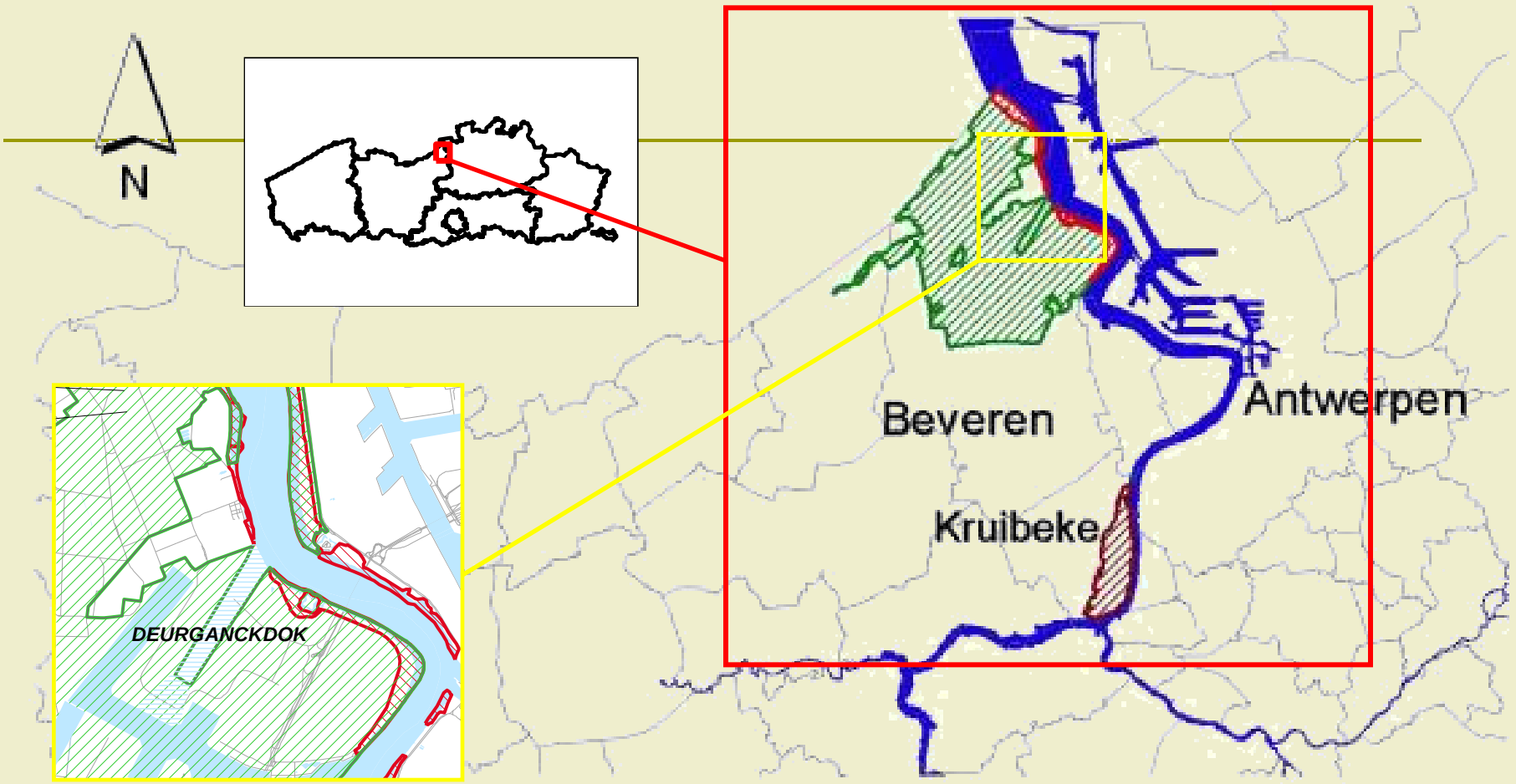

Embracing the Scheldt Estuary:
Integrated Planning for port development,
flooding controle and nature restoration
NATURA 2000
natuurpunt

Overview

Integrated planning processes aiming to implement the Birds & Habitat Directives along the Scheldt and the Antwerp port area:

- In the past: Deurganck Dock case: “compensation”
- AFTER Deurganck Dock: “favourable state of conservation” throuhg integrated planning processes:
  - Strategic Plan for the further development of the Port of Antwerp
  - Long Term Vision and 2010 Development plan for the Scheldt Estuary

Location of the Antwerp port Area – N2000



Habitatrichtlijngebied 6 "Schelde- en Durme-estuarium van de Nederlandse grens tot Gent"

Vogelrichtlijngebied 3.6 "Schorren en polders van de Beneden Schelde"

Gecontroleerd overstromingsgebied Kruibeke-Bazel-Rupelmonde

Construction of Deurganck Dock 1999-2005

DEURGANCK DOCK CONFLICT (1999-2001)

