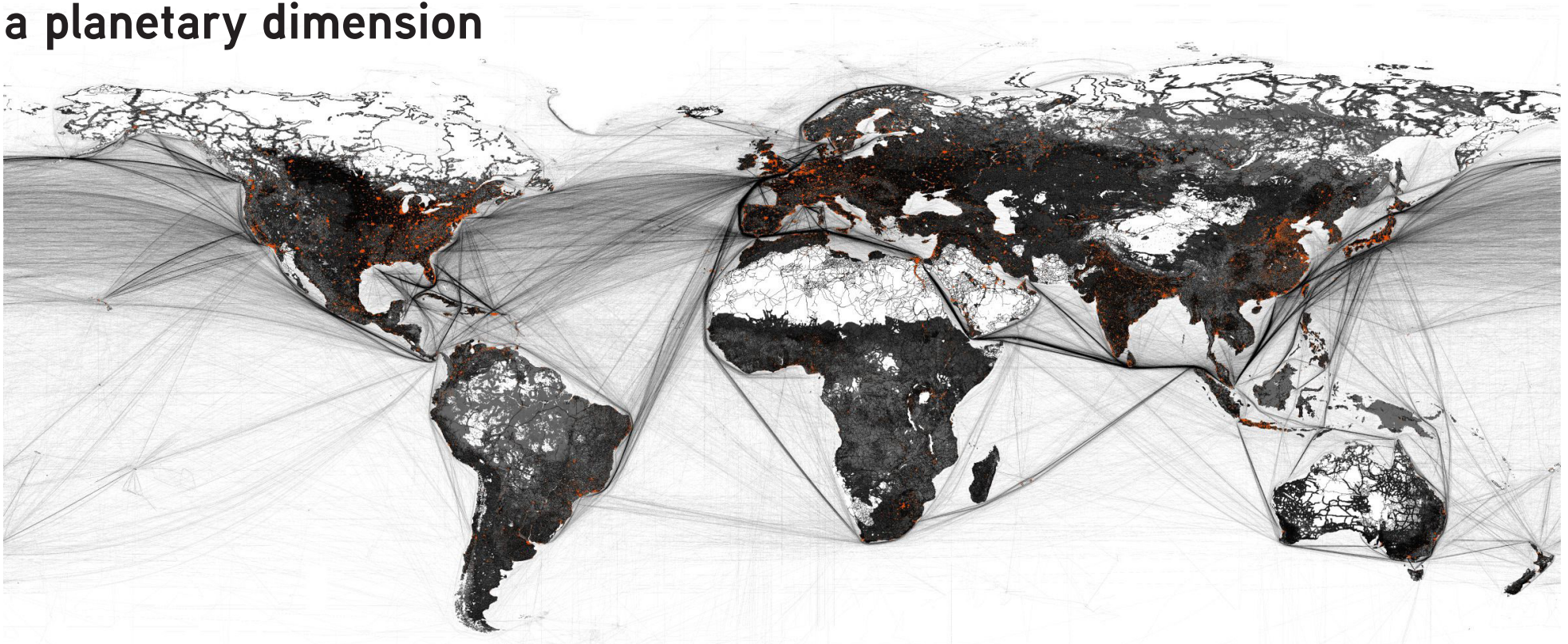
- Aside from slowing the spread of the novel coronavirus, social distancing has had the unintended side effect of reducing pollution and replenishing wildlife across the globe.
- Several cities have seen a reduction in air pollution, while mountain goats overran one Welsh town as people stay indoors.
- The coronavirus has infected over 2.4 million and killed more than 165,000, with over 40,000 deaths in the US.
- Visit Business Insider's homepage for more stories.

Foto: Peter Byrne/PA Images via Getty Images Herds of mountain goats that normally live outside Llandudno, Wales, have taken over while the town's human residents are staying indoors.

Wild boar sighted near Barcelona. Retrieved from: https://www.theguardian.com/world/2018/nov/04/wild-boar-sighted-near-barcelona-city-centre-looking-for-food
Wild animals are slipping to explore. Retrieved from: https://en.mercopress.com/2020/04/02/wild-animals-are-slipping-to-explore-empty-streets-of-lock-downed-cities
Emboldened wild animals venture into locked-down cities worldwide. https://www.theguardian.com/world/2020/mar/22/animals-cities-coronavirus-lockdowns-deer-raccoons
As Humans Remain In Lockdown During Coronavirus Pandemic, Animals Roam. Retrieved from: https://www.forbes.com/sites/carlieporterfield/2020/04/09/as-humans-lockdown-during-coronavirus-pandemic-animals-roam/#30ac07a7cb0d
Amid coronavirus pandemic, animals reclaiming empty cities. Retrieved from: https://www.dw.com/en/amid-coronavirus-pandemic-animals-reclaiming-empty-cities/g-53019990

Artificial/natural

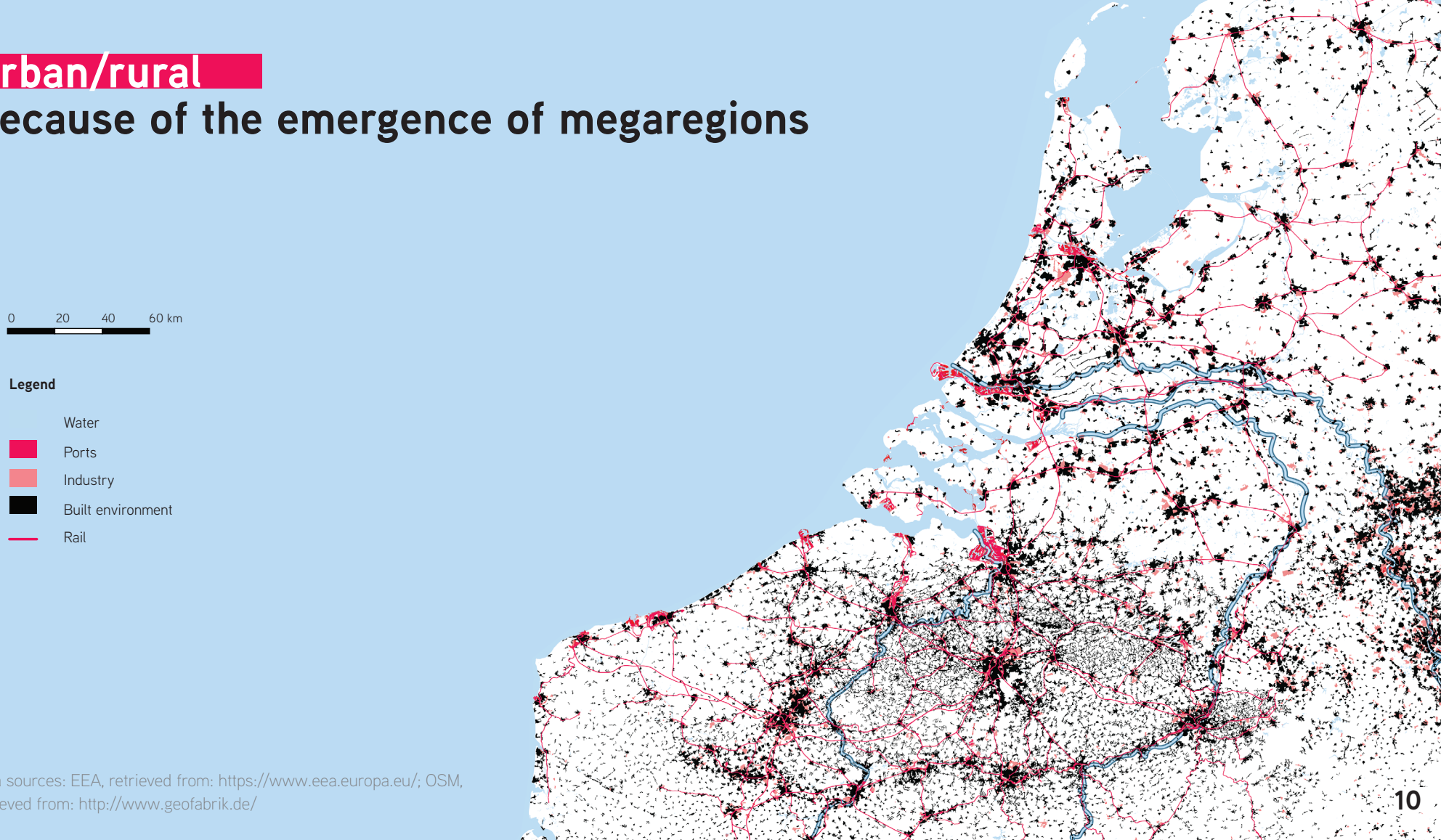
Because urbanisation reached a planetary dimension



The Planetary Thünen Town at the beginning of the twenty-first century. Agglomeration zones in orange, plotted against the totality of the used part of the planet in black, including agricultural lands (cropland, grazing), forestry zones, mining areas, and transport infrastructure (ground, marine). Source: Katsikis (2018); Brenner & Schmiid (2015)

Urban/rural

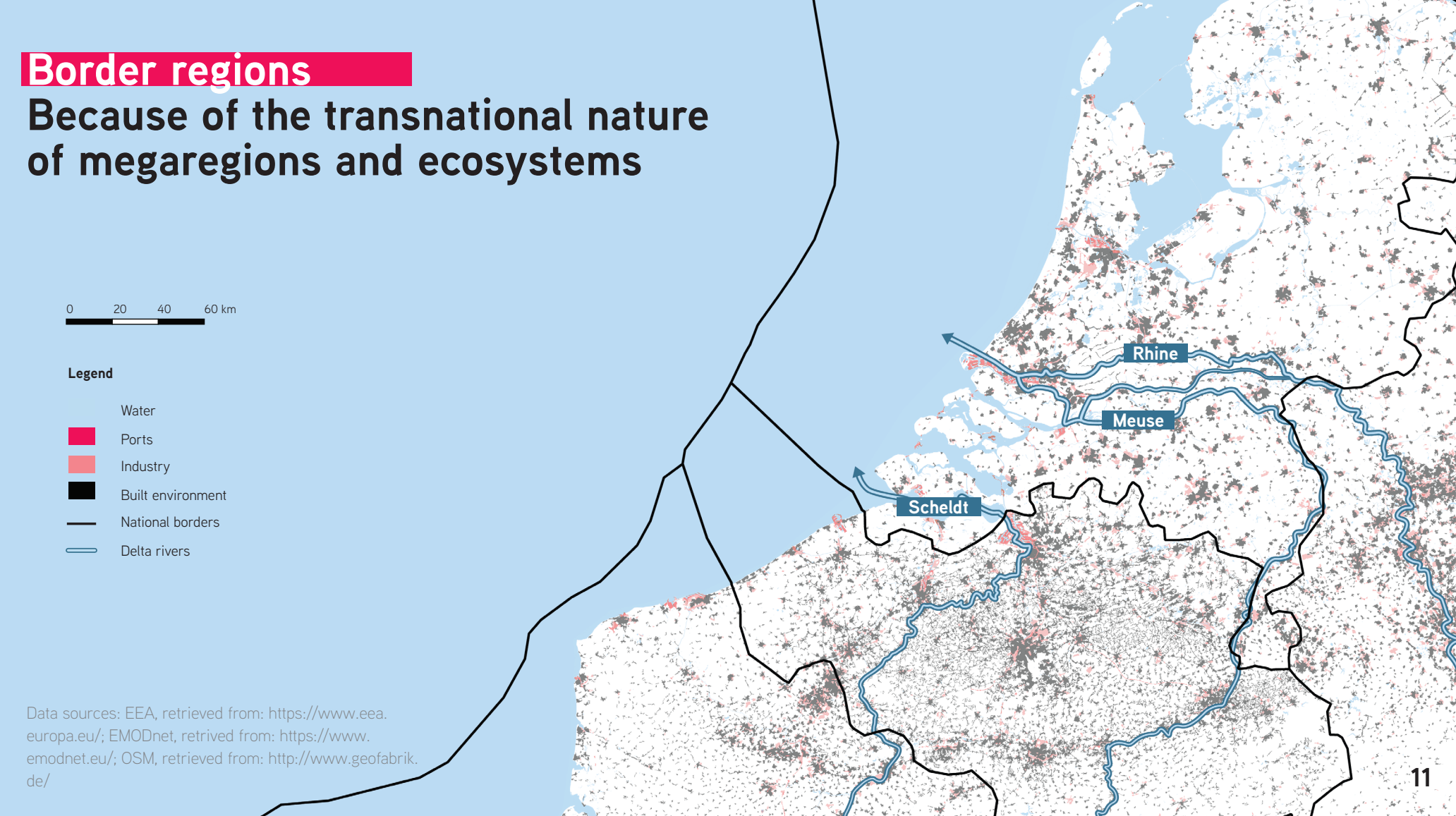
Because of the emergence of megaregions



Data sources: EEA, retrieved from: https://www.eea.europa.eu/; OSM, retrieved from: http://www.geofabrik.de/

Border regions

Because of the transnational nature of megaregions and ecosystems

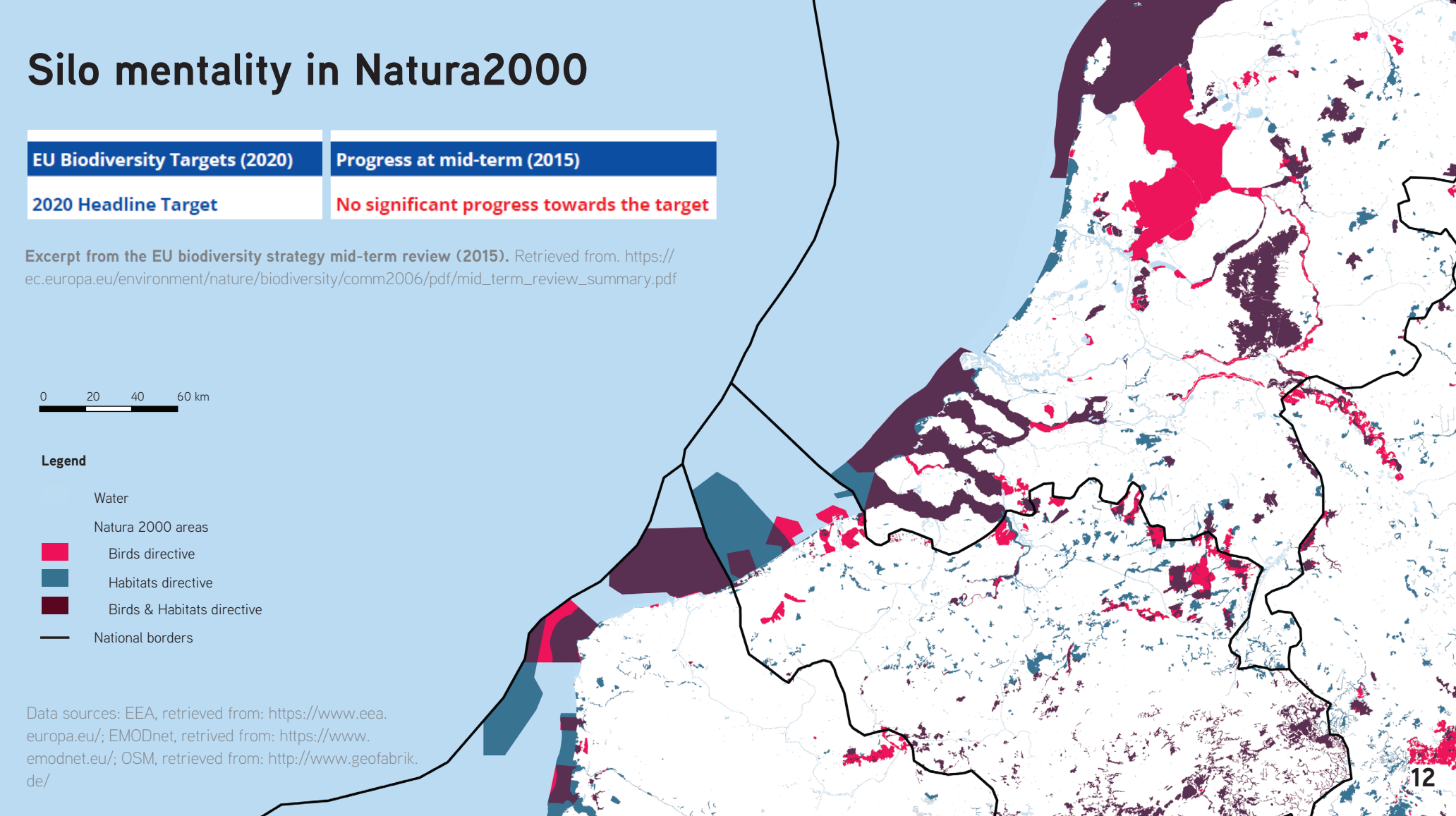


Data sources: EEA, retrieved from: https://www.eea.europa.eu/; EMODnet, retrived from: https://www.emodnet.eu/; OSM, retrieved from: http://www.geofabrik.de/

Silo mentality in Natura2000

EU Biodiversity Targets (2020)	Progress at mid-term (2015)
2020 Headline Target	No significant progress towards the target

Excerpt from the EU biodiversity strategy mid-term review (2015). Retrieved from. https://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/mid_term_review_summary.pdf



Data sources: EEA, retrieved from: https://www.eea.europa.eu/; EMODnet, retrived from: https://www.emodnet.eu/; OSM, retrieved from: http://www.geofabrik.de/

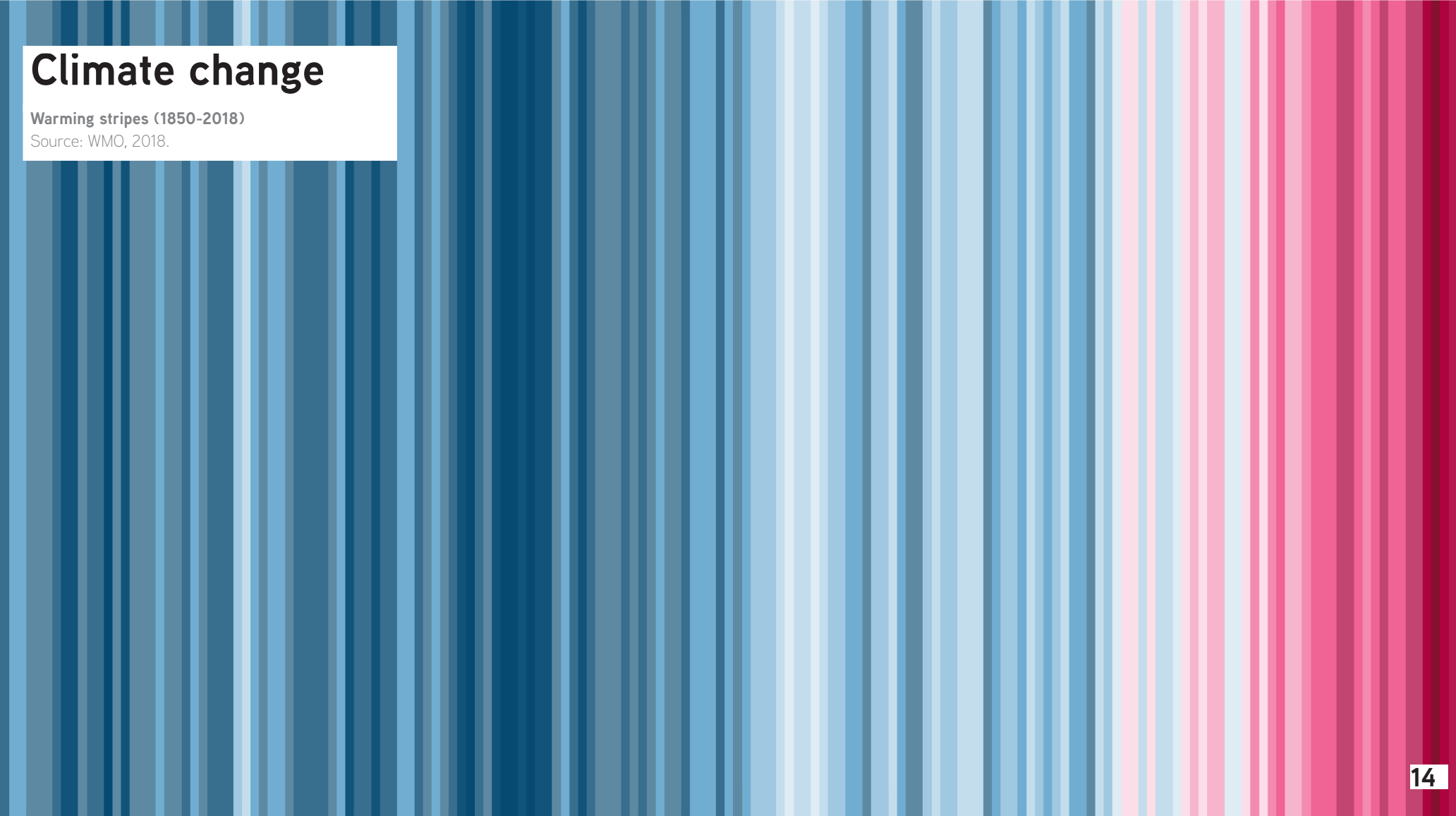
Nature conservation vs human activity

COMMON AGRICULTURAL POLICY vs NATURA 2000

Farmers' strike
Source: RTL nieuws.