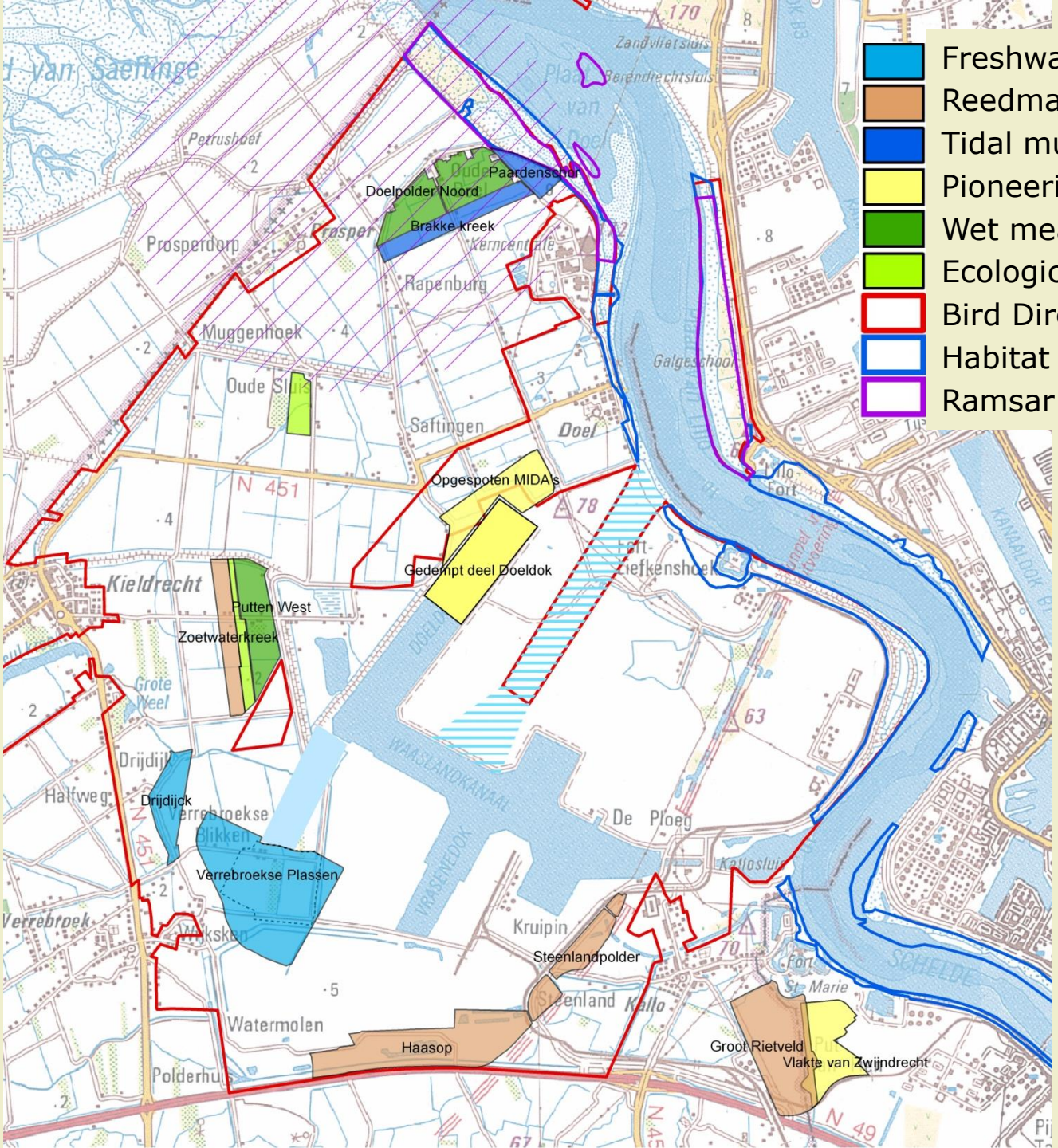
- Highest Administrative Court annulated new spatial plan:
  "Zone for Port Development" re-installed to former "Agricultural Area"
- Complaint by European Commission
  - No proper impact assessment on N2000 conservation objectives
  - No account to cumulative effects with previous developments
  - No proper compensation plan

- construction works interrupted – enormous monetary losses

- new EIA Deurganck Dock – nature compensation plan

- EMERGENCY DECREE (dec.2001)
  - building permits overruling regional zoning plan
  - integration of nature compensation plan

TYPE OF HABITAT	*COMPENSATION*	*TARGET AREA hectare*	*ACTUAL AREA hectare*	*STATUS*
Pioneering bare sandplains	Doel Dock (filled part)	200	74	temporary
	Maritime Industrial Development Areas		77	temporary
	Plain of Zwijndrecht		53	temporary
Reedmarshes	Freshwater Creek	25	17.8	permanent
	Polder of Steenland		10	temporary
	Haasop		101.5	permanent
	Groot Rietveld (Great Reedland)		82.4	permanent
Mudflat - saltmarsh - shallow water	Brackish Creek	25	36	permanent
	Restoration of Paardenschor, saltmarsh		14.5	permanent
	Mudflats and marshes in flood control area Kruibeke-Bazel-Rupelmonde		300	permanent
Meadow bird areas	Doelpolder North	250	71	permanent
	Putten West		52	min. until 2007
	Wet meadows in flood control area Kruibeke-Bazel-Rupelmonde		150	permanent
Freshwater lakes with natural shores	Drijdijck	35	36.7	permanent
	Verrebroekse plassen (water in future development area of Verrebroekdock)		80	temporary
Ecologically valuable polders	On land owned by Flemish Government	45	45	min. until 2007


Paardenschor
Doelpolder Noord
Brakke kreek
Opgespoten MIDA's
Gedempt deel Doeldok
Putten West
Zoetwaterkreek
Drijdijck
Verrebroekse Plassen
Steenlandpolder
Haasop
Groot Rietveld
Vlakte van Zwijndrecht
Freshwater lakes
Reedmarshes
Tidal mudflats and saltmarshes
Pioneering sandy habitats
Wet meadows
Ecological polders
Bird Directive Area
Habitat Directive Area
Ramsar area

Overview of some compensation areas

In general:

- all compensation areas are effectively realised as planned
- monitoring shows that newly created nature areas:
  - develop favourably
  - are increasingly used by targeted breeding birds
  - are being used intensively by wintering water birds

Wet meadows for meadow birds

	Compensation	*Target area*	*Actual area*	*Status*
	Doelpolder North	250 ha	71	permanent
	Putten West		52	min. until 2007
	Flood control area KBR - wetlands		150	permanent
	TOTAL		305 ha	

Realisation of wet meadows and tidal creek in Doelpolder North

11 okt. '05 | 24 jan. '06 | 11 mei '06



15 juli '06 | 30 aug. '06 | 30 aug. '06



Doelpolder North (20/10/08)

Mudflats and saltmarshes

	Compensation	*Target area*	*Actual area*	*Status*
	Brackish Creek	25 ha	36	permanent
	Restoration of Paardenschor-saltmarsh		14,5	permanent
	TOTAL		50,5 ha	

Restoration of Paardenschor tidal mudflat and saltmarsh (20/10/08)

Conclusions of the DGD-case

- Resulted in first effective and large-scale nature compensation scheme in Belgium:
  - 1200 hectares of compensation area was developped (cost: 28 milj €)
  - Based on clear compensation objectives
  - Annual progress reports to Fl. Gov. and EC)
- Led to transposition of Art 6 HD in Flemish nature legislation

BUT:

- Resulted also in enormous economic losses (>25 milj €)
- European nature legislation was conceived as a new threat by port authority and agricultural sector
- Most habitats and species of the SPA's and SAC's were still in an unfavourable state of conservation…

AFTER Deurganck Dock (2005 – present)

SHIFT FROM:

COMPENSATION

- ad hoc approach
- short term solution
- fragmented nature
- 1-on-1
- ecol.-econ. Uncertainty
- conflict / confrontation

TO:

CONSERVATION

- pro-active approach
- sustainable, 'robust' situation
- large nature core regions
- favourable state of conservation
- ecol.-econ. Certainty
- dialogue / cooperation

Defining conservation objectives

- C.O.= qualitative and quantitative objectives for habitat types and areas necessary to maintain/restore populations in a "favourable conservation status".
- C.O. for port of Antwerp (Left Bank) already defined in 2004
- Port of Antwerp was pioneer. Based on the good experiences of this case:
  - C.O. for SPA's and SAC's along Flemish part of Schelde estuary already defined in 2005 and approved by Flemish Government
  - 'National' C.O.'s for all N2000-habitats and species approved in 2010
  - Site-specific C.O. for all Flemish SPA's approved in 2015
- C.O. for the port area and Scheldt were defined by University of Antwerp and Institute for Nature and Forest Research.

Translating C.O. into integrated planning processes

C.O. Scheldt Estuary		C.O. port of Antwerp
Long Term Vision SE 2010 Development Plan	implemented in	Background Nota Nature
Actualised SIGMAPLAN	will be realised by	Strategic Plan for the port of Antwerp

Integrated planning for the further development of the Antwerp port area

- **Strategic Plan for the Port of Antwerp** (=SPPA)
  - Integrated vision up to 2030 for further port development, transport agriculture, residential use, and nature in the port region
  - "favourable conservation status" is primary condition for development
  - Efficient use of space

- **EIA on SPPA** (agreed 6/3/'09)
  - environmental impact of different scenarios for PORT development
  - in combination with different scenarios for NATURE development as described in "**BACKGROUND NOTA NATURE"**
  - Resulted in defining "Publicly Most Acceptable Alternative"

- **Spatial Plan on SPPA** (approved in 2014)
  - spatial translation of future port development plans and all necessary nature restoration and development plans (at present still subject of court cases…)

Background Nota Nature

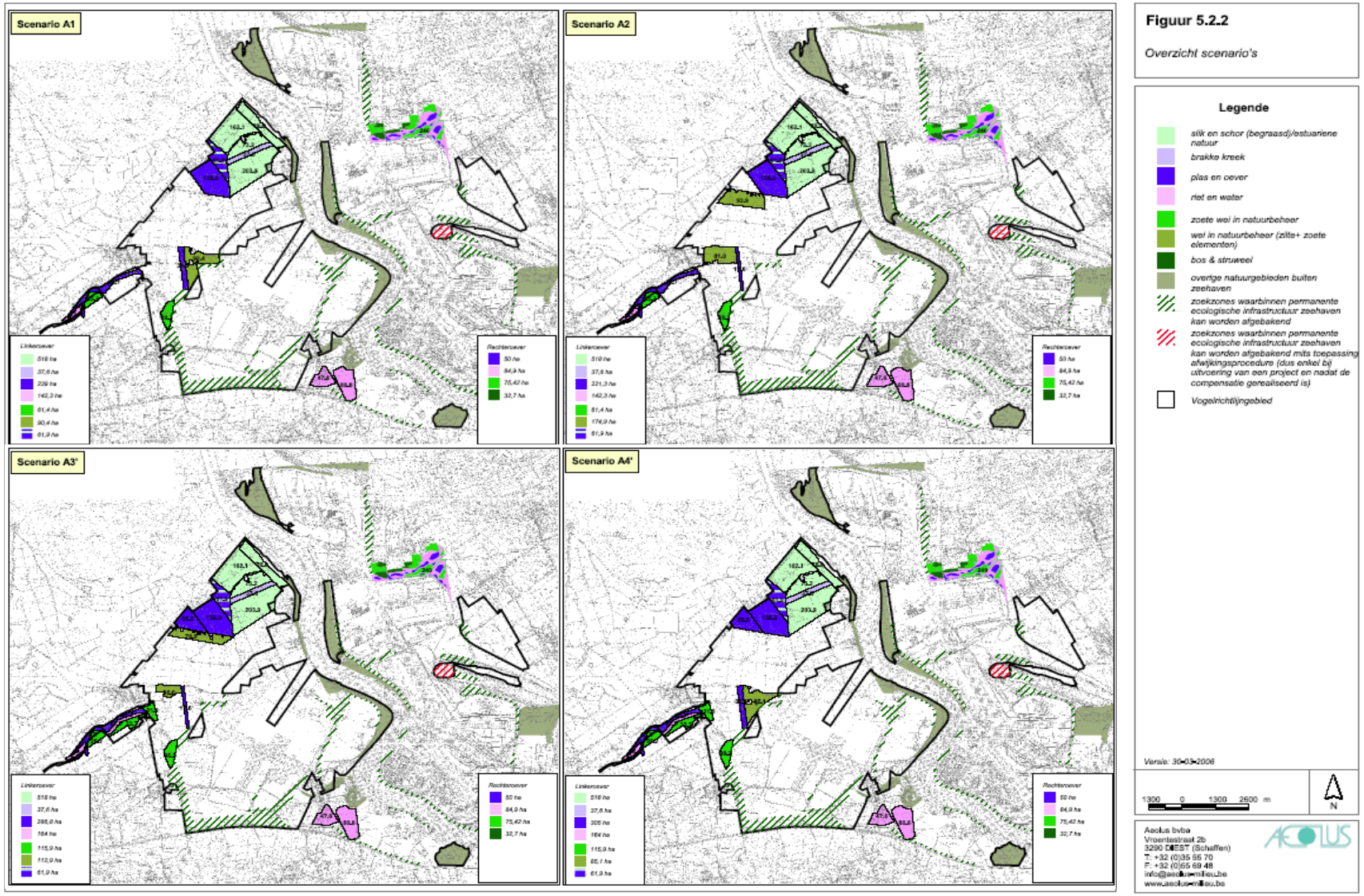
- starting-points:
  - N2000-sites currently don't meet 'favourable conservation status' as defined by the C.0.
  - C.O. to be reached in network of new nature areas outside the port

- aim:
  - provide spatial scenarios for sustainable realisation of C.O.
  - enable port development and give certainty to economical sector