Climate change

Warming stripes (1850-2018)
Source: WMO, 2018.



Climate change

Warming stripes (1850-2018)
Source: WMO, 2018.

Achieving climate neutrality

Europe aims to achieve net-zero emissions by 2050.
Retrieved from: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

Climate change

Warming stripes (1850-2018)
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Achieving climate neutrality

Europe aims to achieve net-zero emissions by 2050.
Retrieved from: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

Achieving climate neutrality, but how?

Achieving **economic neutrality**, at the risk of ignoring **environmental resilience** and **human health**

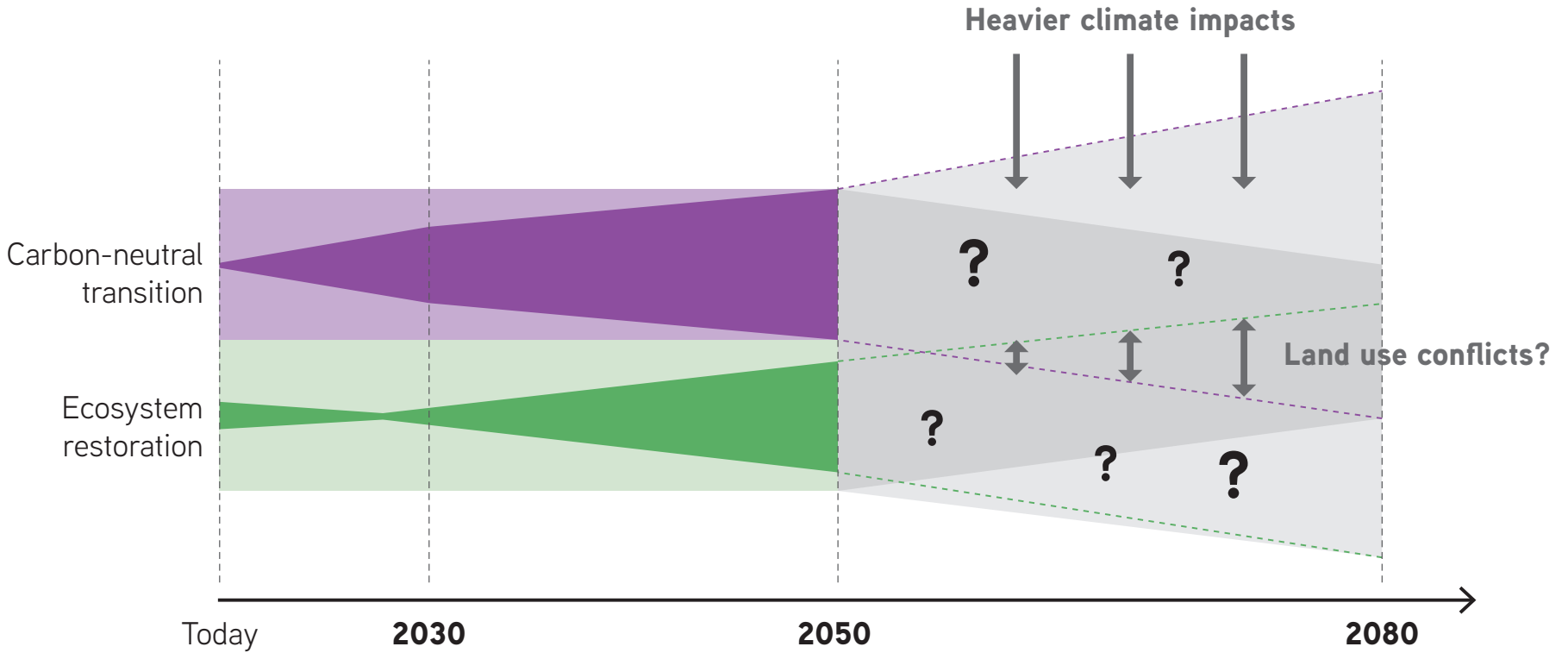
Excerpt from the IEEP first analysis of the EU Green Deal (2019). Retrieved from. Retrieved from: https://ieep.eu/publications/first-analysis-of-the-european-green-deal

Achieving ecosystem restoration

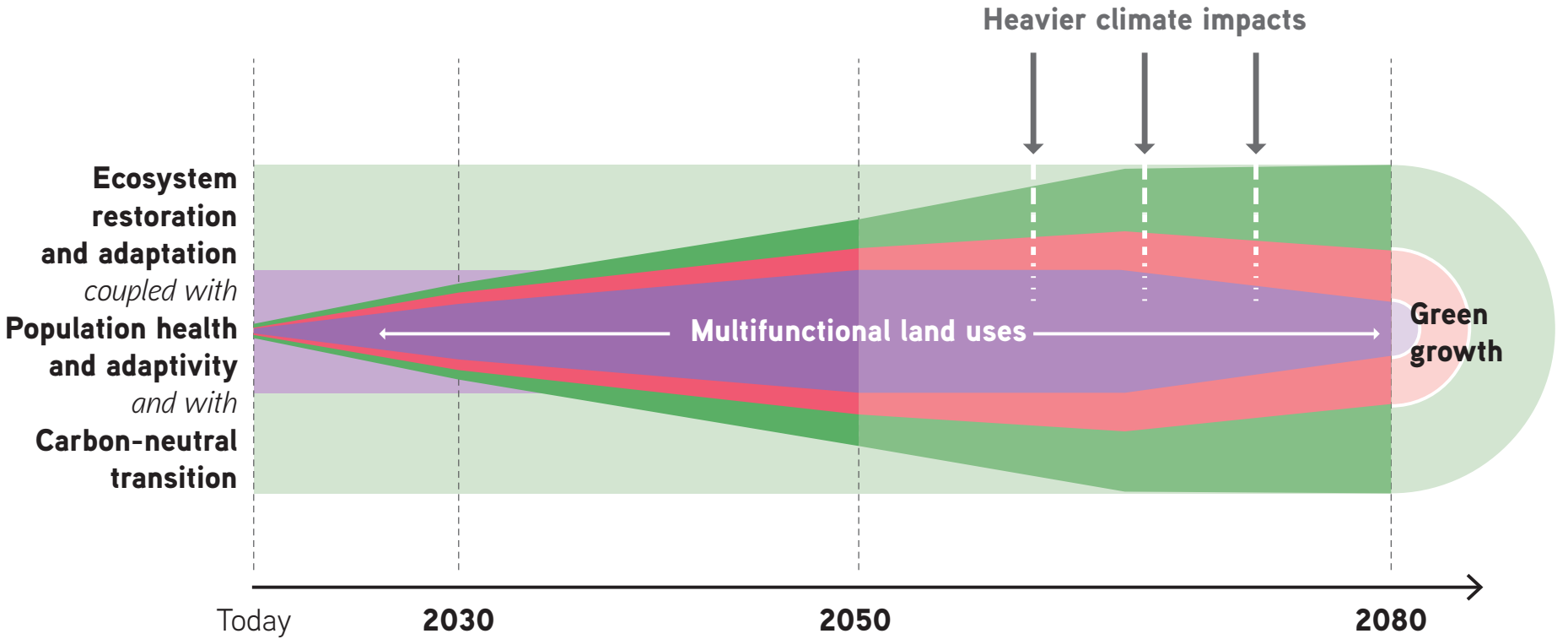
"Bringing nature back into our lives"

Excerpt from the EU biodiversity strategy for 2030. Retrieved from. https://ec.europa.eu/environment/nature/biodiversity/strategy/index_en.htm

How to prepare for climate resilience beyond 2050?



Evaluation
Evolutionary resilience



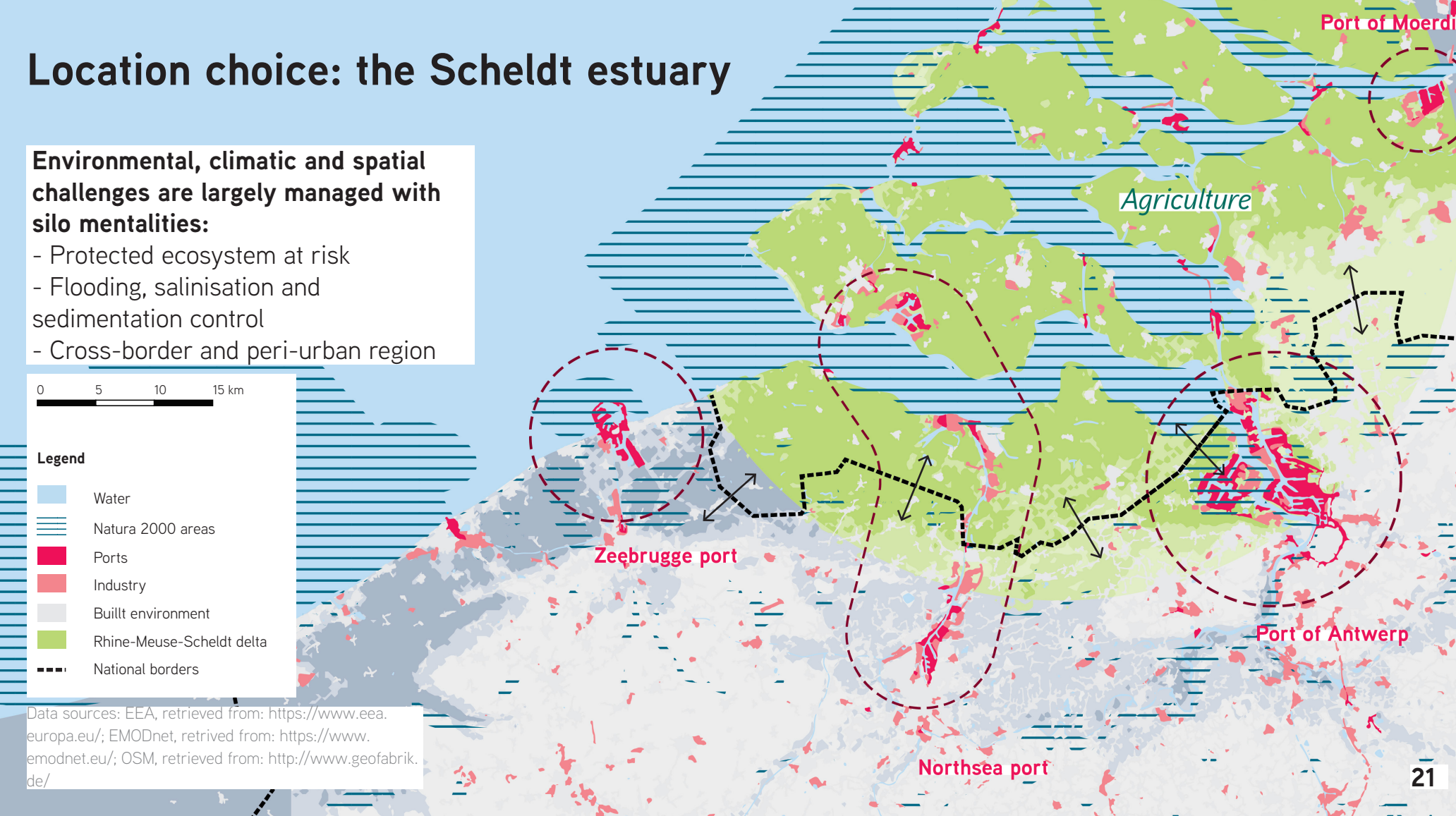
WHERE?

The Scheldt-estuary region

Location choice: the Scheldt estuary

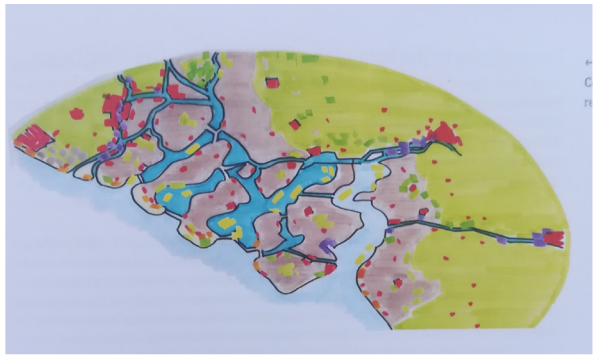
Environmental, climatic and spatial challenges are largely managed with silo mentalities:

- Protected ecosystem at risk
- Flooding, salinisation and sedimentation control
- Cross-border and peri-urban region



Data sources: EEA, retrieved from: https://www.eea.europa.eu/; EMODnet, retrived from: https://www.emodnet.eu/; OSM, retrieved from: http://www.geofabrik.de/

Green growth in the delta:
from mosaic to pastel



Delta concept plan 1.0 and 2.0. From mosaic to pastel.
Source: de Vlieger, (2018)

Agriculture

Zeebrugge port

Port of Antwerp

Northsea port

Port of Moerdi

Main research question

SRQ2
Systems

How to align spatial, environmental and climate actions in the Scheldt-estuary region towards long-term green growth development? And to what extent can multi-functional uses and multi-actor collaboration facilitate this transformation?

SRQ3
Governance

SRQ4
Strategy

SRQ1
Concepts

Sub-research questions

SRQ1
How to define green growth in spatial development and planning?

Concepts

SRQ2
How to assess the systems at stake? Which are their challenges, opportunities and interrelations?

Systems

SRQ3
How to facilitate strategic multi-actor collaboration? How can their interaction evolve over time?

Governance

SRQ4
How to combine multiple functions and actors in single development areas?

Strategy

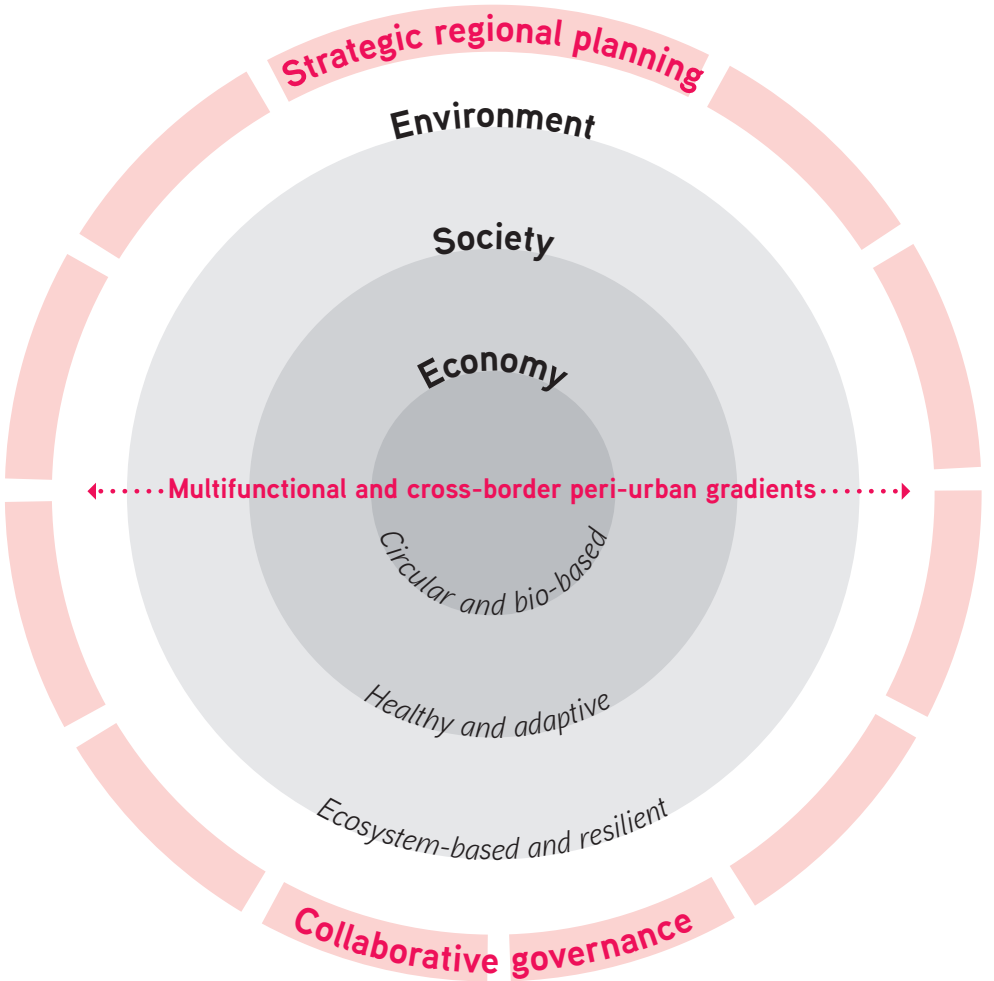
HOW?

Green growth concept

Conceptual framework

SRQ1a

How to define green growth
and why does it matter?



Based on: **Doughnut model** (top) by Raworth (2012); **SDGs** hierarchy (bottom left) by Rockström & Sukhdev (2016); **Green economy** diagram (bottom right) by EEA (2015) model

HOW? (2)