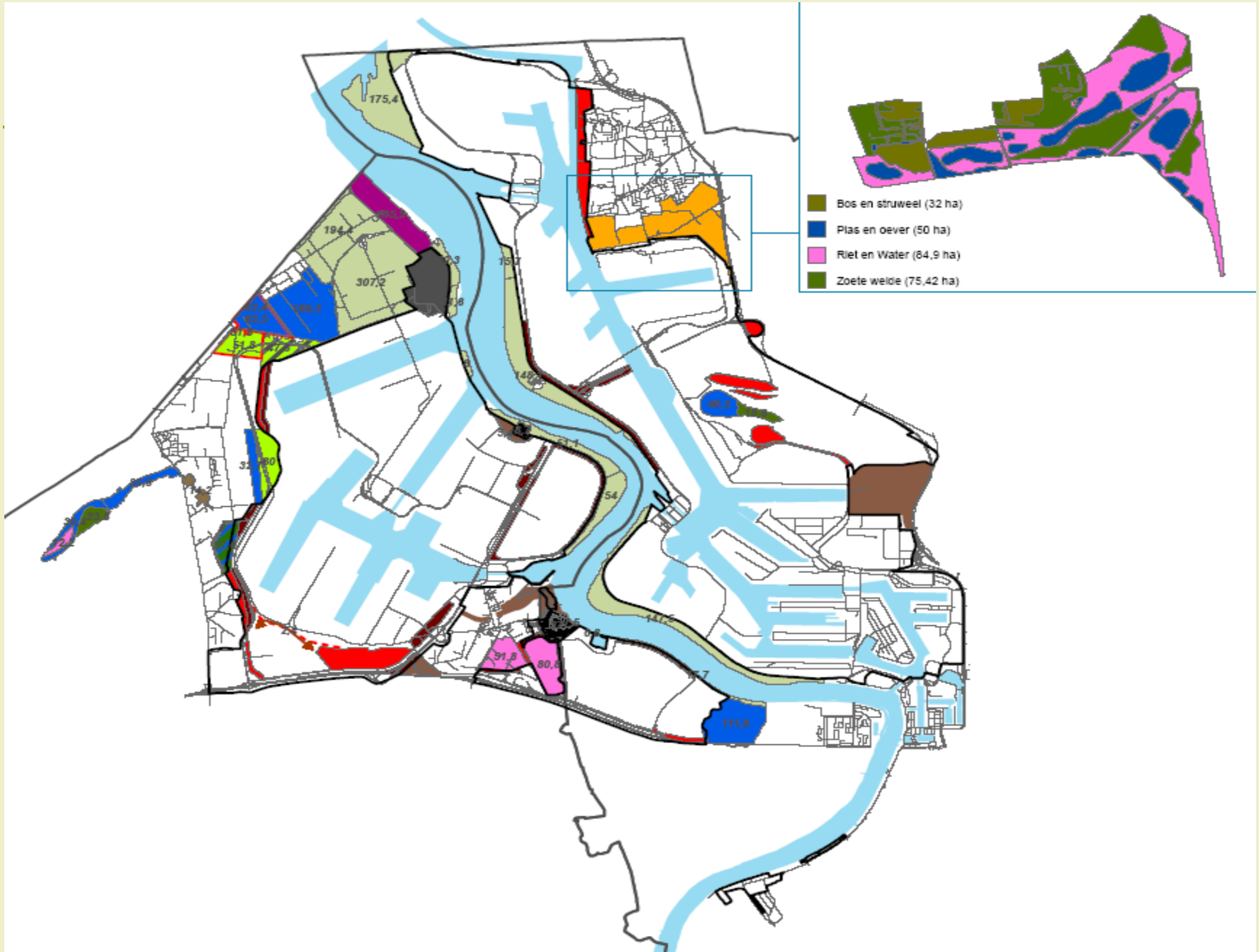
- basic principles: realisation of
  - **high level nature core areas outside port area, plus**
  - **supporting network of Ecological Infrastructure inside port area**

'robust nature', with enough strength to allow further economical development without causing significant impact on the favourable conservation status of SPA's, SAC's and App. 4-species