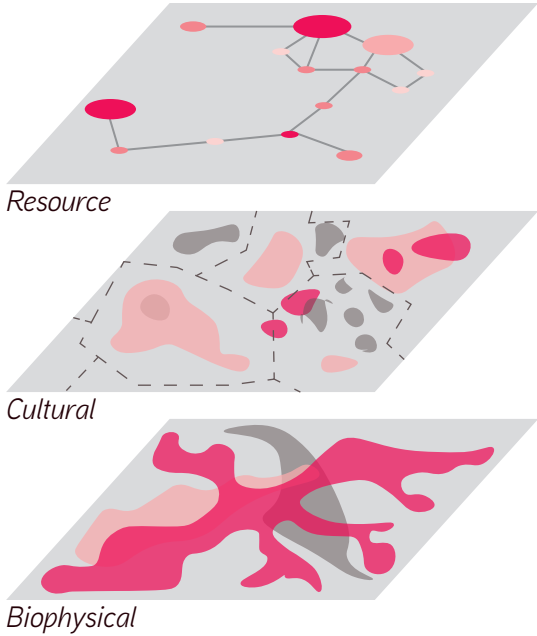
Spatial systems and interventions

Spatial systems
Towards a strategic perspective

Economy →

Society →

Environment →



Operational goal

↓

System assessment

Challenges

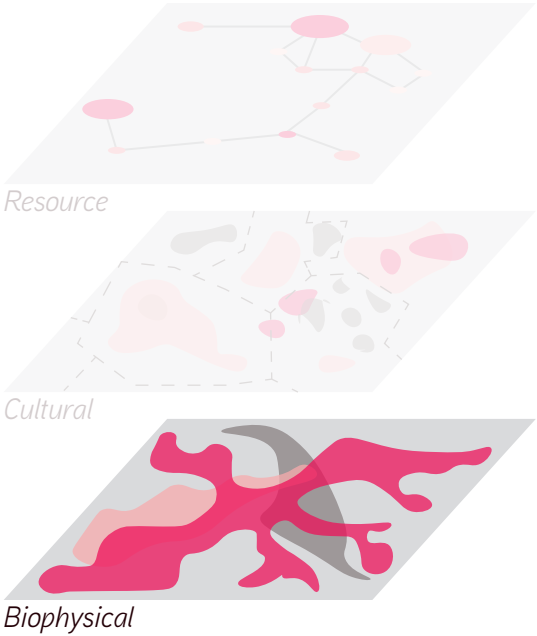
↓

Interventions

↓

Clusters

Biophysical systems
Goal



Environmental resilience

Adapt and restore ecosystems and address climate uncertainty

Operational goal

↓

System assessment

Challenges

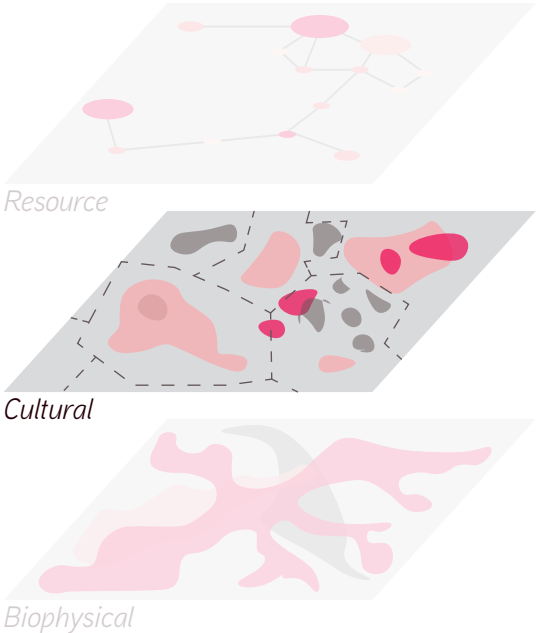
↓

Interventions

↓

Clusters

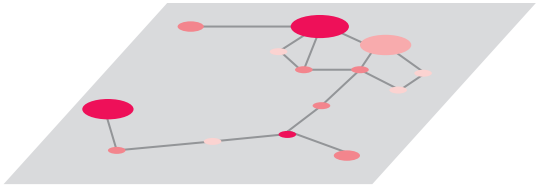
Cultural systems
Goal



Societal well-being

Increase population health
and adaptive capacity

Resource systems
Goal



Resource

Cultural

Biophysical

Economic neutrality

Implement circular carbon flows and bio-based economy

Operational goal

↓

System assessment

Challenges

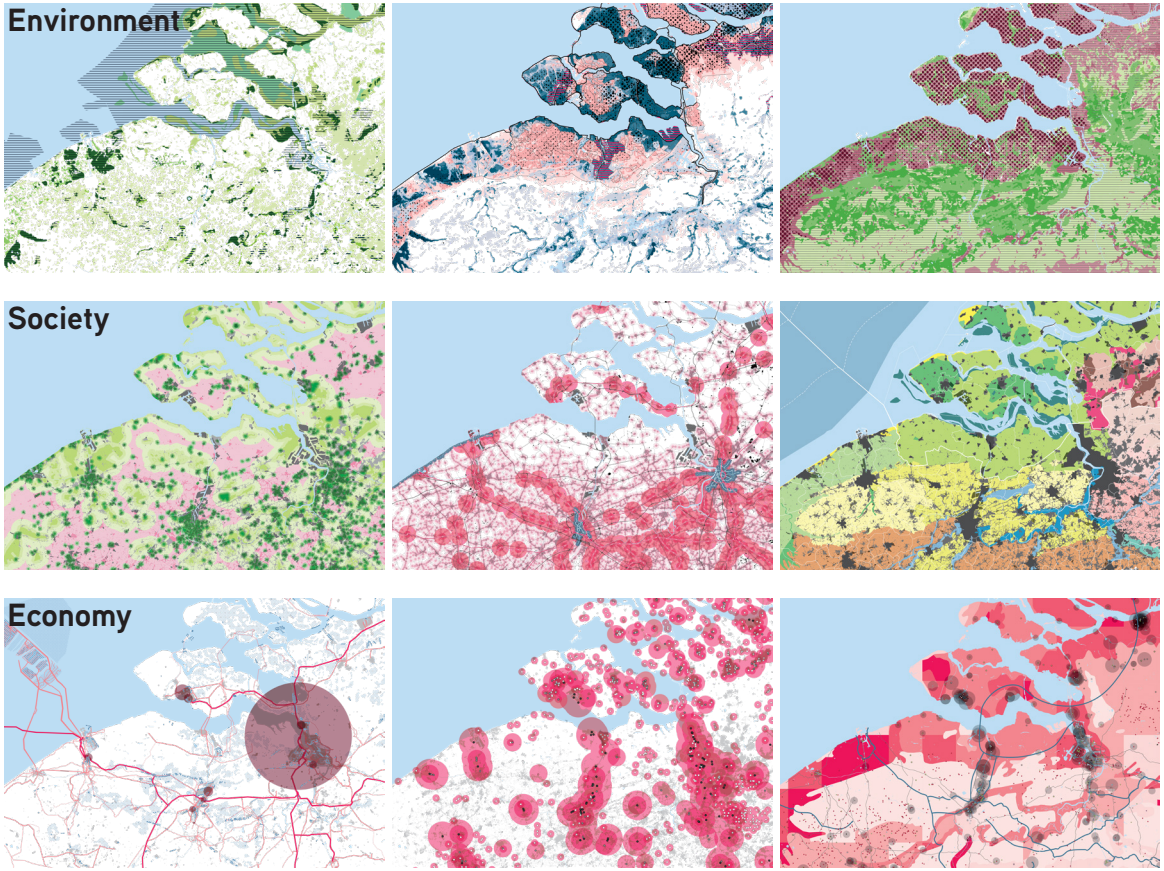
↓

Interventions

↓

Clusters

Spatial systems
Challenges



Overall data sources:

Atlas Natuurlijk Kapital.
DOV (Databank Ondergrond Vlaanderen).

EEA (European Environment Agency).

EMODnet (European Marine Observation and Data Network).

Geodan.

Geopunt.

INBO (Instituut voor Natuur- en Bosonderzoek).

OSM (Open Street Map).

OSPAR (Convention for the Protection of the Marine Environment of the North-East Atlantic).

PDOK (Publieke Dienstverlening Op de Kaart).

Environmental resilience
Interventions

Societal well-being
Interventions

	General goal	External pressures	Urban core	Peri-urban core	Open landscape	Port	Infrastructu
Big and small green	Space for big and small green	Limit land take Safe accessibility	Small urban green on roofs, temporary land, and streets Metropolitan green wedges	Green doors to the landscape	Areas for recreation relax, and exploration	Wild green on edges and undeveloped land	Boundled green and gray corridors
Public mobility	Public mobility hubs and networks	Limit private mobility and infrastructure	TOD around multi-modal hubs (Transit Oriented Development)	Shared mobility hubs connected with urban cores and open landscape	Accessible edges from (peri-)urban cores	Shared cargo and public trsport	Fill missing links in the public mobility
Active mobility	Slow mobility hubs and networks	Limit car use	Pedestrian living areas Bike network hubs	Regional bike and hike network nodes	Regional bike and hike network	Regional bike and hike network	Fill missing links in the regional bike and hike networksvv
Services	Diverse service clusters	Limit monofunctional development	Clustering of services within population cores (focus on high education, culture, special uses)	Clustering of services within population cores (focus on food, education, health)	Serviced edges with (peri-)urban cores	Serviced edges with (peri-)urban cores	Limit presence of infrsatructural barriers
Cultural landscapes	Connected landscape identity	Limit land take Development in line with surroundings	Mix diverse functions and construction years	Link between built and open landscapes	Strenghten historic regional landscapes	Develop port cultural landscapes	Regional bike and hike network along cultural landscapes

Societal well-being

Ensure population health and increase adaptive capacity

Conceptual framework

↓

Challenges

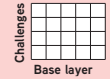
Internal:
Green accessibility
Active mobility
Cultural landscapes

Climate-related:
Public transport accessibility
Services accessibility

↓

Interventions

Challenges
x
Land uses & population density



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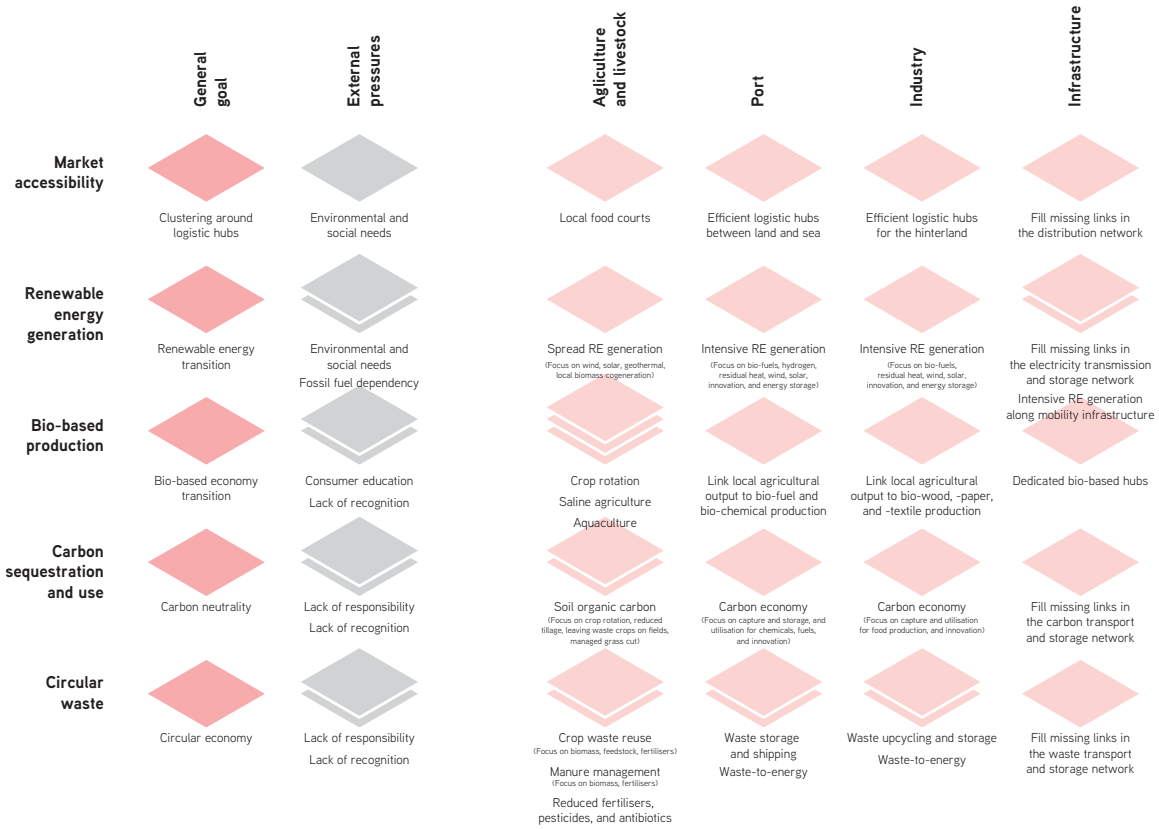
Clusters

Healthy urbanism in:
Urban cores
Peri-urban cores
Infrastructural corridors
Ports

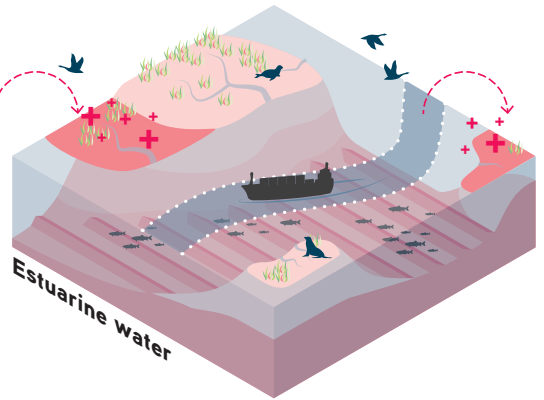
System assessment

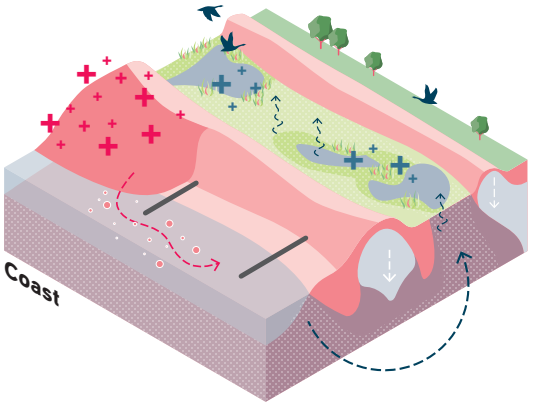
Economic neutrality
Interventions



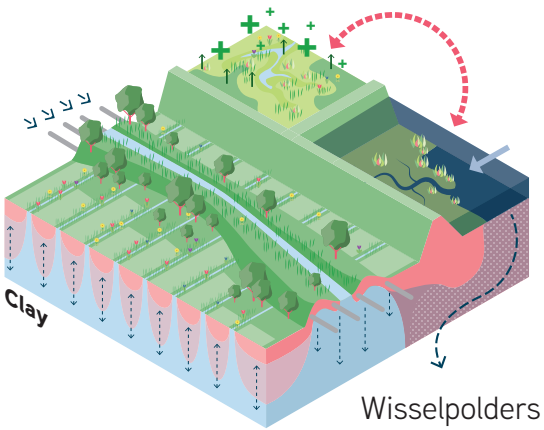
Clusters of interventions
Environment

Sediment management

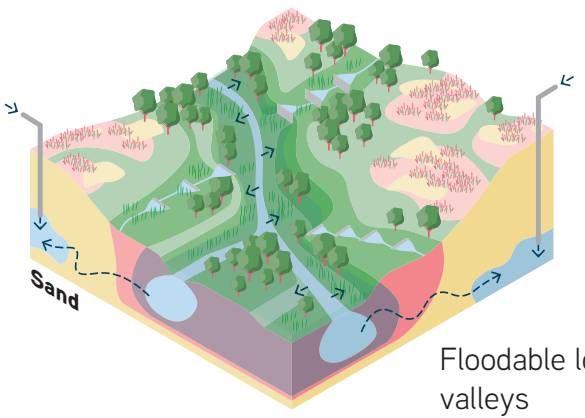




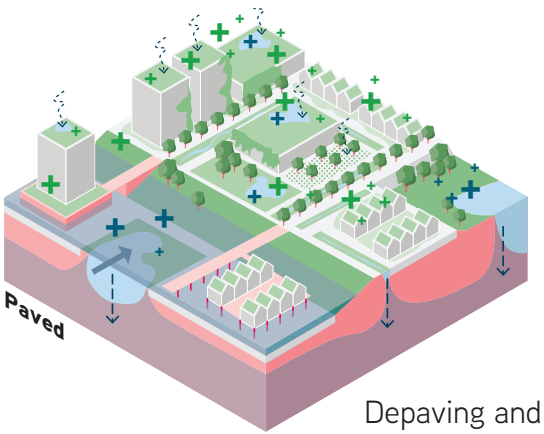
Sand motor and water gradients



Wisselpolders and flexible water table



Floodable low valleys



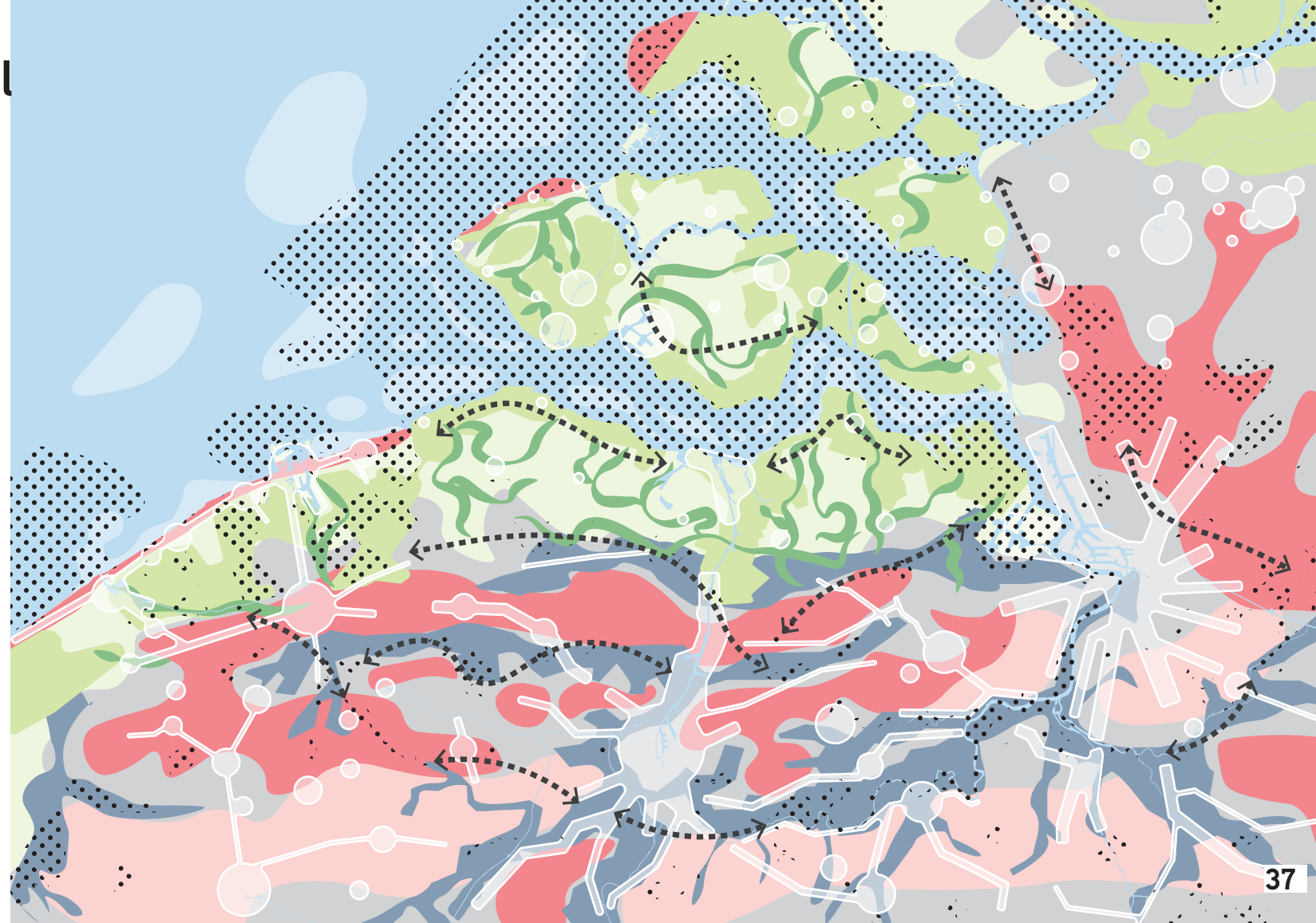
Depaving and water retention

Environmental strategies

0 5 10 15 km

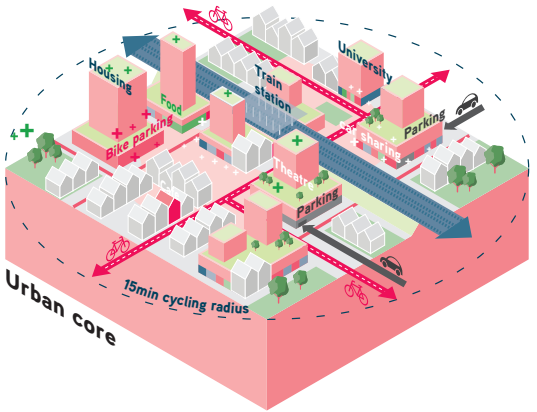
Legend

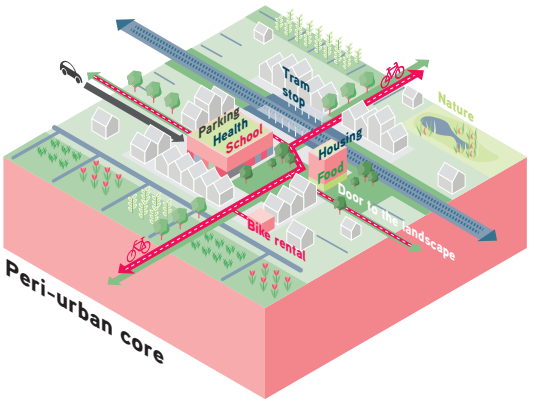
- Water
- Restored sand and mud flats for sedimentation and erosion management
- Depoldered coast for salt marsh restoration and land formation
- Saline seepage for salt marsh restoration
- Water storage in creeks for freshwater provision
- Floodable low valleys for excess water storage buffer
- Fresh water loam ridges for afforestation
- Fresh water sand ridges for afforestation and heather restoration
- Paved areas for increased soil filtration measures (de-paving)
- Protected natural areas
- Expansions and new connections of the ecological network