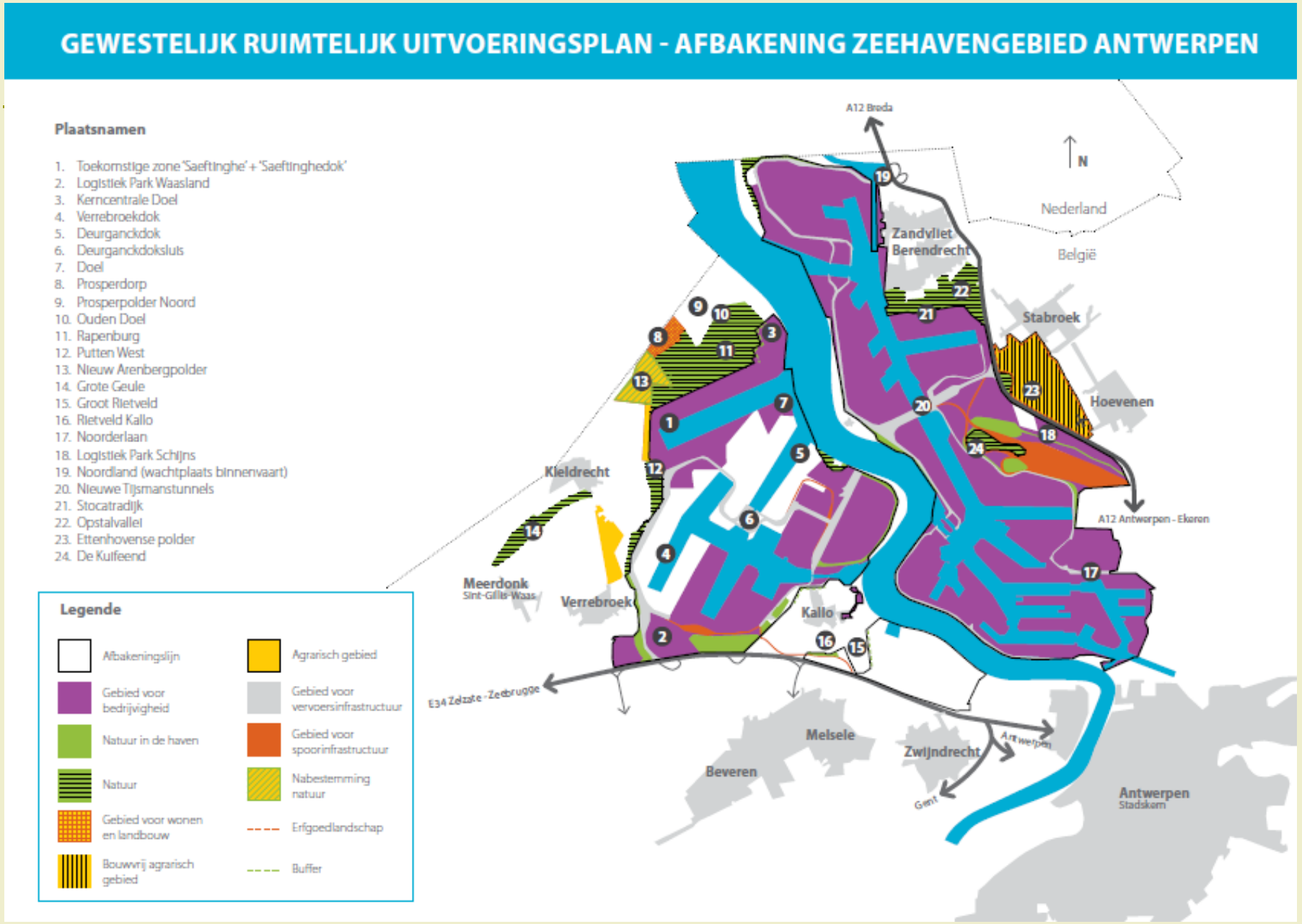
Different Nature Scenario's



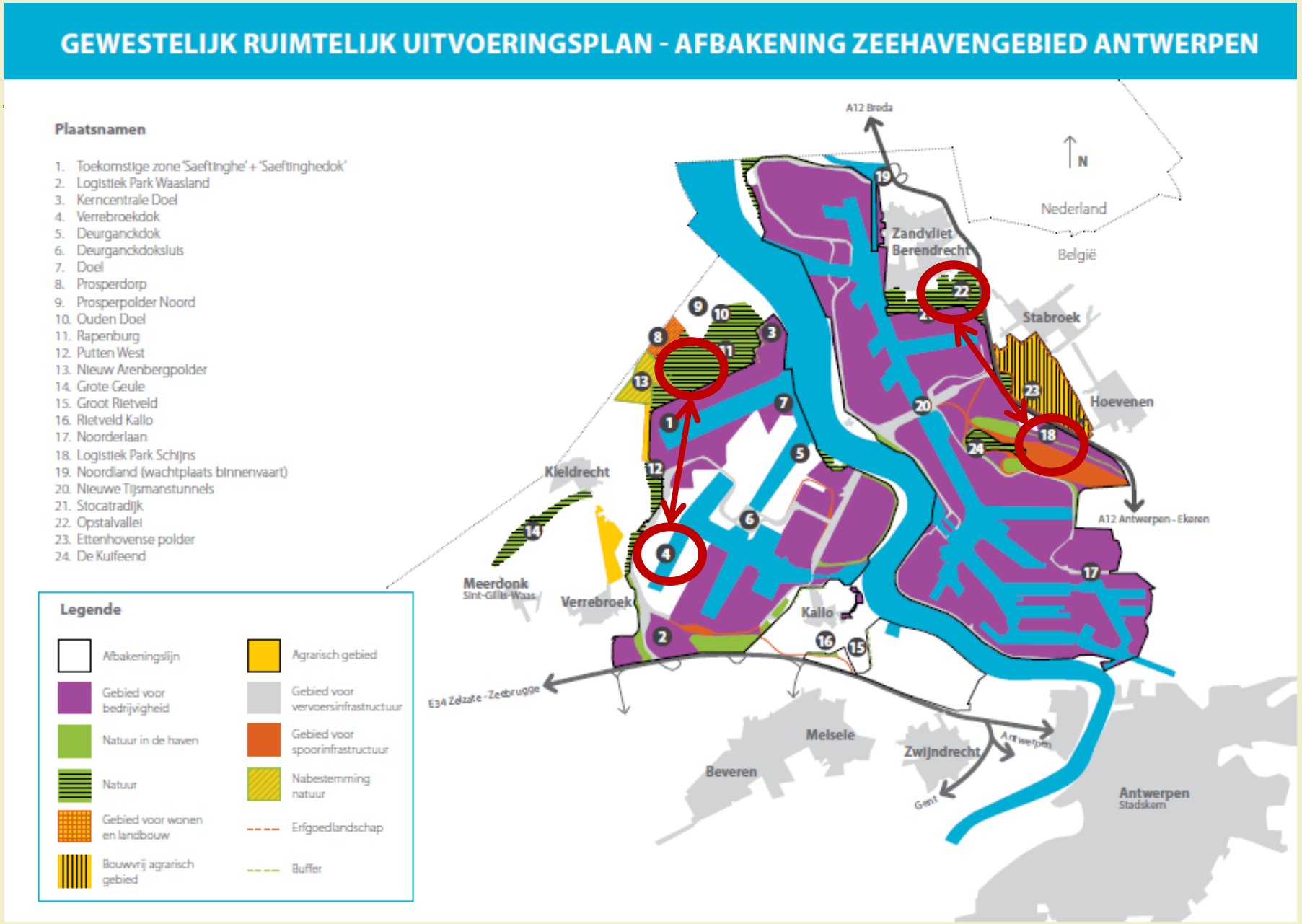
“Publicly Most Acceptable Alternative” as defined by EIA



“Publicly Most Acceptable Alternative” translated in Spatial Plan



PRO-ACTIVE APPROACH nature restoration and port development



PRO-ACTIVE APPROACH

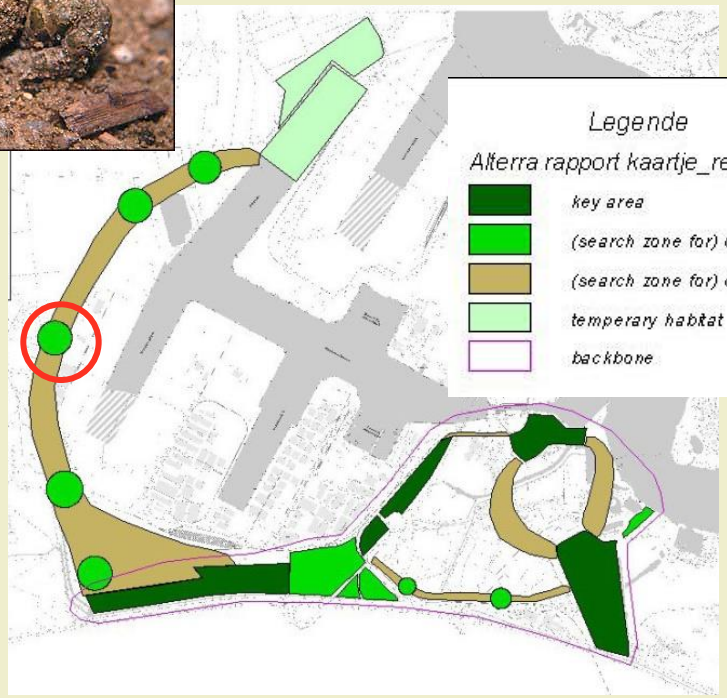
- Principles:
  - STAND-STILL should be guaranteed at all times
  - Constant improvement until conservation objectives are fully reached
- Focus on FAVORABLE STATE OF CONSERVATION
- Each port development project will be properly assessed according the procedures of art. 6.3 of the HD
- Pro-active nature restoration projects should guarantee no significant impacts of each individual port development project
- Advice of European Court: pro-active conservation measures can not be taken in consideration to assess impact of port development projects… -> Art.6.4