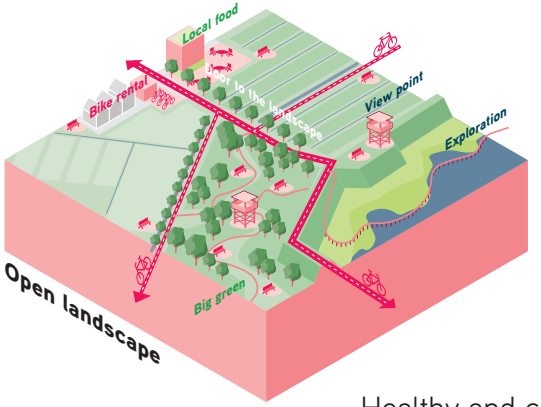
Clusters of interventions
Society

15 min city

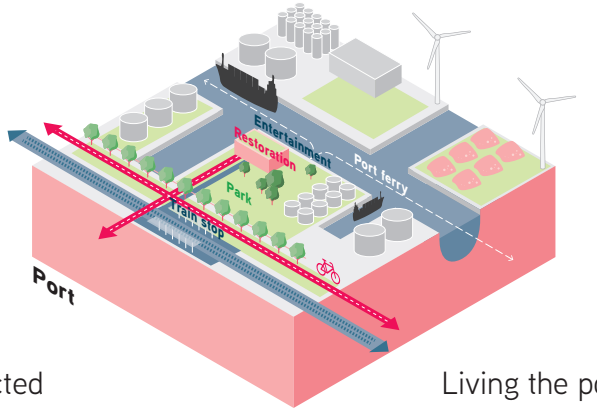




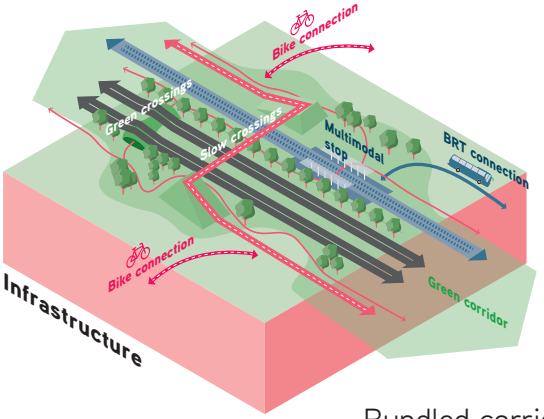
Doors to the landscape



Healthy and connected landscapes



Living the port



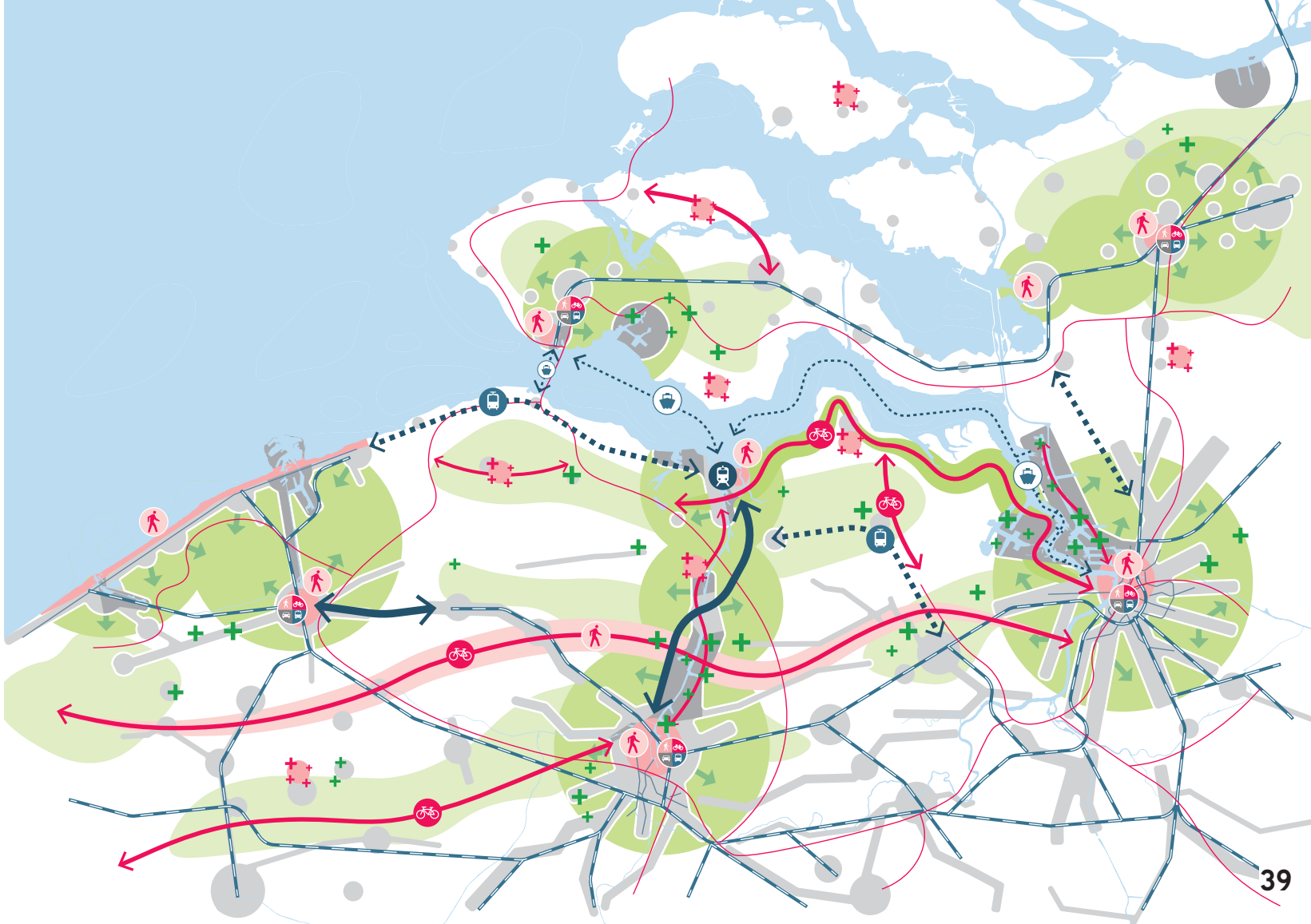
Bundled corridors

Social strategies

0 5 10 15 km

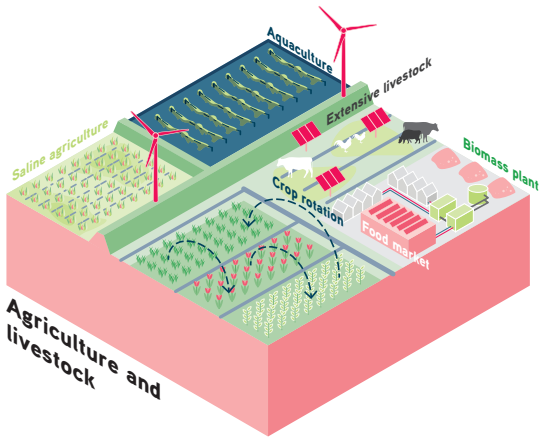
Legend

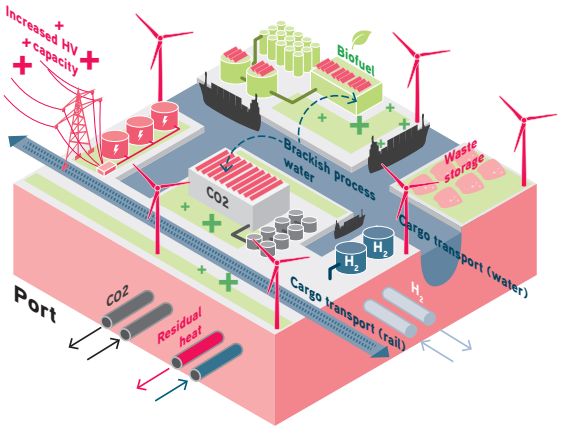
- Water
- New small green in residential areas
- New small green in industrial areas
- Metropolitan areas
- Metropolitan green edges
- New large scale green
- New regional bike routes
- New cultural landscape routes
- New public transport
  - Rail
  - Tram
  - Ferry
  - Multi-modal node
- Pedestrian domain
- Strengthen peri-urban core



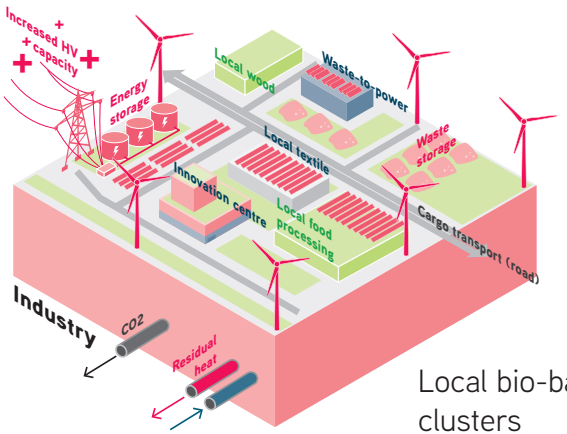
Clusters of interventions
Economy

Eco-based agriculture

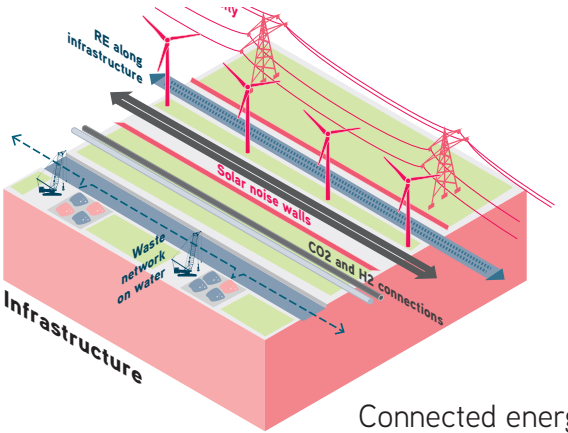




Carbon and hydrogen hubs



Local bio-based clusters



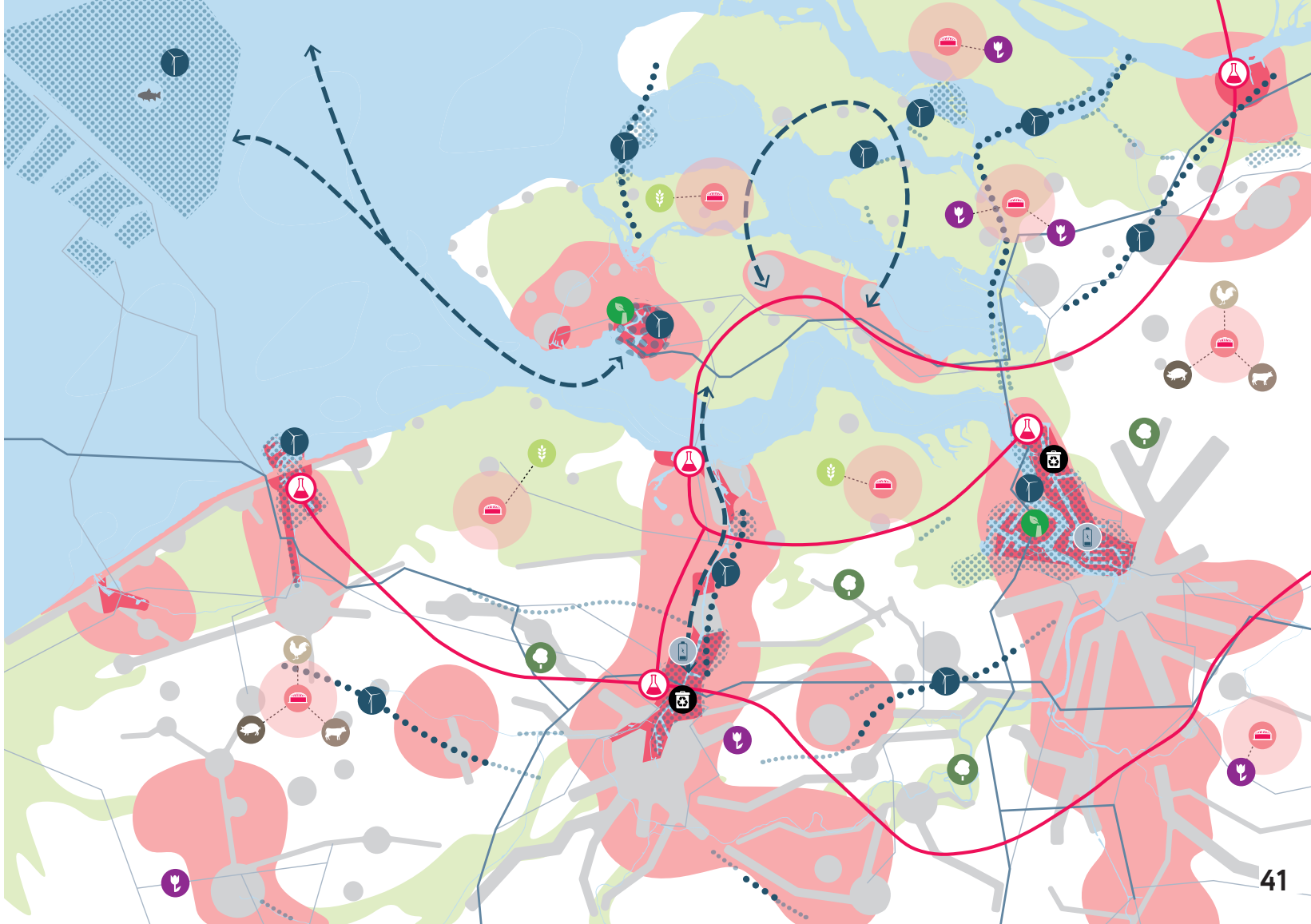
Connected energy, material and waste network

Economic strategies

0 5 10 15 km

Legend

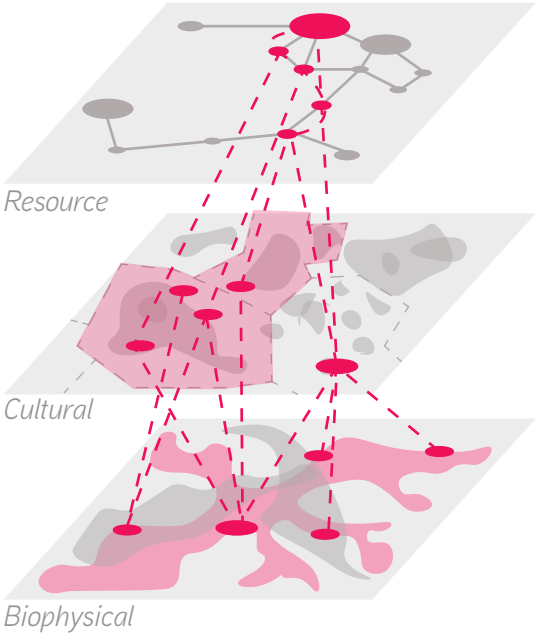
- Water
- Residential areas
- Circular ports
- Heat network
- Biomass digester from surrounding sources
- Soil Organic Carbon
- Food and biomass crops
- Agroforestry
- Extensive pig farm
- Extensive cattle farm
- Extensive poultry farm
- Horticulture
- New pipelines for carbon and hydrogen
- Waste sorting centres
- Bio refineries
- Electricity storage
- New wind farms
- New high voltage connection



HOW? (3)

Collaborative, cross-border and evolutionary governance

Governance structures
Towards a strategic perspective



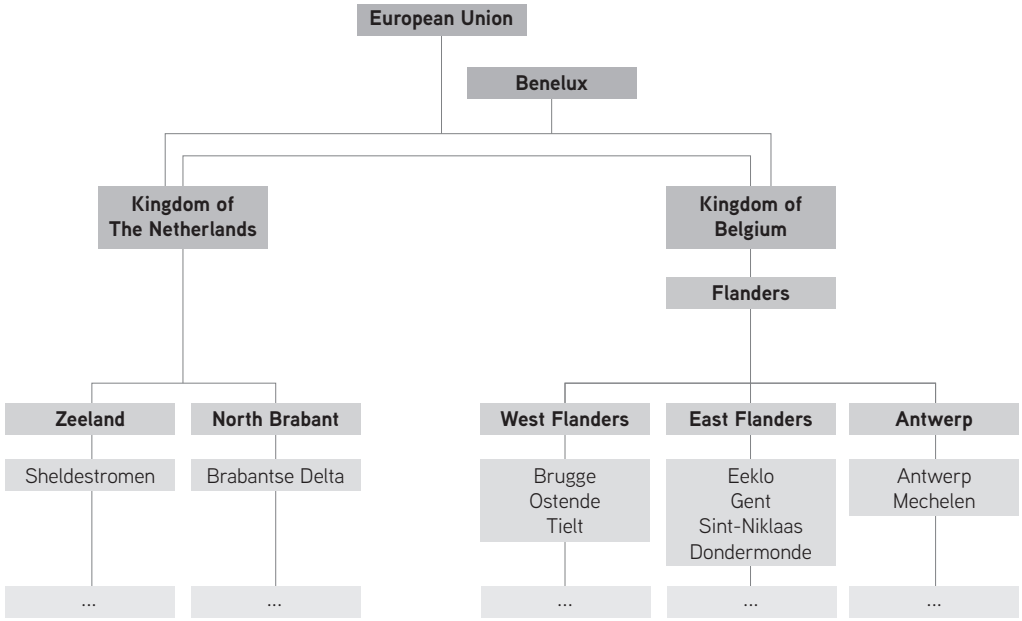
Governance goal

Collaborative planning

Mobilise all actors involved
Create co-producing arenas
Facilitate multi-level agreements

Institutional frameworks

In search of multi-actor and cross-border arrangements



Collaborative planning

Mobilise all actors involved
Create co-producing arenas
Facilitate agreements

Conceptual framework

Institutions

European
Regional
Local
Cross-border

Arenas

Stakeholders and Facilitators

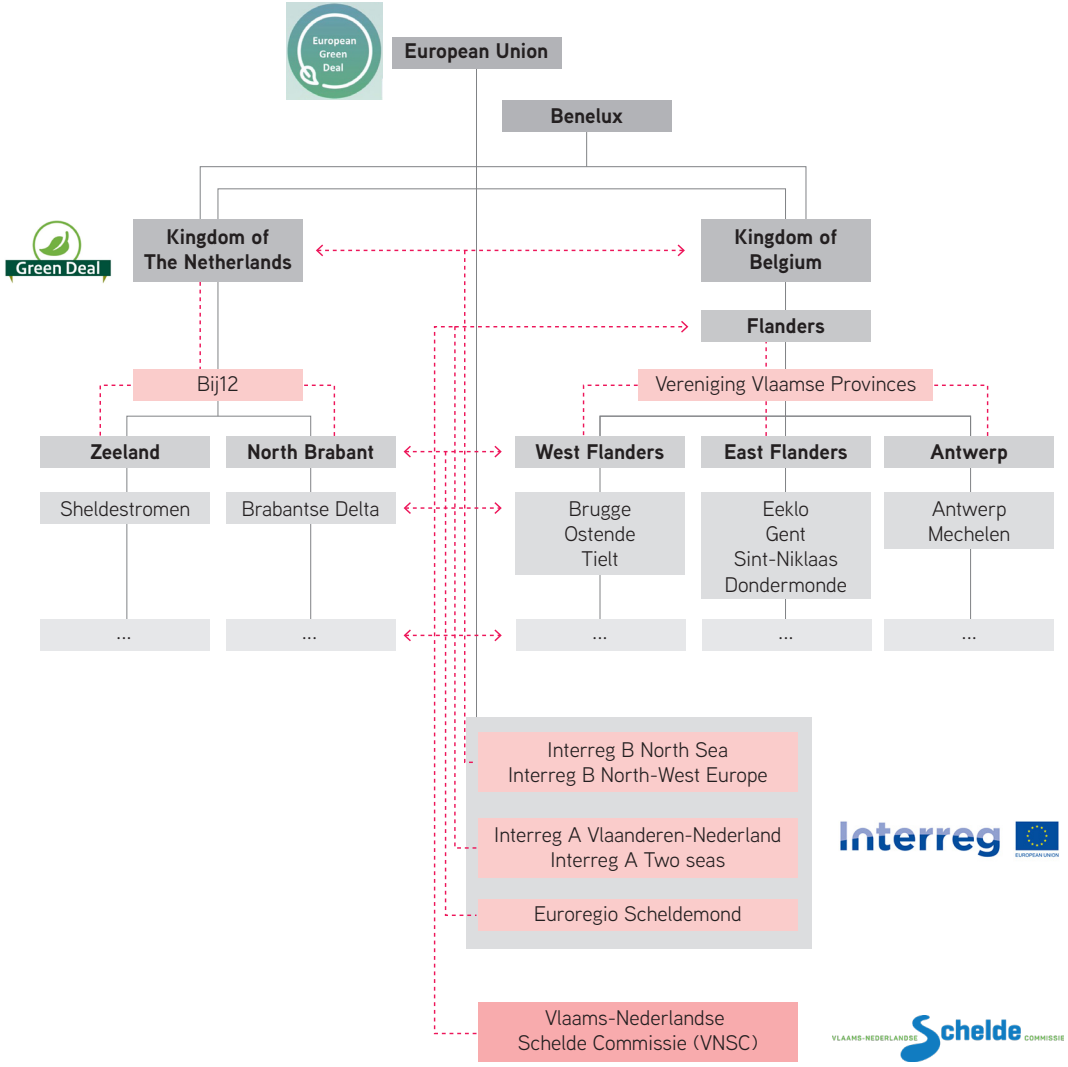
Scenarios

Four pathways to climate neutrality:
Green
De-growth
Consumers
Circular

Dynamic Adaptive Pathways

Governance assessment

Institutional frameworks
In search of multi-actor and cross-border arrangements



Collaborative planning
Mobilise all actors involved
Create co-producing arenas
Facilitate agreements

Conceptual framework

Institutions
European
Regional
Local
Cross-border

Arenas
Stakeholders and Facilitators

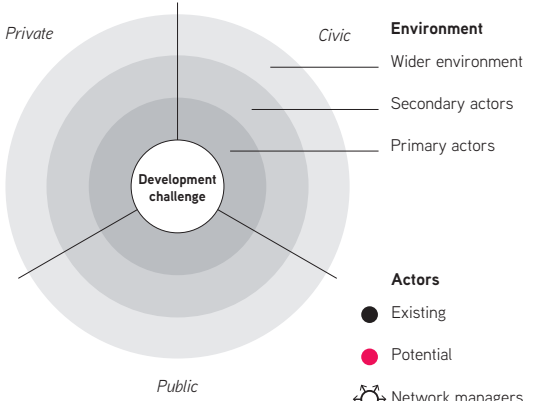
Scenarios
Four pathways to climate neutrality:
Green
De-growth
Consumers
Circular