Conservation of Annex 4 - species

- Annex 4 – species occurring in the Antwerp port Area:
  Natterjack Toad, Fen Orchid, bats
- Fully protected by the Habitat Directive, where ever they occur
- Conflicts with development plans of industries in the port
- Species conservation strategy:
  - From '**passive protection of individual specimens**'
    to '**active conservation of populations**'
  - Aim: ensure 'favourable state of conservation' in the port area
  - Instrument:
    - Development of a species conservation program for port specific species and habitats for the entire port area
    - Realisation of a Network of Ecological Infrastructure to meet the conservation objectives for these species within the port area

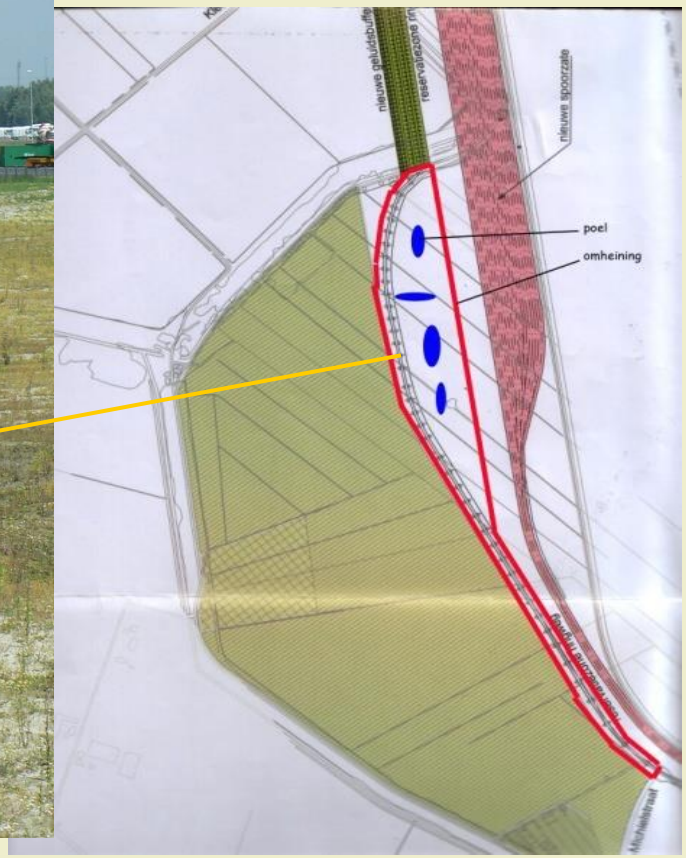
Example: Natterjack Toad

Occurrence in Antwerp port - 2007

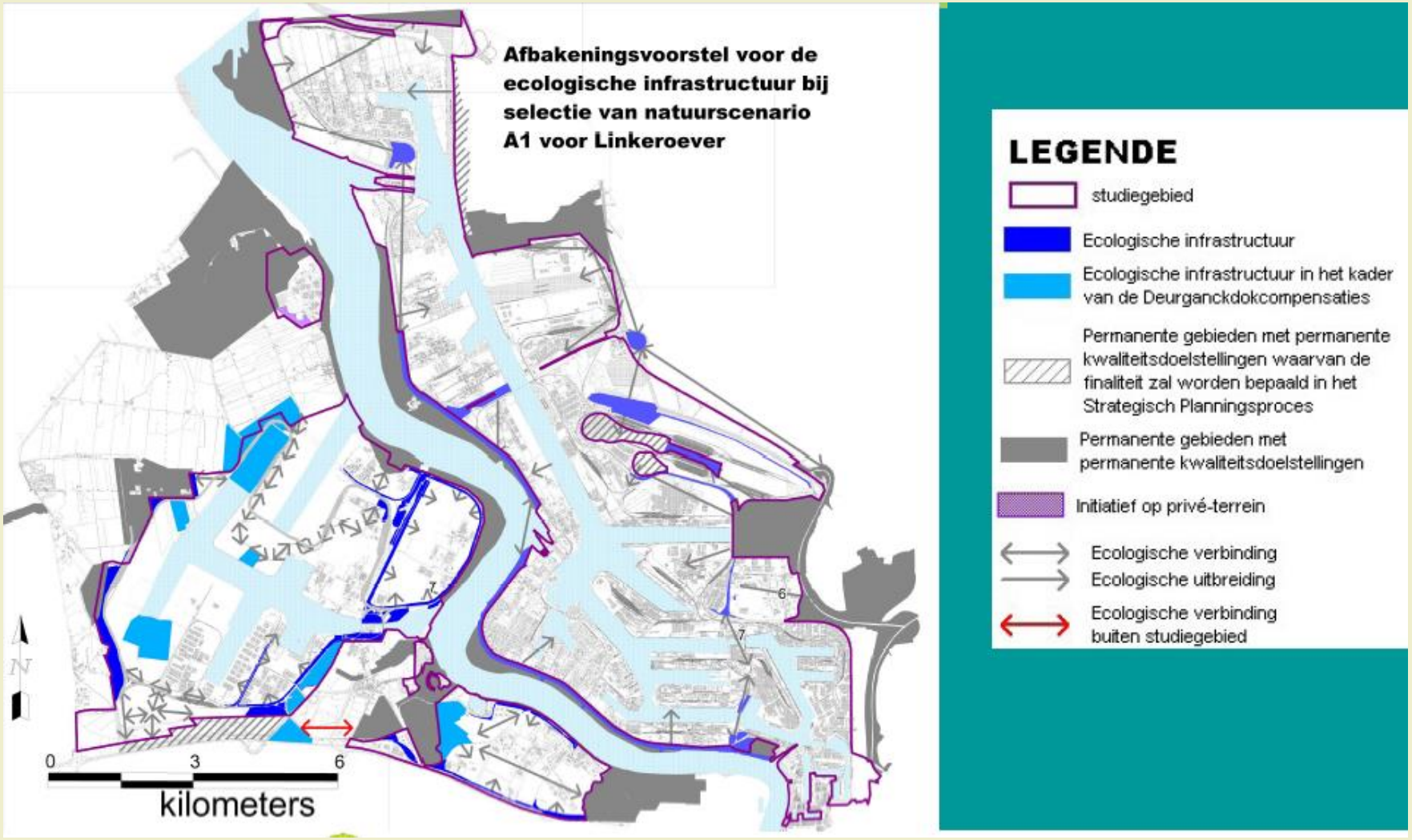


Future occurrence : Backbone

Example: Natterjack Toad



Network of Ecological Infrastructure in the Antwerp Port Area



Translating C.O. into integrated planning processes

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implemented in	
Actualised SIGMAPLAN	Strategic Plan for the port of Antwerp
will be realised by	

Integrated planning for Schelde estuary

- **Long Term Vision Schelde estuary** (2001): vision up to 2030
  - flood protection (dikes and flood control areas)
  - accessibility of ports (deepening of the shipping channel in the Schelde)
  - nature restoration (creation of mudflats, salt marshes and wetlands)

- **2010 Development Plan** (2004): engagements up to 2010
  - choice for 'robust nature' to restore/maintain FSC
  - to be achieved by providing/restoring 'space for the river'

- **Actualised Sigmaplan** (2006-2030):