Dynamic Adaptive Pathways

Governance assessment

Multi-actor interaction
Current situation

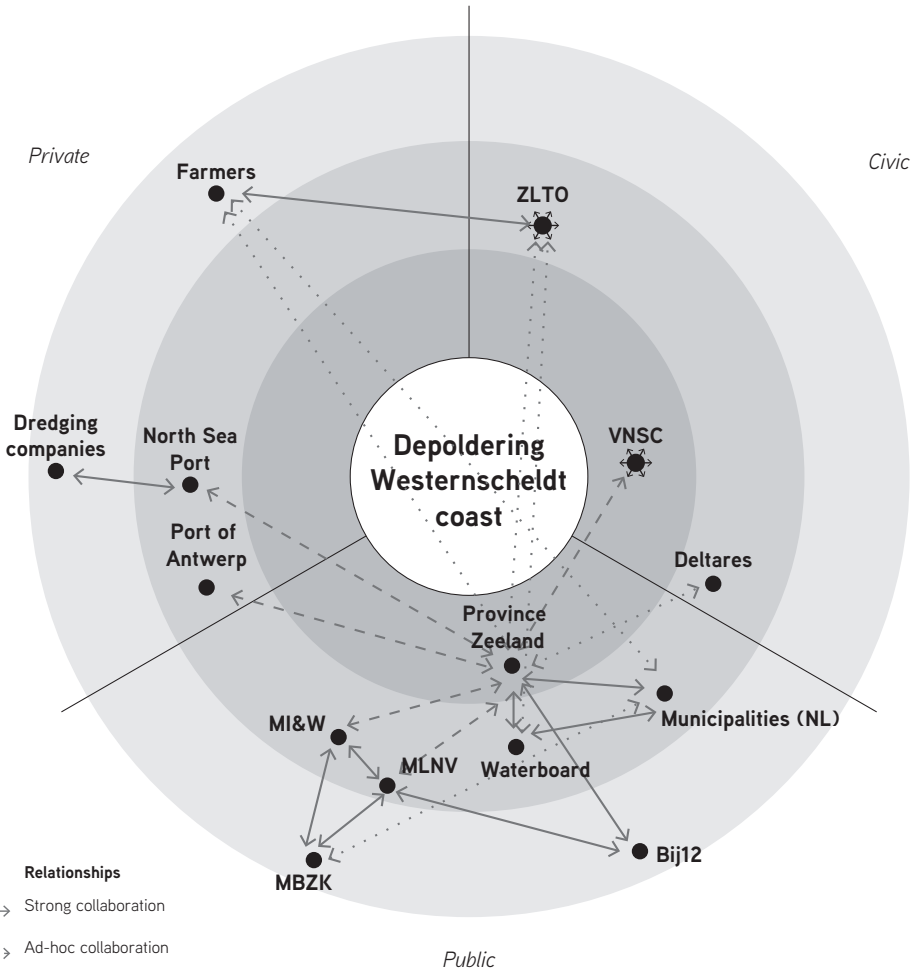
Onion diagram. Based on: Czischke (2018).



Environment
- Wider environment
- Secondary actors
- Primary actors

Actors
- Existing
- Potential
- Network managers

Relationships
- Strong collaboration
- Ad-hoc collaboration
- Indirect influence



Collaborative planning
Mobilise all actors involved
Create co-producing arenas
Facilitate agreements

Institutions
European
Regional
Local
Cross-border

Arenas
Stakeholders and Facilitators

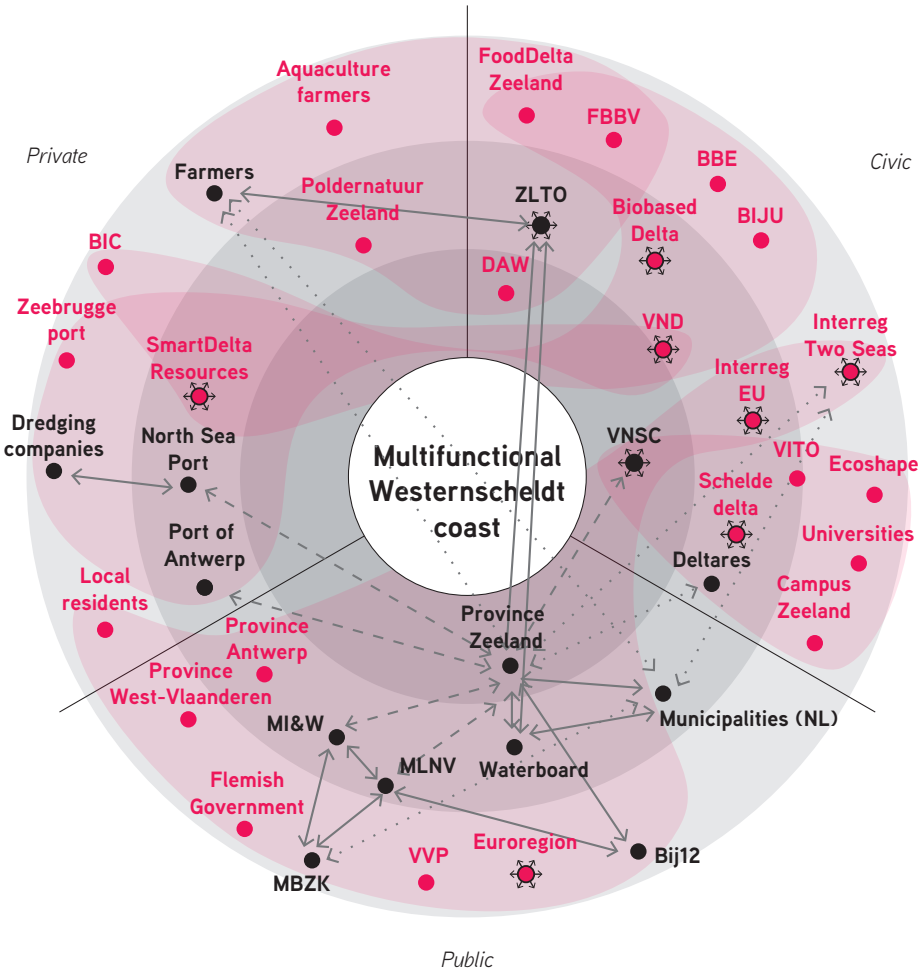
Scenarios
Four pathways to climate neutrality:
Green
De-growth
Consumers
Circular

Dynamic Adaptive Pathways

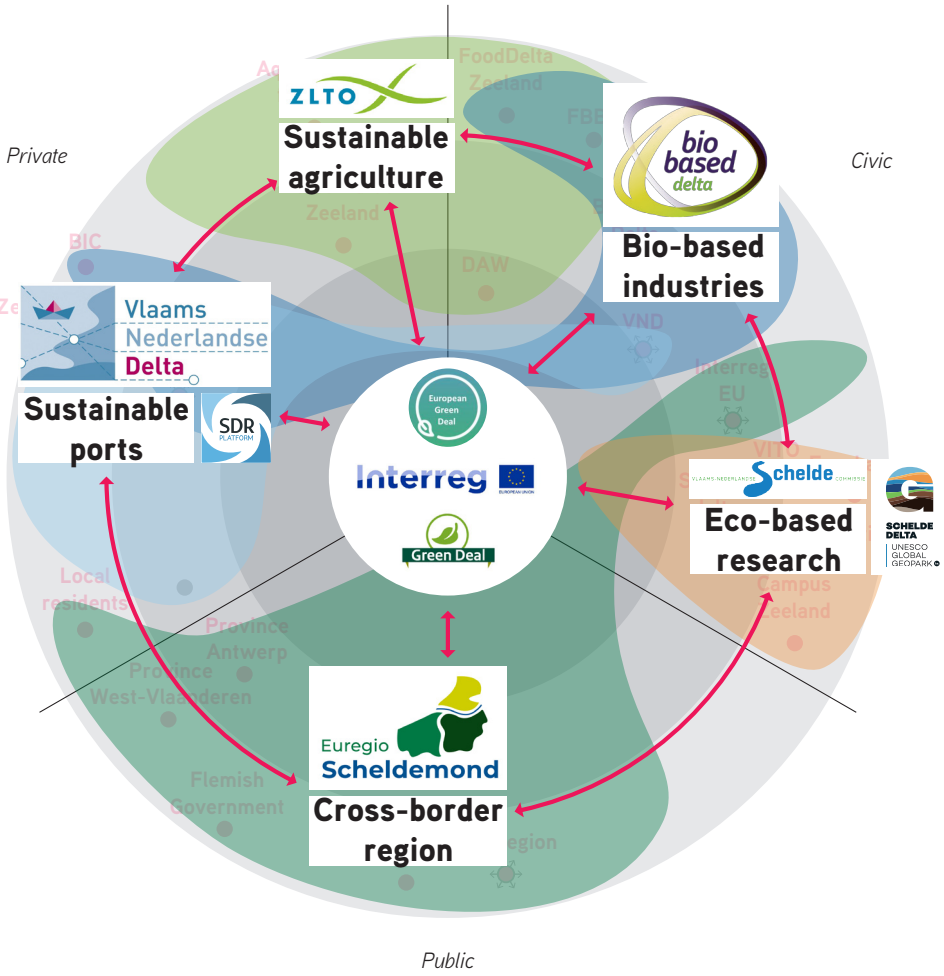
Conceptual framework

Governance assessment

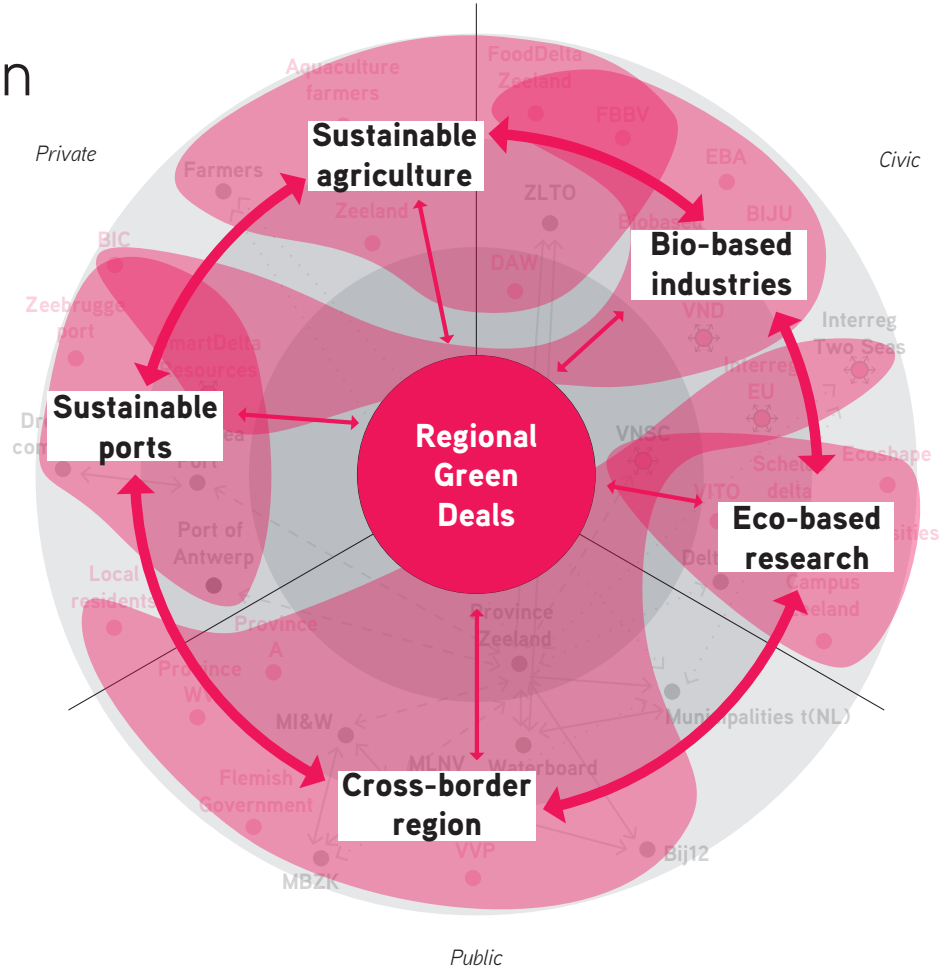
Multi-actor interaction
Desired situation



Multi-actor interaction
Network managers and institutional facilitators

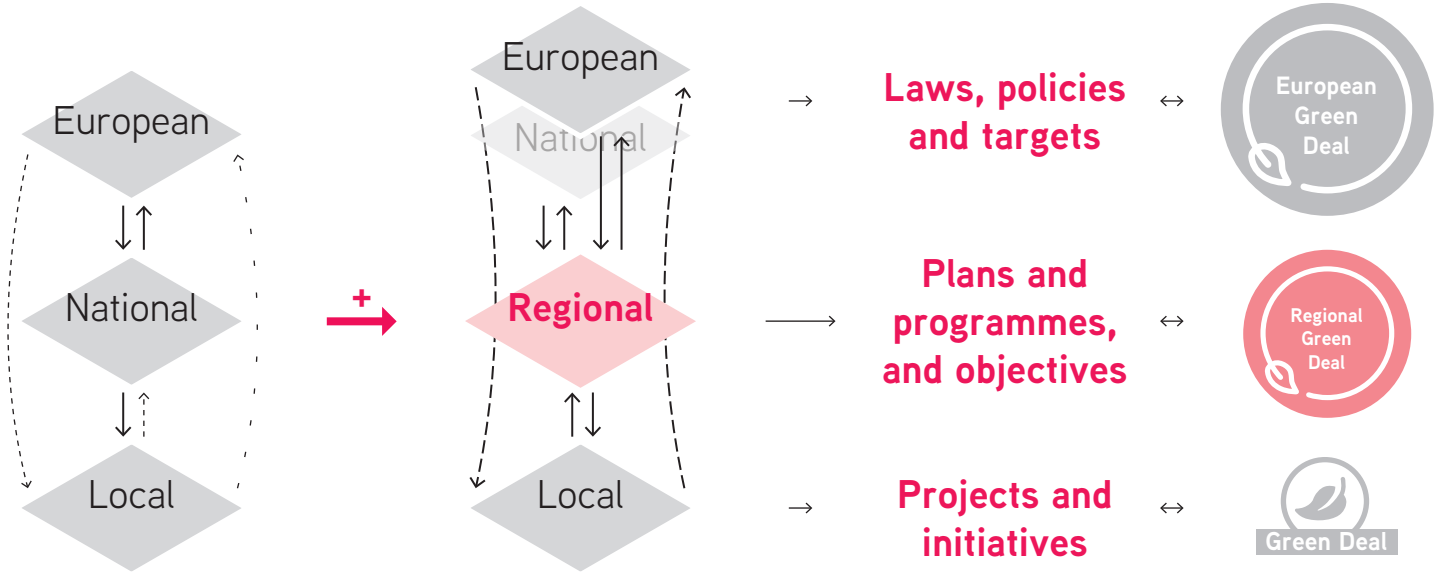


Regional Green Deals
Multi-actor collaboration



Regional Green Deals

The regional counterpart of the EU green deal



Evolutionary governance
Moving through short- medium- and long-term targets

2030

Carbon neutrality (EU Green Deal)
-50% GHG emissions compared to 1990 values

No Net Loss (EU Biodiversity strategy 2030)
+30% Natura2000 areas on land and +30% on sea
25% agricultural area to organic farming
10% agricultural area to nature management
50% river banks re-naturated

2050

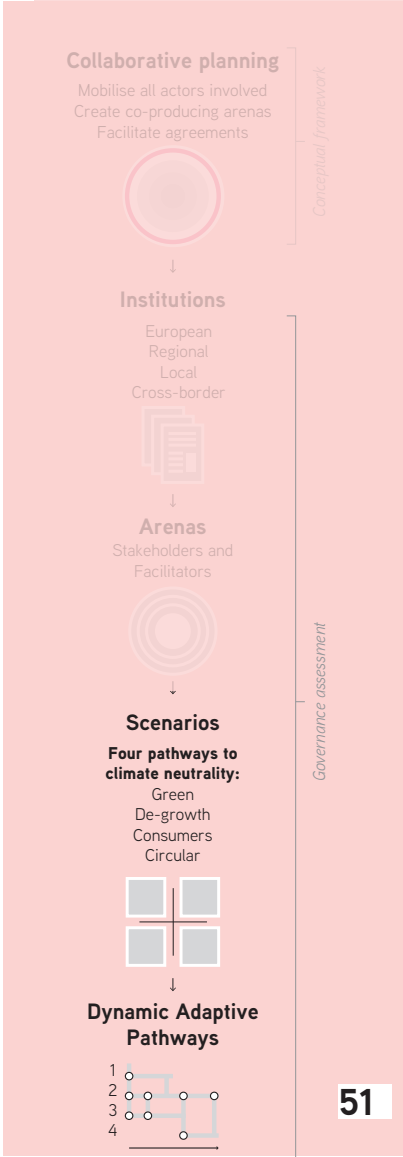
Carbon neutrality (EU Green Deal)
-95% GHG emissions compared to 1990 values

Ecosystem recovery (UN Convention on Biodiversity)
All ecosystem are partially recovered and have net positive biodiversity

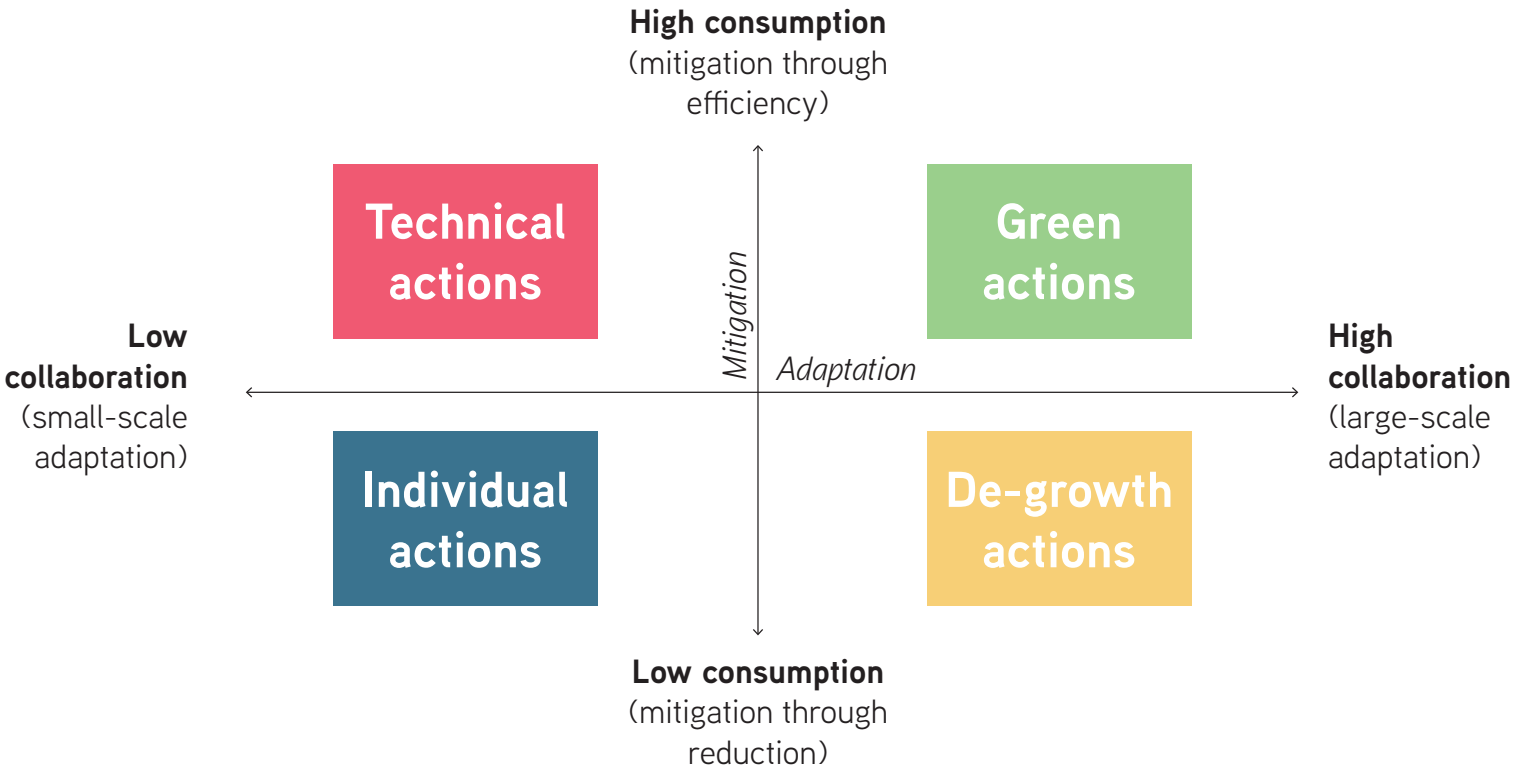
2080

Climate resilience (proposed target)

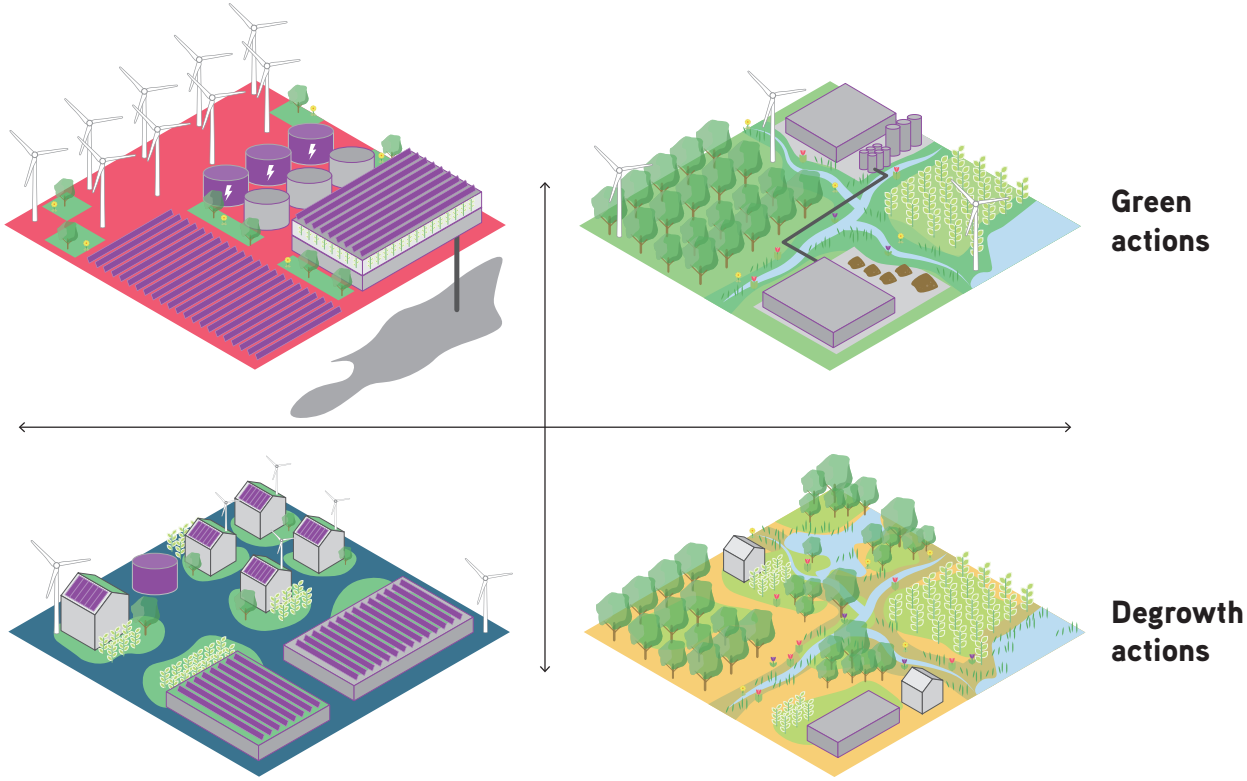
Sources: EU Green Deal, retrieved from: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en; EU Biodiversity strategy: https://ec.europa.eu/environment/nature/biodiversity/strategy/index_en.htm



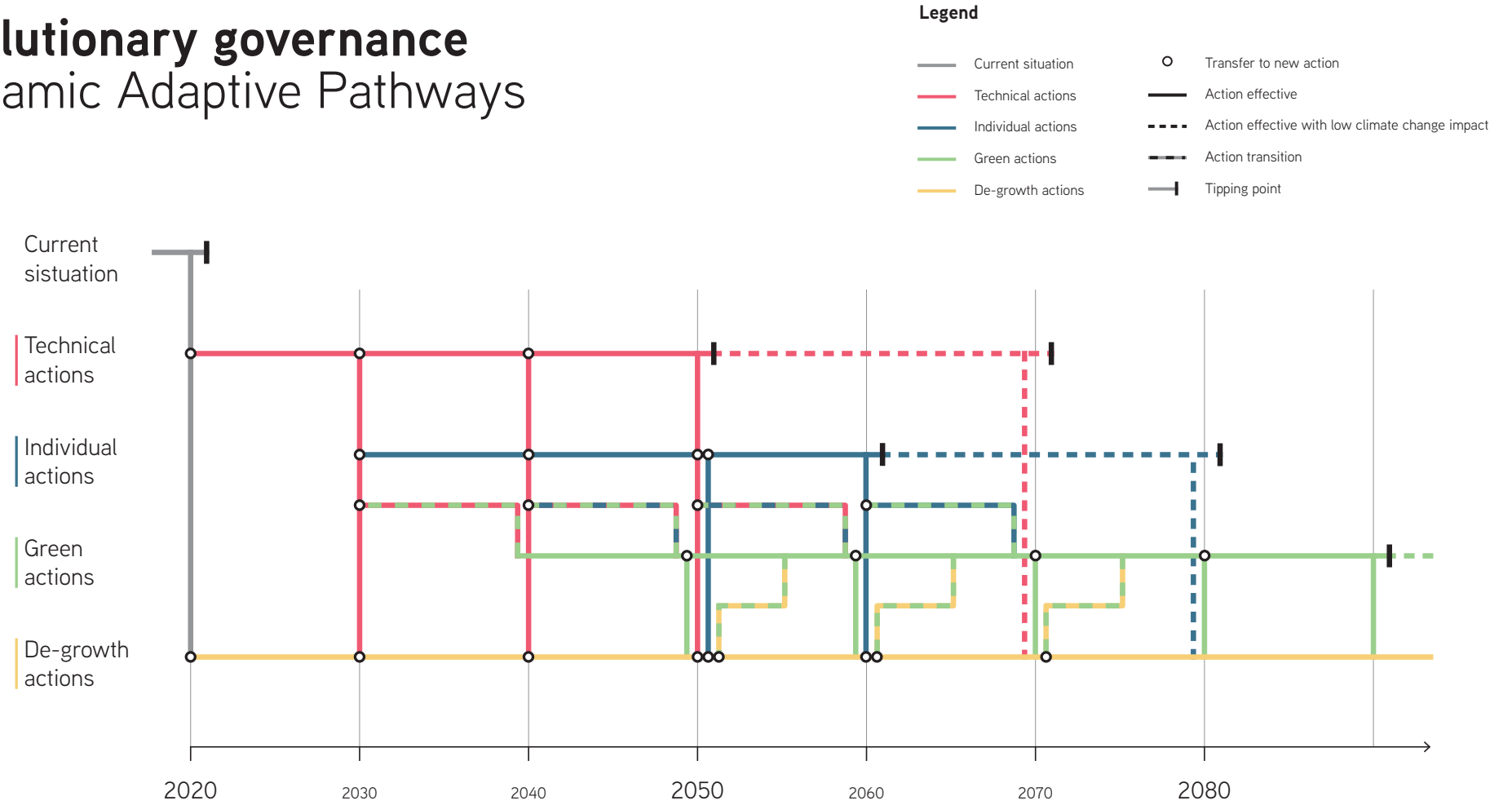
Evolutionary governance
Four types of policy action



Evolutionary governance
Four types of policy action

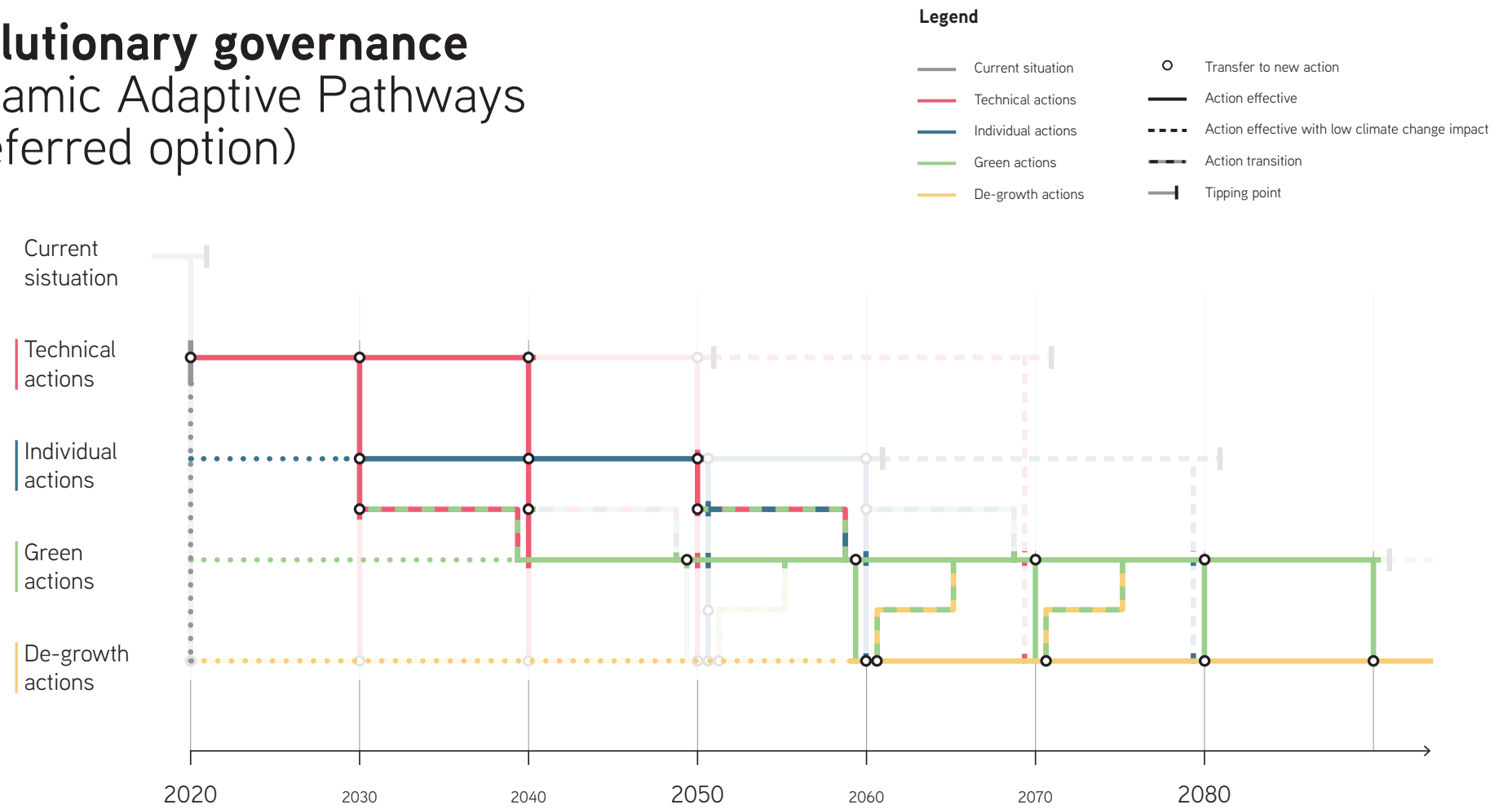


Evolutionary governance
Dynamic Adaptive Pathways



Source: Haasnoot et al., 2013

Evolutionary governance
Dynamic Adaptive Pathways (preferred option)

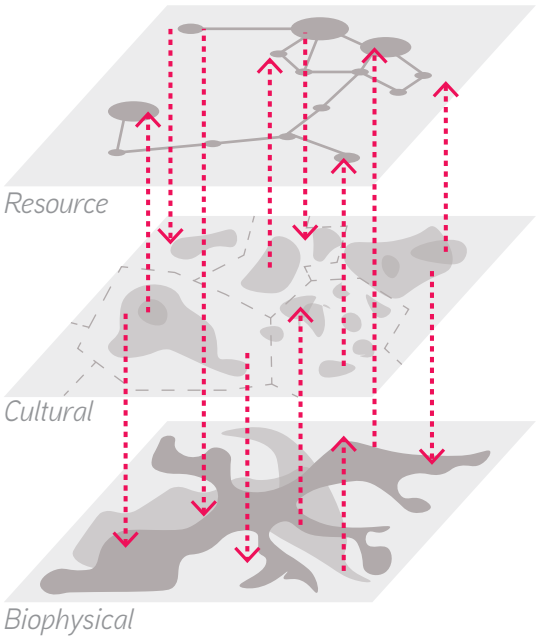


Source: Haasnoot et al., 2013

HOW? (4)

Regional strategy and design

System interrelations
Towards a strategic perspective



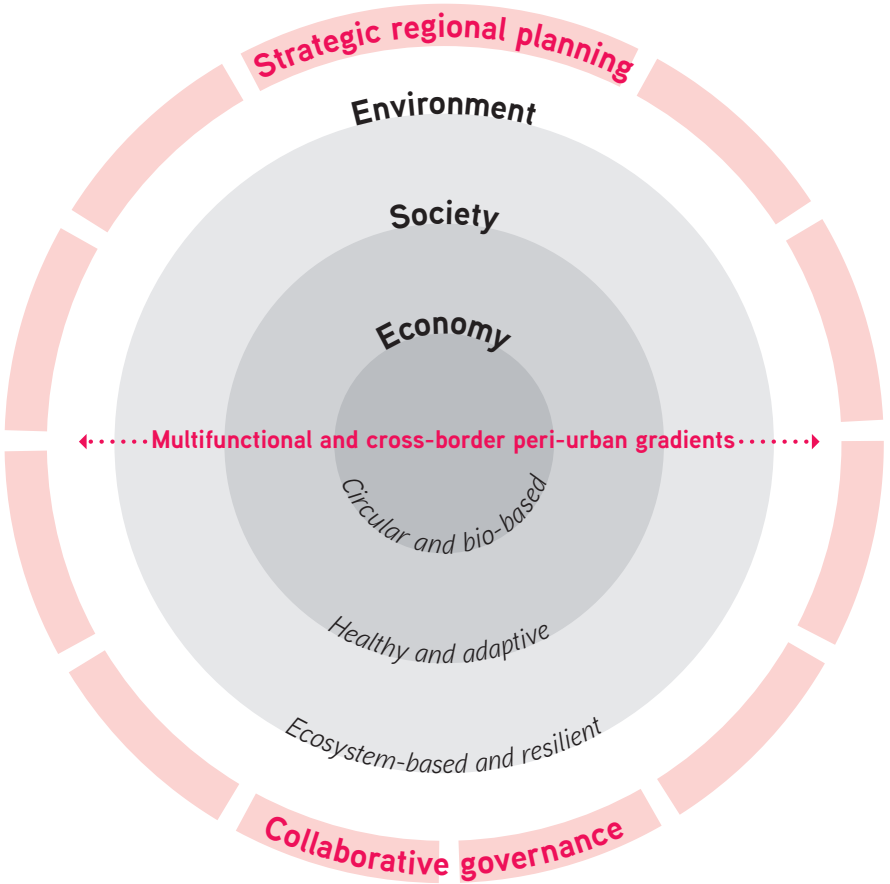
Strategic regional planning
multifunctional and multiactor

- **Vision**
- **Actions**
- **Timeline**

Strategic planning. Based on the work by Albrechts (2006, 2009, 2013)

Scheldt vision 2080

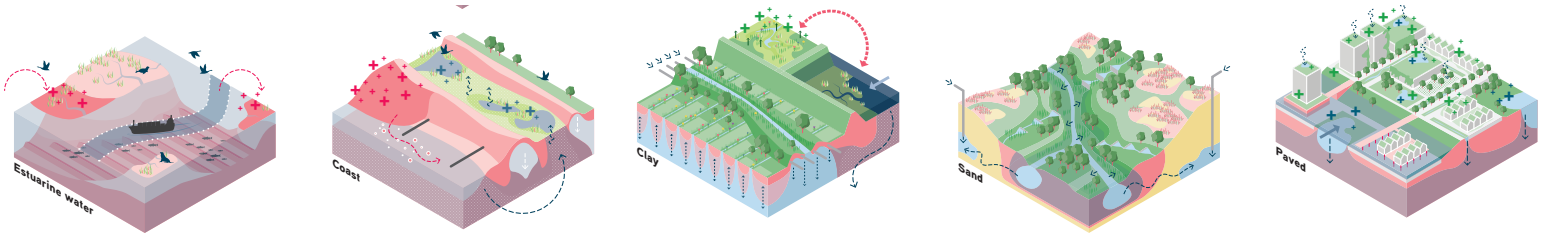
Co-producing desired futures in collaborative arenas



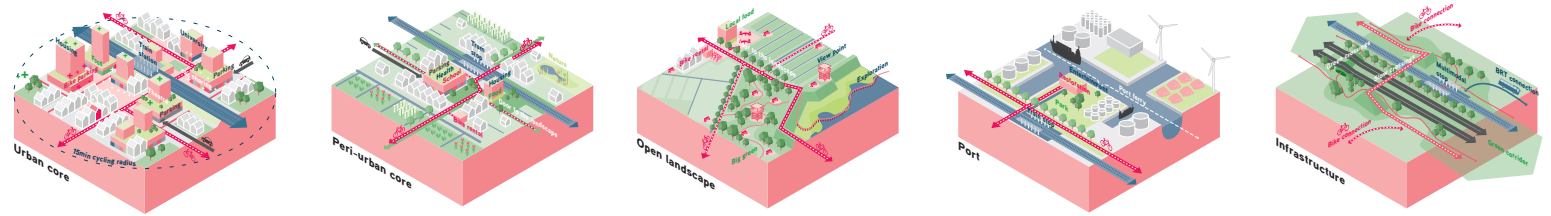
Strategic actions

Deploying physical solutions to strategic problems

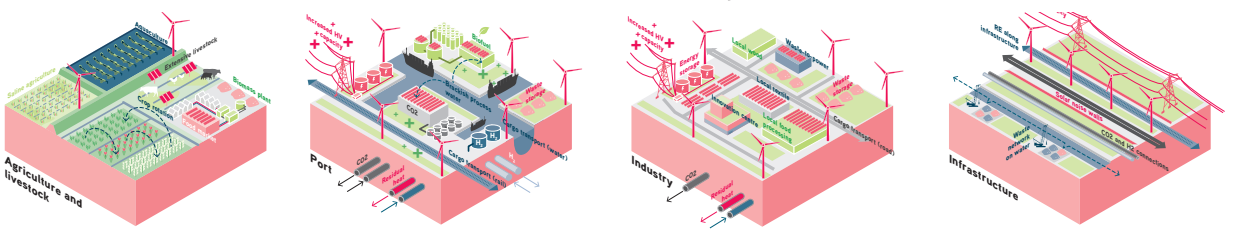
Environmental resilience



Societal well-being

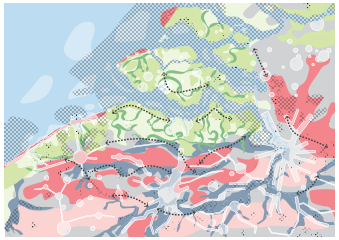


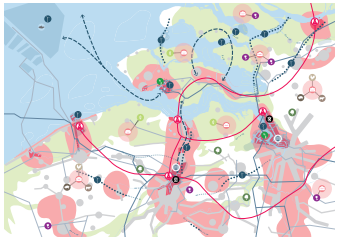
Economic neutrality



Strategic plan

Managing trade-offs and synergies on the regional scale





Strategic timeline

Economic development

Social development

Environmental development

2030 TARGETS:
EU Green Deal
-50% net carbon emissions
EU Biodiversity strategy
+30% Natura2000 areas at sea
+30% Natura2000 areas on land
+25% organic farming
No Net loss

2050 TARGETS:
EU Green Deal
Carbon neutrality
UN Convention on Biodiversity
All ecosystem on the path to full recovery
Regional Green Deal
Sustainable transport
Circular economy
60% organic farming

2080 TARGETS:
Regional Green Deal
Climate resilience
Complete ecosystem recovery
Healthy and adaptive society
Circular and bio-based economy

Scheldt-estuary 2080 strategy

Scheldt-estuary 2110 strategy

Vision development — Vision update — Vision update

Plan elaboration

Pilot projects

Local co-producing arenas

Backbones implementation

CO2 and H2 pipelines
Circular waste newtorks
Land and sea high-voltage connections
Gent-Terneuzen passenger rail
Recreational routes along new ecological networks
Flexible water network
Reinforced inner dikes for depoldering
CO2 and H2 pipelines and storage
Strengthened circular waste network
Biomass energy and products clusters
Strengthened eco-recreational routes
Increased water network capacity
Reinforced inner dikes for depoldering