  - defines Conservation Objectives for the Flemish part of the Schelde
  - Implementation of C.O. through maximal combination with flood protection projects

MAIN OBJECTIVES in LTV (2001)

While maintaining the physical characteristics:

- Maximize safety against flooding
- Optimize accessibility of the Schelde ports;
- Restore a healthy and dynamic ecosystem

Through better cooperation between Flanders and the Netherlands

“Ontwikkelingsschets 2010”: PACKAGE DEAL (2001 – 2005)

- comprehensive, integrated package of projects and measures
- solutions for safety against flooding, accessibility and increasing nature areas (N2000-objectives)
- no grab bag, but integrated global plan
- consensus and public support

ACCESS TO THE PORTS

- Deepening and widening the shipping channel
  - Draught of 13,1m regardless of tide
  - Lower the 11 sills by 1,4 m
  - Widen Zeeschelde from 250 to 370m over 5 km

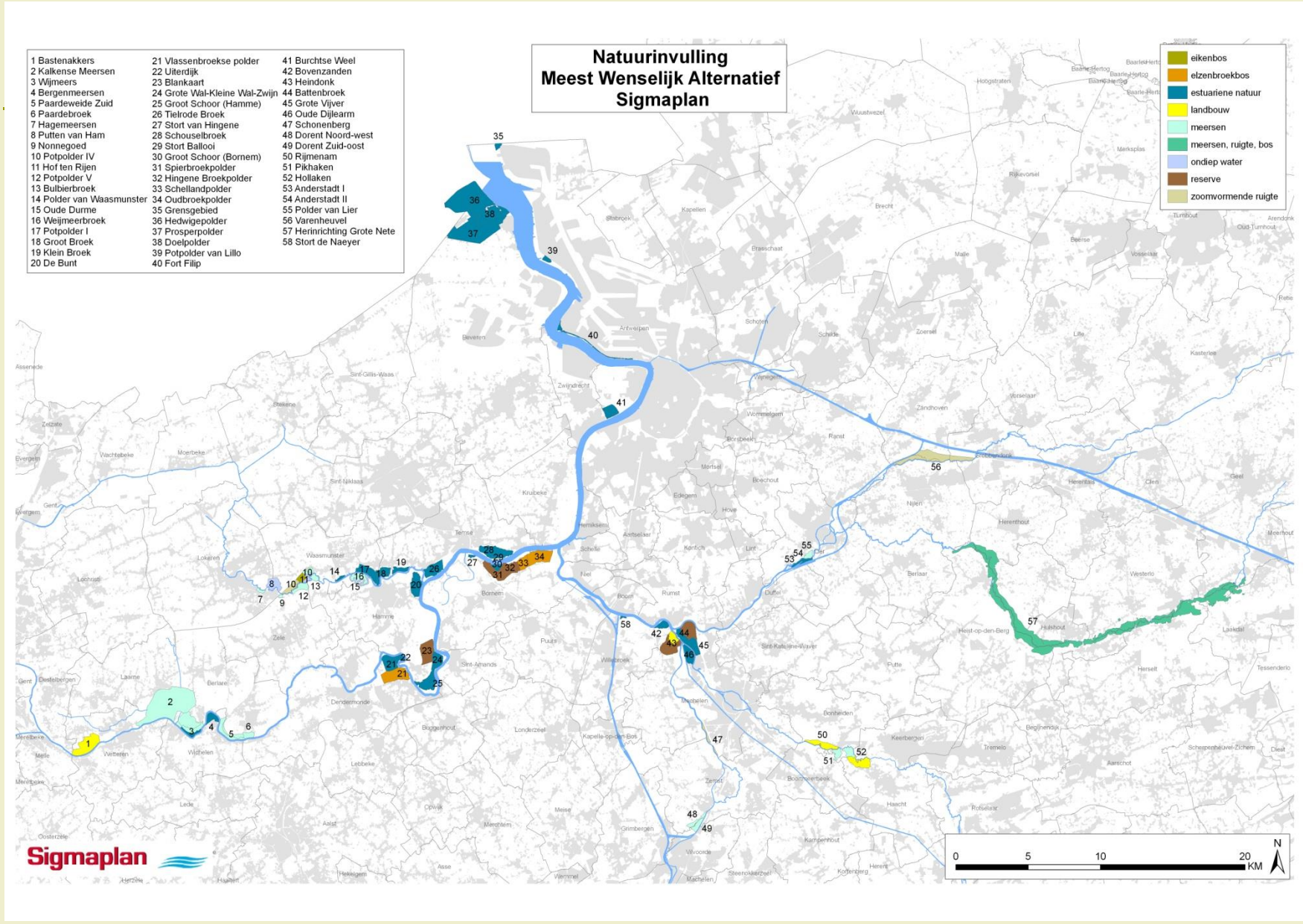
- Deepening only possible if mitigation:
  - Alternative 'dynamic' morphological managment
    - Flexible dumping strategy
    - Work "with" the system to help/restore vitality of estuary
    - Monitor and adjust
  - Creation of 'robuste (estuarine) nature' in order to increase 'carrying capacity' of the ecosystem for other functions

SAFETY AGAINST FLOODING

- Along the Zeeschelde:
  - Create controlled flooding areas
    - **280 ha** by 2010
  - Increasing dyke heights in urban and industrial areas
  - In combination with nature development
  - further elaborated in new “Sigma-plan”
    - **1100 ha** of extra controlled flooding areas by 2015
    - **ca 1800 ha** by 2030

- Along Westerschelde:
  - no need for extra measures before 2050...