Local projects

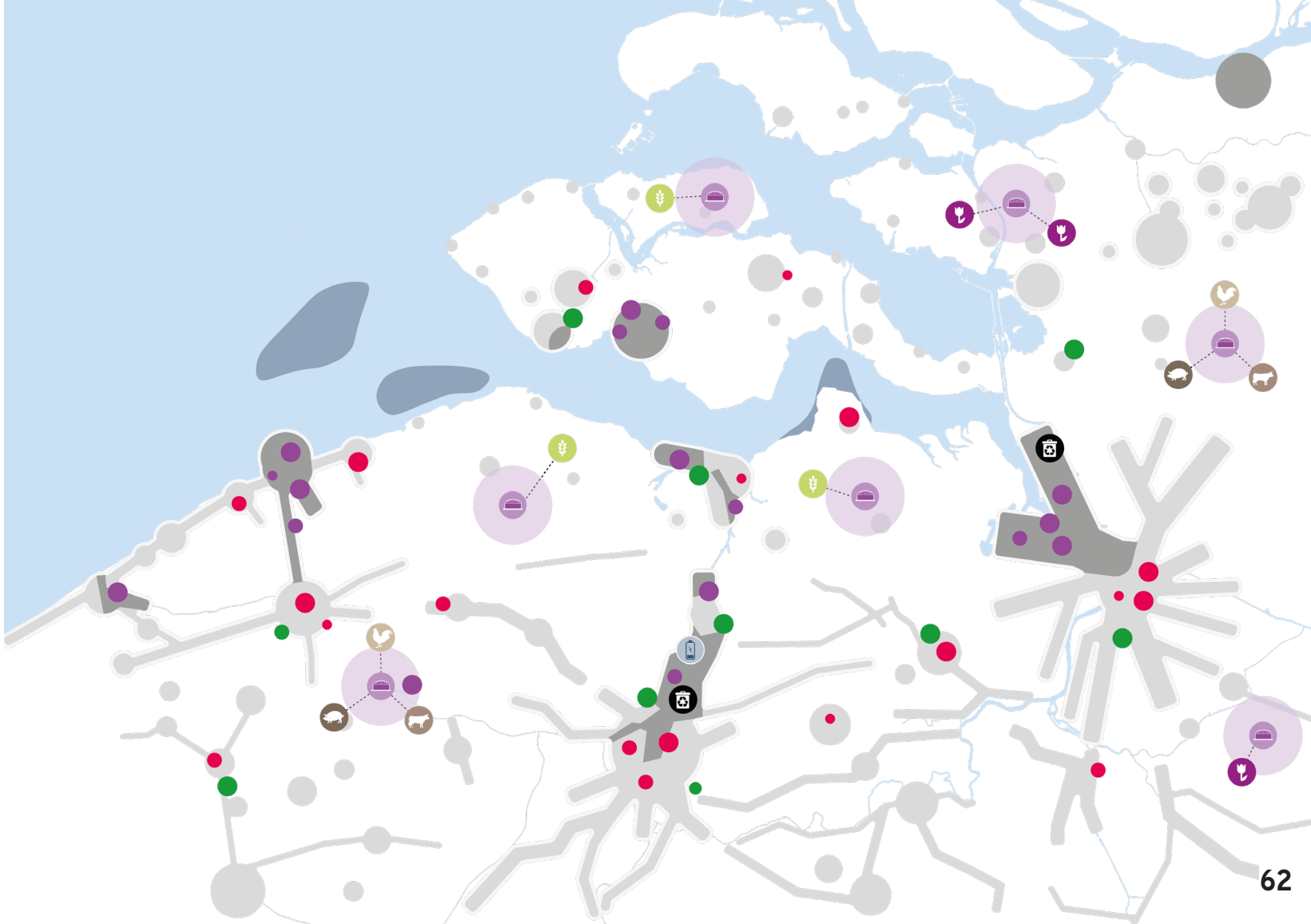
Renewable energy development
Circular industries development
House refurbishment
Transit-oriented development
Eco-agro recreation
Organic farming
Hyrdogen- Carbon- and Bio-based industries
Circular industries development
Agroforestry
Saline agriculture

years 2021 **2025** **2030** 2035 2040 2045 **2050** 2060 2070 **2080**

2025

Pilot projects

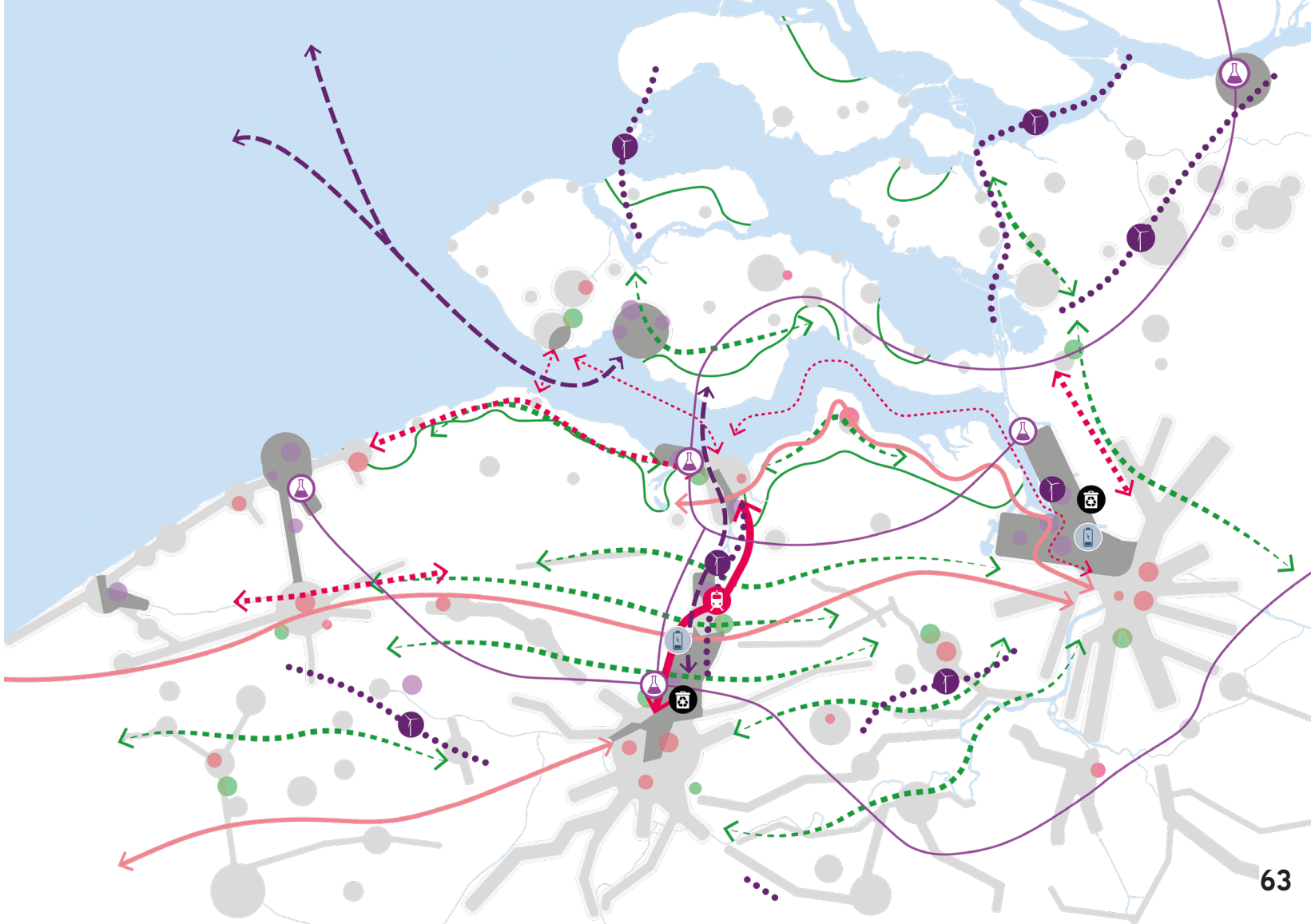
Test options



2030

Backbones

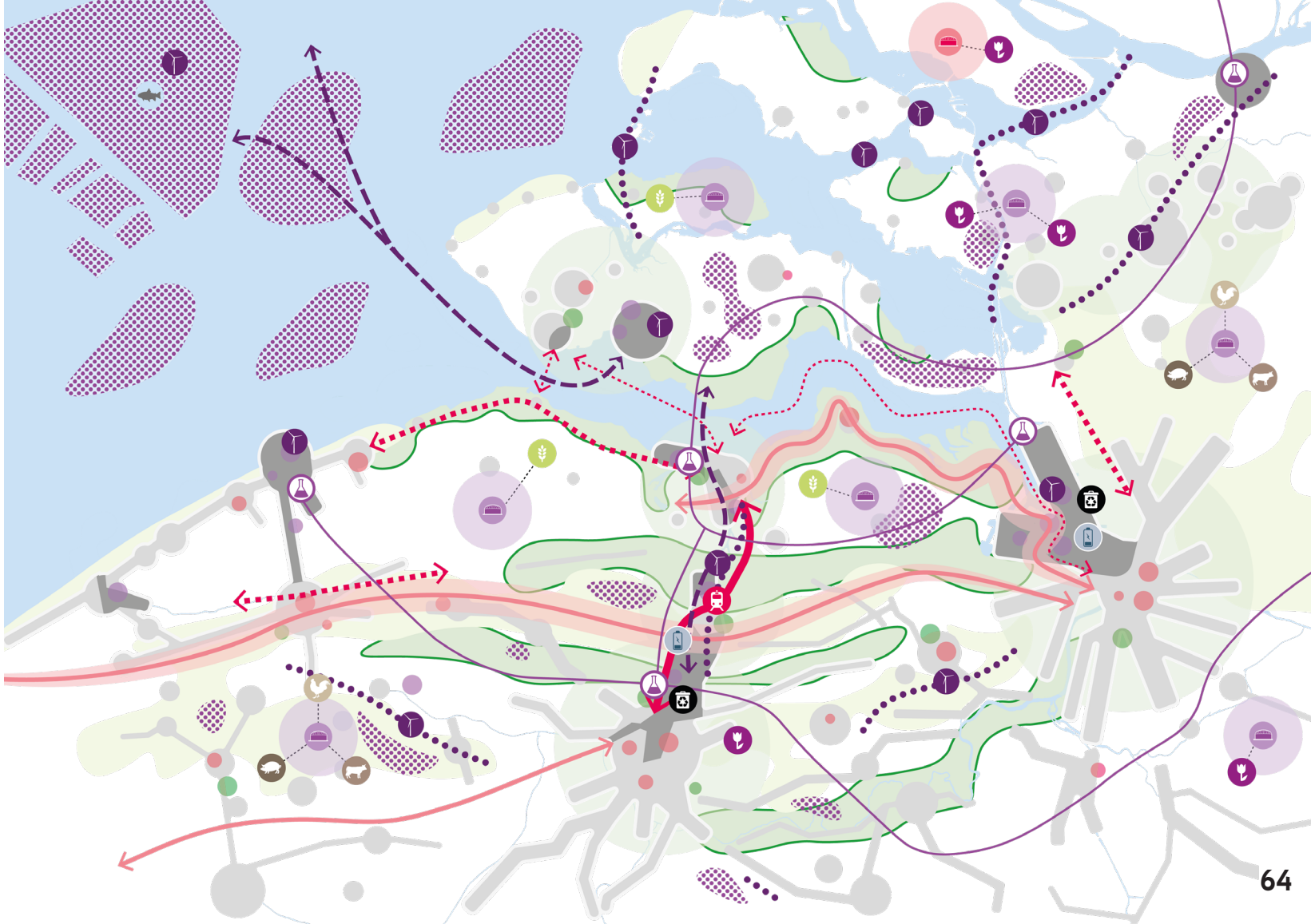
Develop regional infrastructure



2050

Neutrality targets

Through backbones and local projects implementation



2080

Resilience targets

Through the shift to full eco- and bio-based solutions

From Landscape
to landscape

Two case studies of landscape transitions

1- Towards sustainable and resilient agriculture

2- Towards sustainable and resilient ports

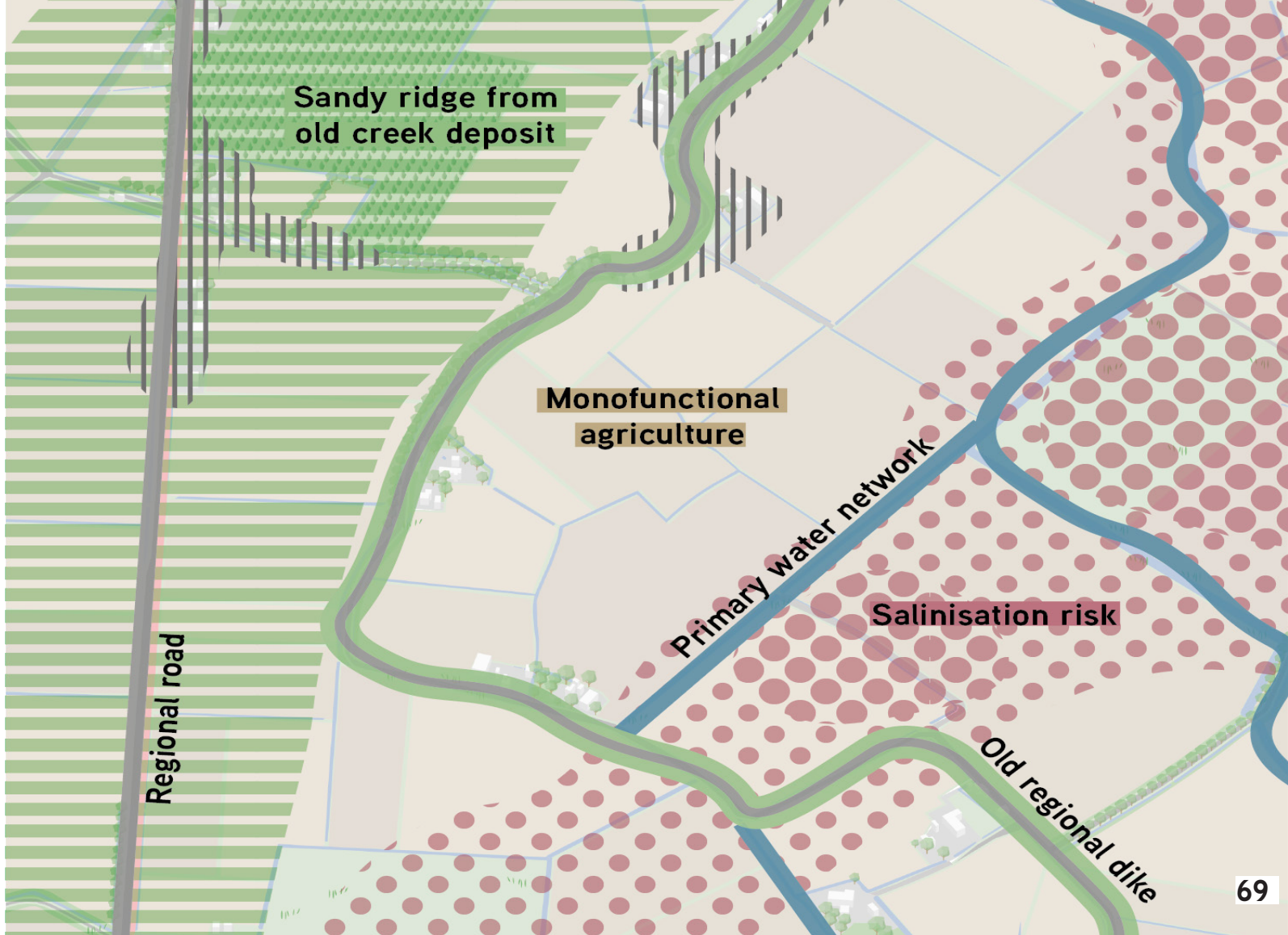
Data sources: Google maps, retrieved from: https://www.google.com/maps

Transition towards sustainable agricultural landscapes

Data sources: Google maps, retrieved from: https://www.google.com/maps

2020

Current situation: challenges and potentials



Data sources: PDOK, retrived from: https://www.pdok.nl/; TOP10 Netherland, retrived from: https://zakelijk.kadaster.nl/; and see surces of slide 31

2020

Data sources: PDOK, retrived from: https://www.pdok.nl/; TOP10 Nederland, retrived from: https://zakelijk.kadaster.nl/

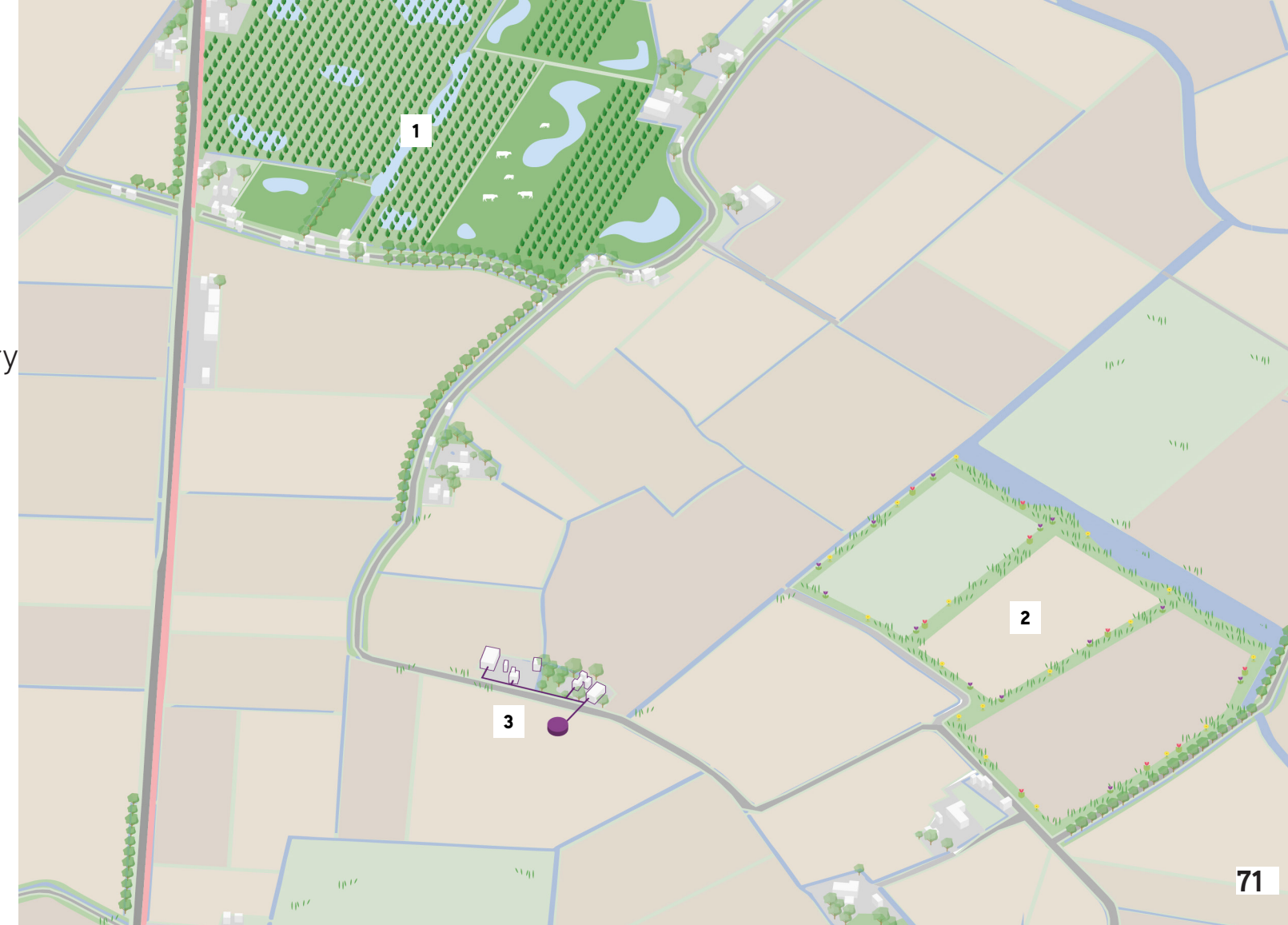
2025

Pilots completed:

1- Increased freshwater storage in sandy creeks for orchards and forestry

2- Crop rotation and natural field edges management

3- Agricultural waste digester for decentralisted heat network

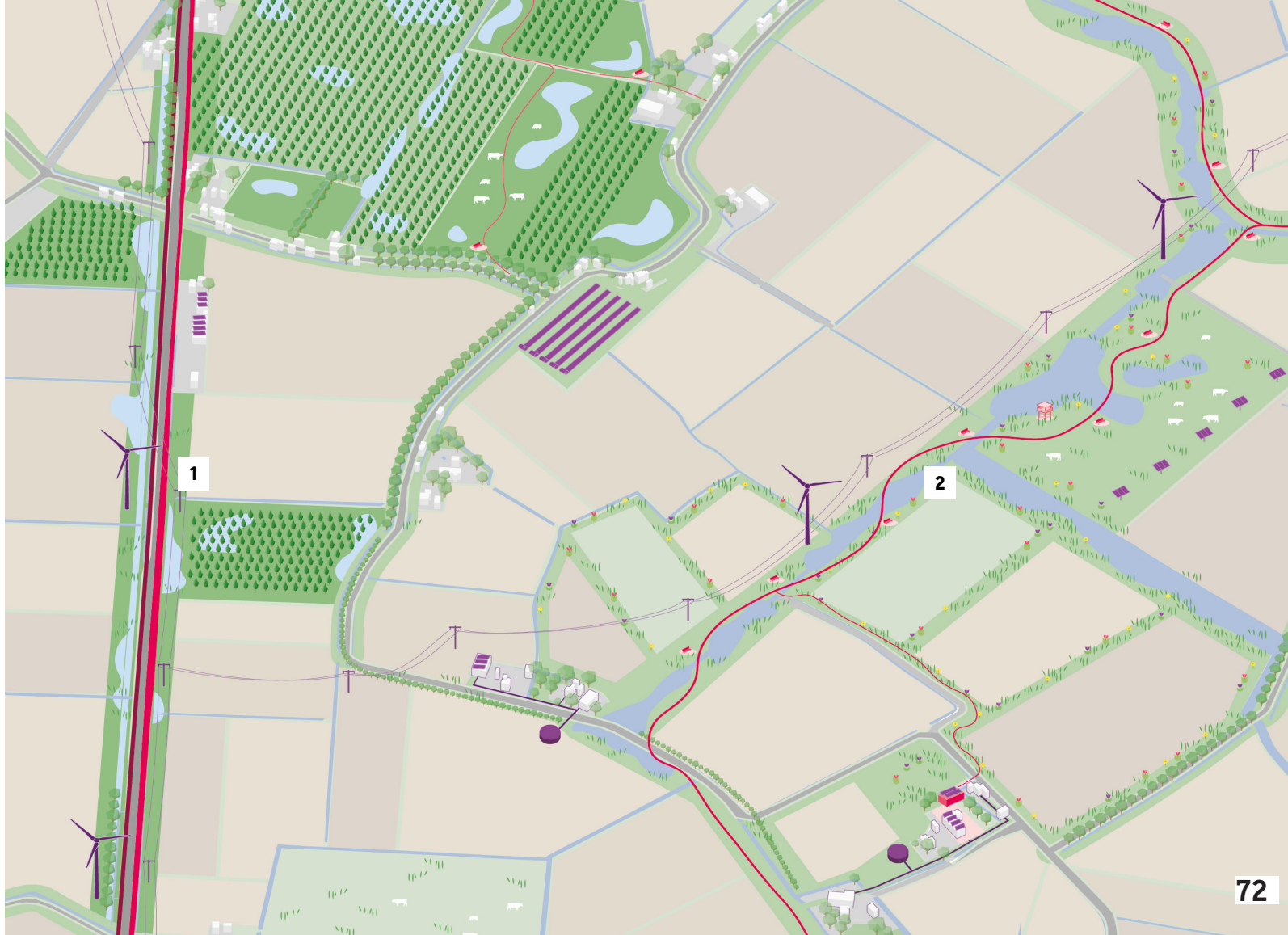


2030

Backbones completed:

1- Increased freshwater storage in sandy creeks, coupled with public and slow mobility routes, and extended power lines

2- Recreational routes along field edges and organic farming corridors, coupled with extended power lines



2050

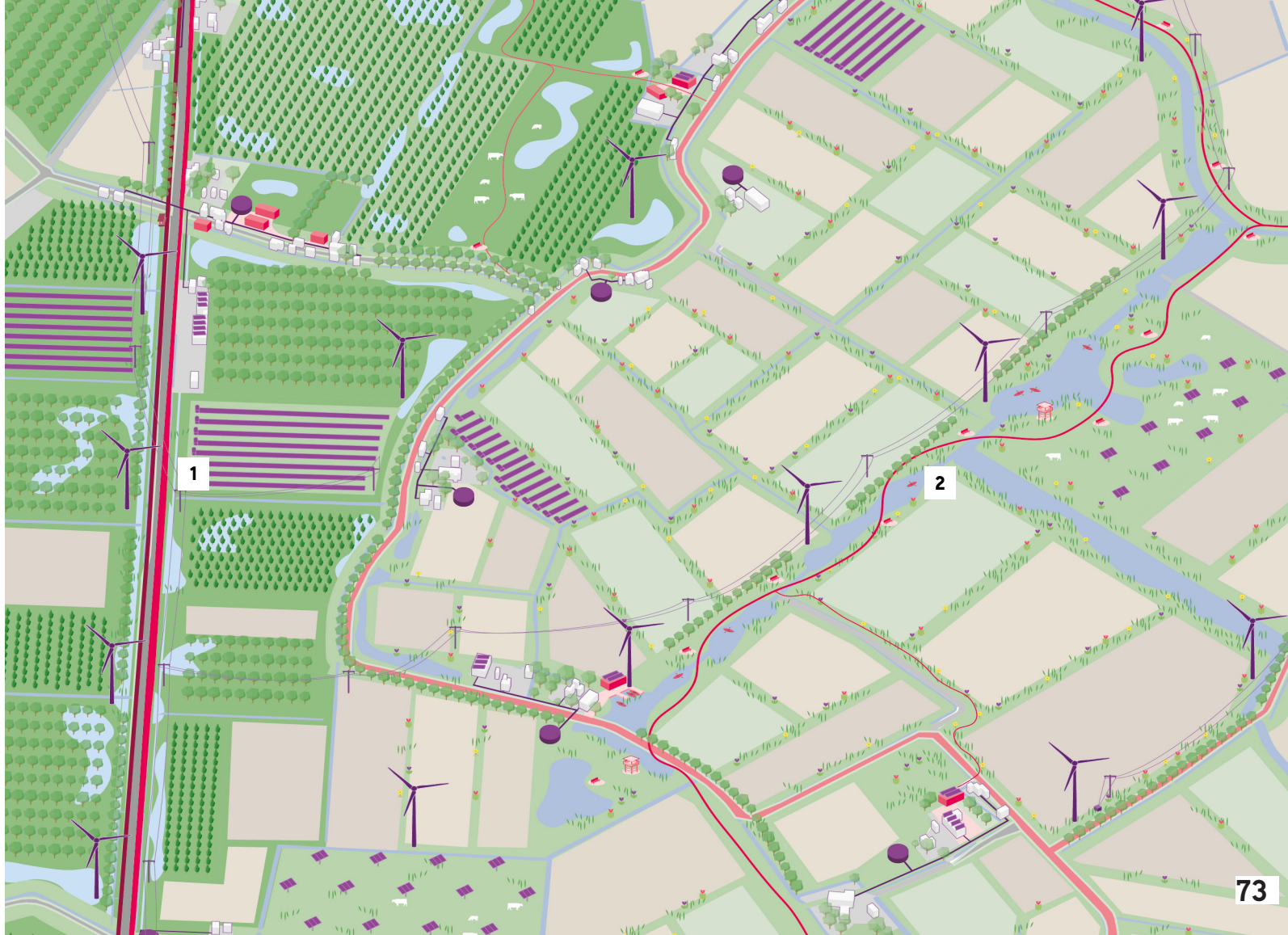
Backbones filled by local projects

1- Fully developed freshwater storage in sandy creeks

2- Fully developed organic farming linked with agro-tourism services

3- Fully developed local heat network

4- Full renewable energy production



2080

Long-term climate resilience

1- Freshwater storage in sandy creeks for fruit crops and forestry

2- Depoldering/salty seepage for saline agriculture linked with recreational routes and agro-tourism services

3- De-growth of the technical energy network

Current situation

Data sources: Google maps, retrieved from: https://www.google.com/maps

2050

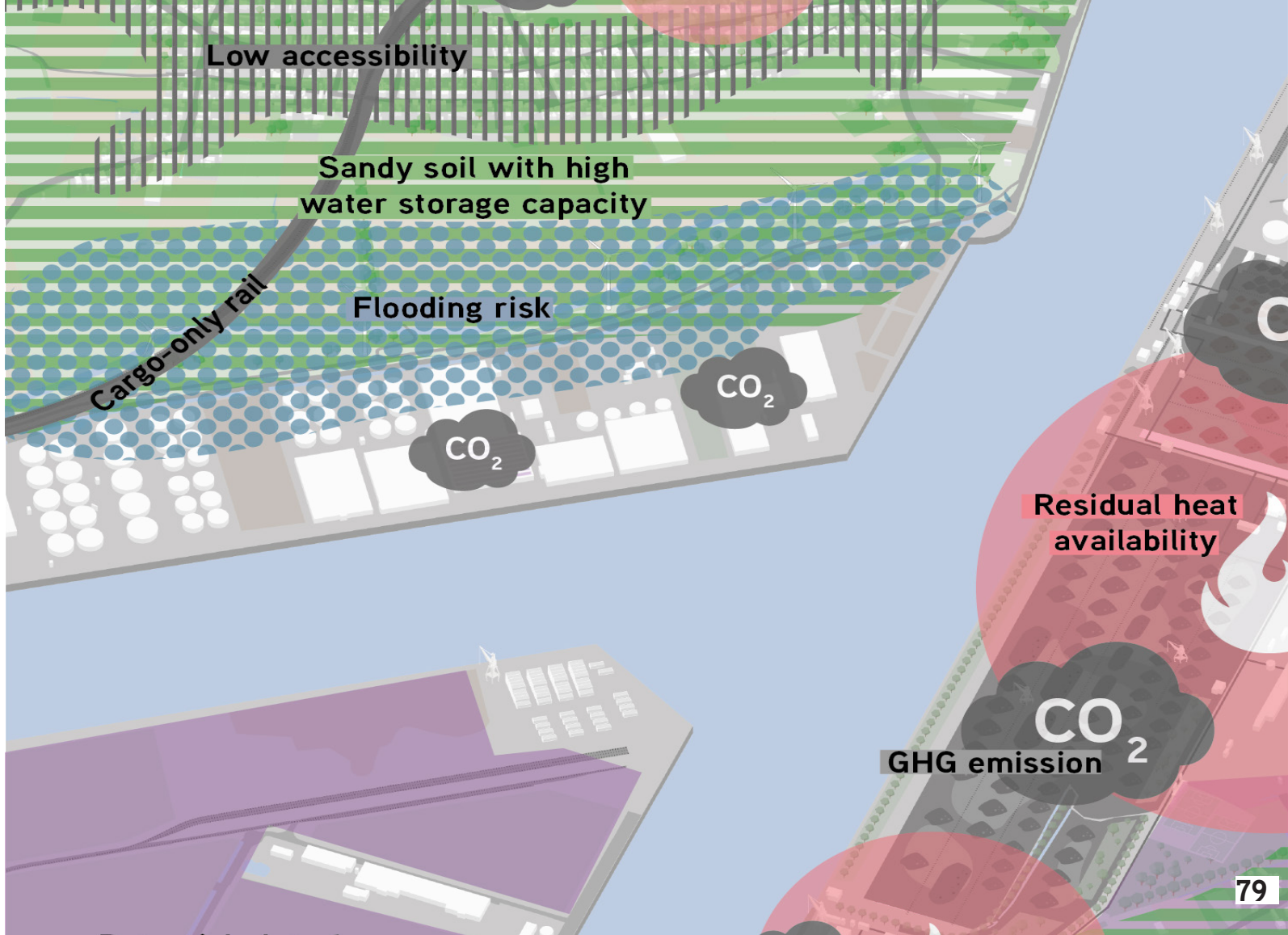
2080

Transition towards sustainable port landscapes

Data sources: Google maps, retrieved from: https://www.google.com/maps

2020

Current situation: challenges and potentials



Data sources: GEOPUNT, retrived from: http://www.geopunt.be/; OSM, retrived from: http://www.geofabrik.de/; and see surces of slide 31

2020

Current situation:

- Polluting port activities
- Unattractive living environments

Data sources: GEOPUNT, retrived from: http://www.geopunt.be/; OSM, retrived from: http://www.geofabrik.de/

2025

Pilots completed:

1- Constructed wetland parks along port edges, coupled slow mobility routes and renewable energy production

2- Carbon-neutral steel pilots: carbon capture and use; bio-coal; hydrogen as coal replacement

3- Circular waste storage sites in empty port plots

2030

Backbones completed:

1- Passenger light-rail next coupled with transit-oriented developments and green connections

2- Carbon and hydrogen pipeline coupled with constructed wetland corridors and RE generation

3- Circular waste storage site network

2050

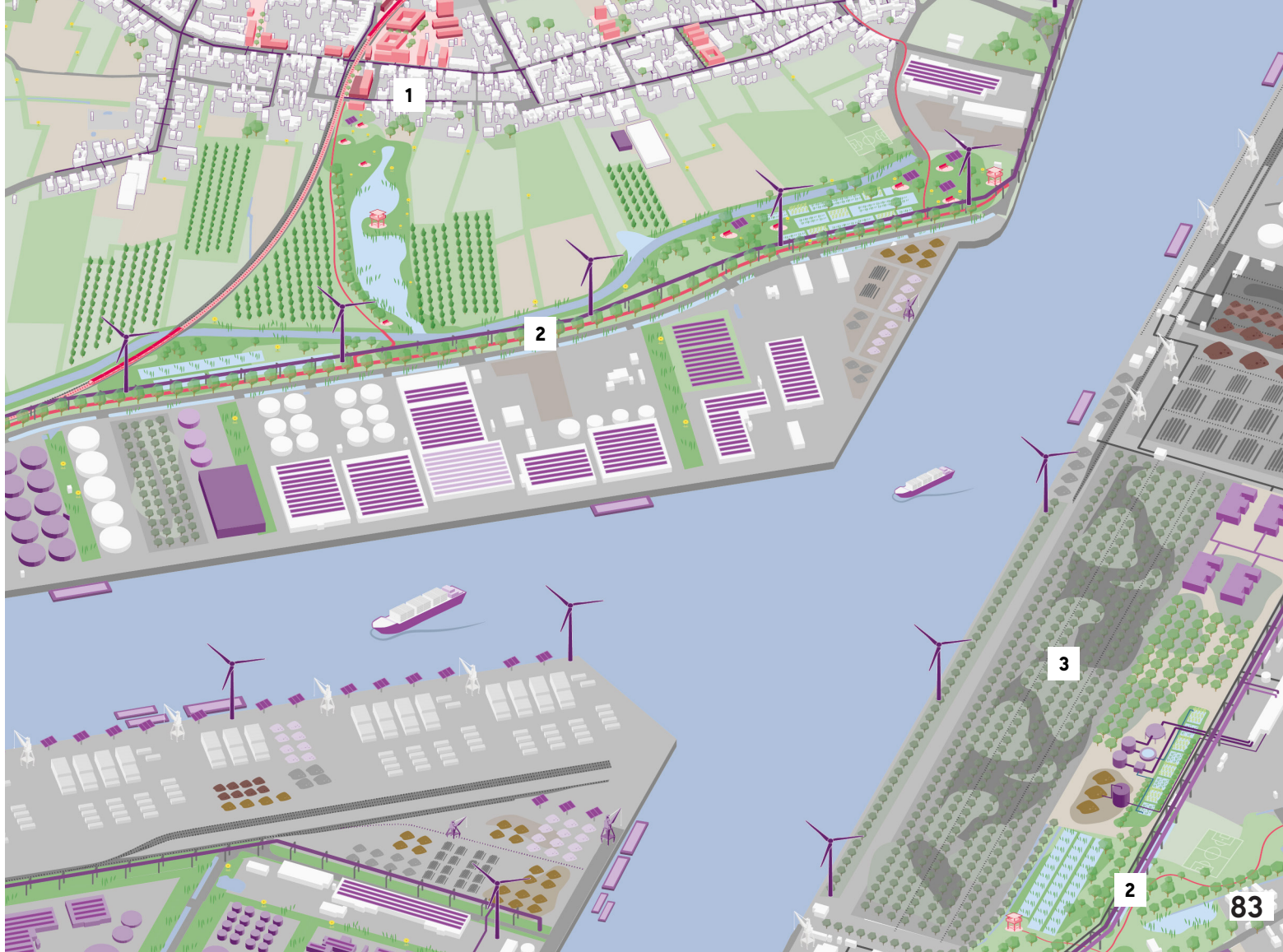
Backbones filled by local projects

1- Fully developed multi-modal hubs around new stations in connection with the landscape

2- Fully developed constructed wetland network with emerging forestry. Also, developing carbon-based sector

3- Fully carbon-neutral port with phased-out coal

4- Circular port



2080

Long-term climate resilience

1- Restored ground waters that support forestry and, hence, bio-based products

2- Fully circular steel from recycling and renewable energy sources

3- Circular waste network supported by new waste upcycling facilities

Current situation

Data sources: Google maps, retrieved from: https://www.google.com/maps

2050

2080

RESULTS

Results summary

Were the questions answered?

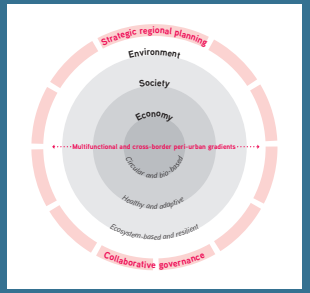
SRQ1
How to define green growth in spatial development and planning?

SRQ2
How to assess the systems at stake? Which are their challenges, opportunities and interrelations?

SRQ3
How to facilitate strategic multi-actor collaboration? How can their interaction evolve over time?

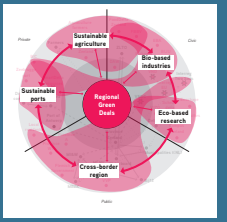
SRQ4
How to combine multiple functions and actors in single development areas?

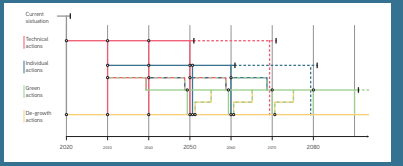
Concepts



Systems

Governance





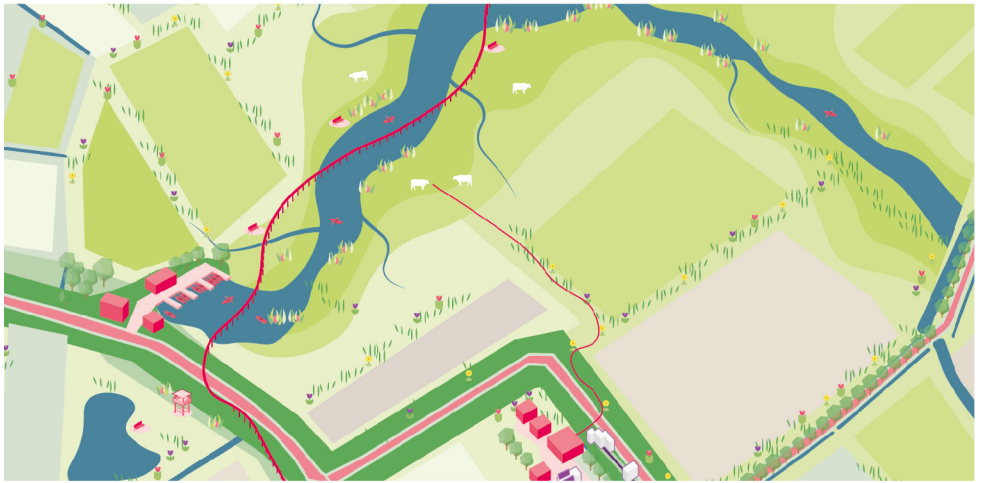
Strategy

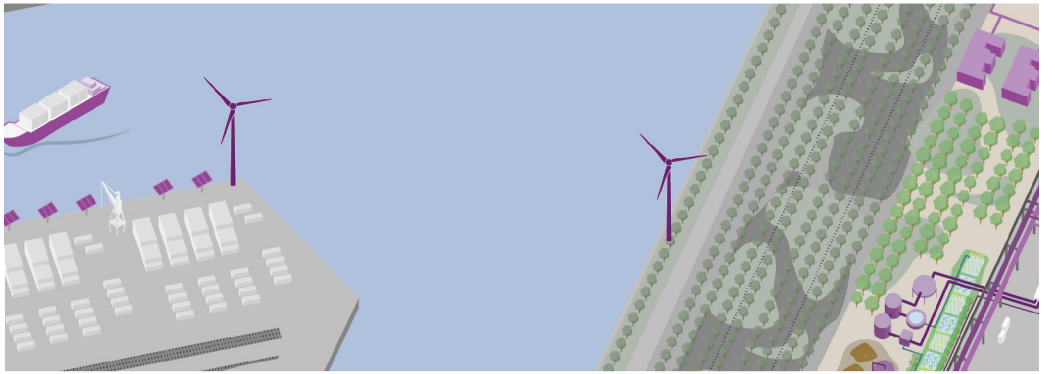
Evaluation
Research transferability

European Green Deal

Data sources: EMODnet, retrieved from:
https://www.emodnet.eu/

Thank you





From Landscape to Landscape
Stefano Agliati
TU Delft

3 July 2020

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