Actualised SIGMAplan: nature restoration projects in flooding areas

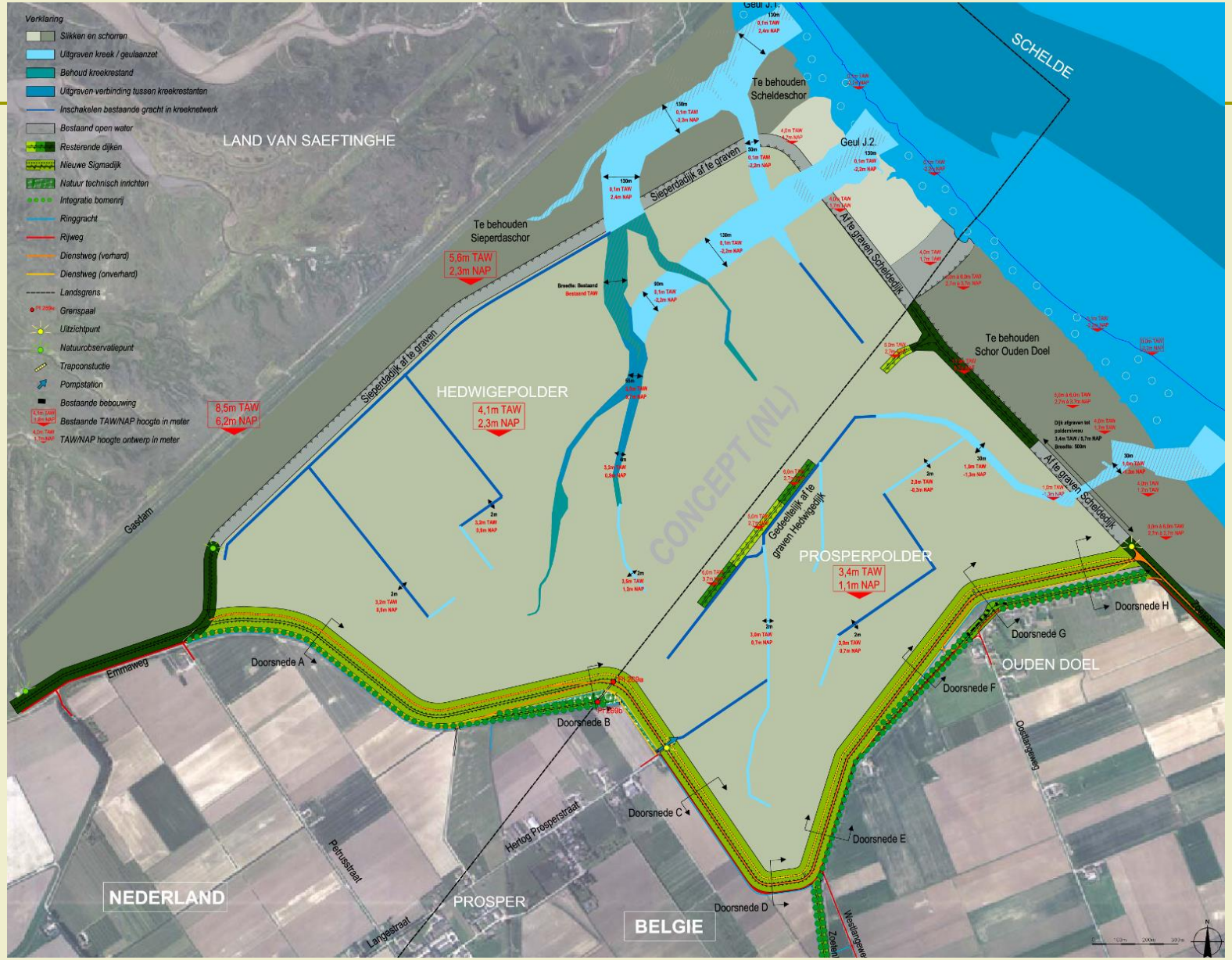


NATURE RESTORATION

“more space for estuarine processes”

- Cross border projects
  - Marine Protected Area “Vlakte van de Raan”
  - Enlarging Nature Reserve “Zwin” by minimum 120 ha
  - Restore 440 ha intertidal area near Saeftinge (“ontpoldering” Hedwige-Prosperpolder)

Nature restoration in Hedwige-Prosper



Hedwige-Prosperpolder in the past (2009)…

…and in the near future (2019)

Additional projects

- Nature objectives integrated in Flemmish Sigmaplan:
  - Development estuarine habitats and wetlands in combination with flood protection measures
  - Restoration of the side rivers Durme, Dijle, Netes and there valleys
  - Restoring conditions for fish migration
- Development/restoration of an additional 300 ha of intertidal habitat along the Westerschelde in Holland (“ontpoldering”)

Nature Restoration as an essential part of integrated “smart solutions”

- ‘robuste nature’ to restore and/or maintain favourable state of conservation
- ‘robuste nature’ to increase carrying capacity for economical acitivities
- ‘robuste nature’ as an insurance against ‘significant impact’
- ‘robuste nature’ to enhance safety against flooding

Meanwhile…

- Schelde Treaties ratified in summer 2007
- Deepening of the shipping channel was completed
- In 2010-2012 or all fase 1- Sigma projects in Flanders (including Hedwige-Prosper) were initiated; by 2017 all will be realised (> 1500 ha).
- All legal procedures for sigma fase 2 were initiated (spatial planning, land acquisition, ...) so that the works in the field can effectively start in 2017 (ca 1200 ha)
- In march 2013 the Flemish government approved the new spatial plan for the Antwerp Port Area, including 800 ha op port expansion area and an additional 1000 ha of nature development areas.
- But still some legal uncertainty regarding compatibility of 'pro-active approach' with procedures of Art. 6.3 and 6.4…

Thank you for your attention

Vragen ?