Europe in de Meuse valley : border or common, how so ?

focus on transboundary realisation

content

- **the project(s)**
- **working together and process**
- **benefits**
- **some reflections ...**

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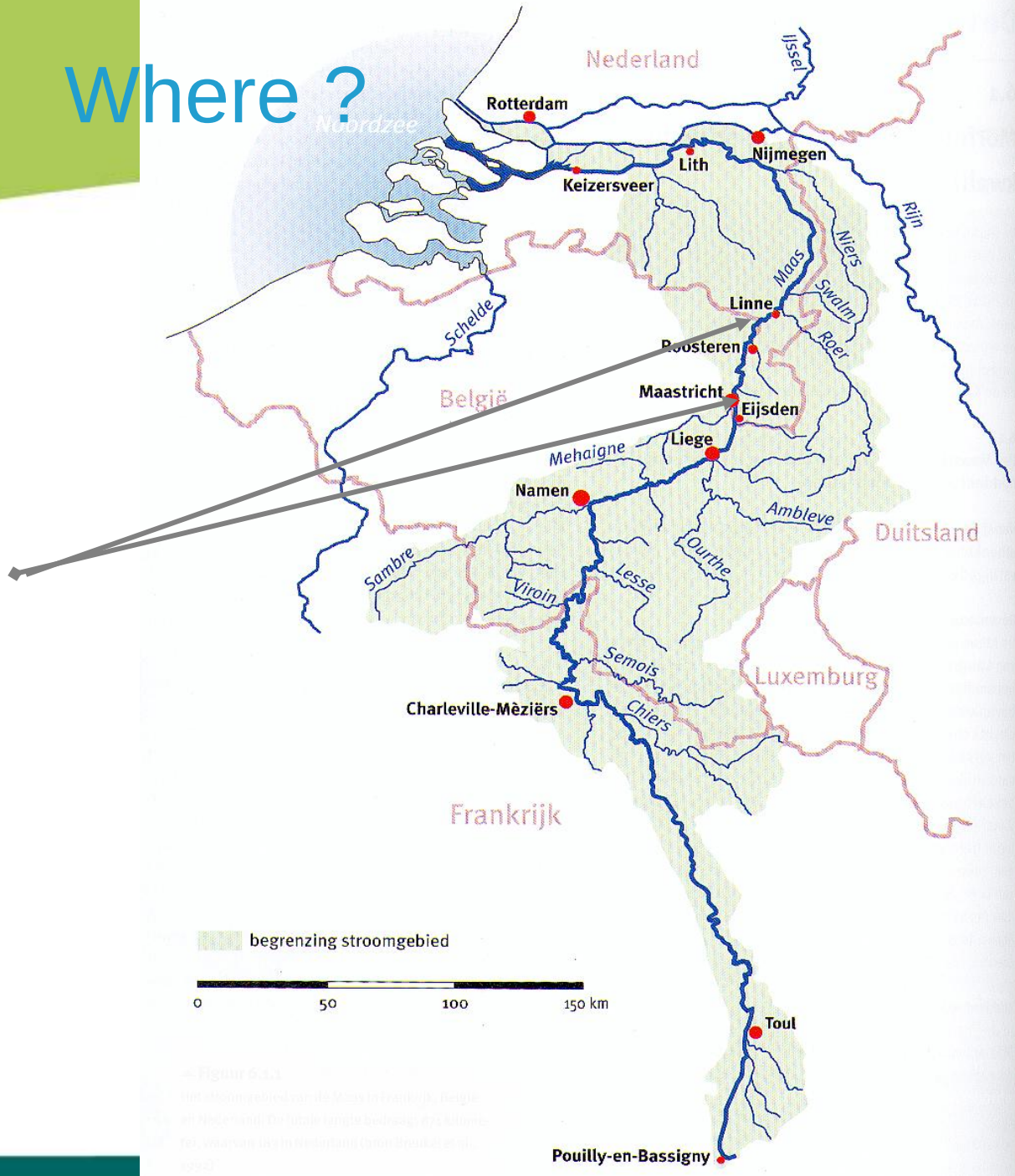
What ...

international river rehabilitation project which aims to restore the natural river processes

Where ?

Section border Meuse



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River characteristics

- influenced by human activities
  - *normalisation, embankment, dikes, towing path, gravel mining in the streambed*
- rain fed river
  - *fluctuation in discharge*
- deposition
  - *high sedimentation (polluted)*

But still natural …

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Aims of the projects

Netherlands

- Gravel excavation
- Safety
- Nature development

Flanders

- **Integrated water management**
- **Nature development**
- **Harmonisation of different functions**

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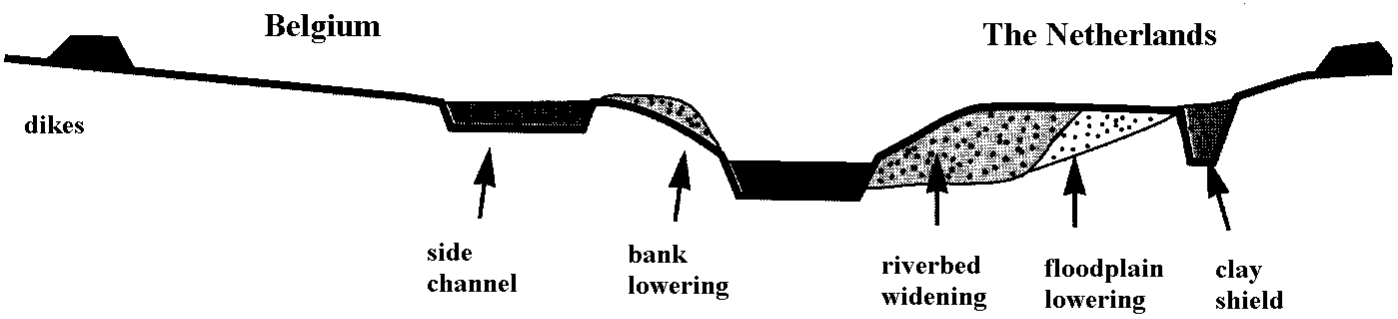
How and what



- lowering of the floodplain and riverbank
- excavation of side channels
- clay shields

improvement of the river contact with floodplain and its tributaries

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habitat types

Marches

River forest

riverbanks

pastures

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From old to new landscapes

Agriculture ➔ Mosaic Nature

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… Process …

Planning proces

- Started in 1994
- Intention declaration (1995)
- Coordination by Benelux
- Process of design, environmental impact assessement, cumulatieve impact studies on both sides of the river

Resulted in mutual agreement in 2004 and furhter decision making

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Decision in 2004 on:

- Principles of cooperation on high water protection and nature development
- Agreement on the adverse effects of river restoration on high waterlevel, grondwaterlevel and the control of it.
- Opportunities for strengthening mutual plans
-

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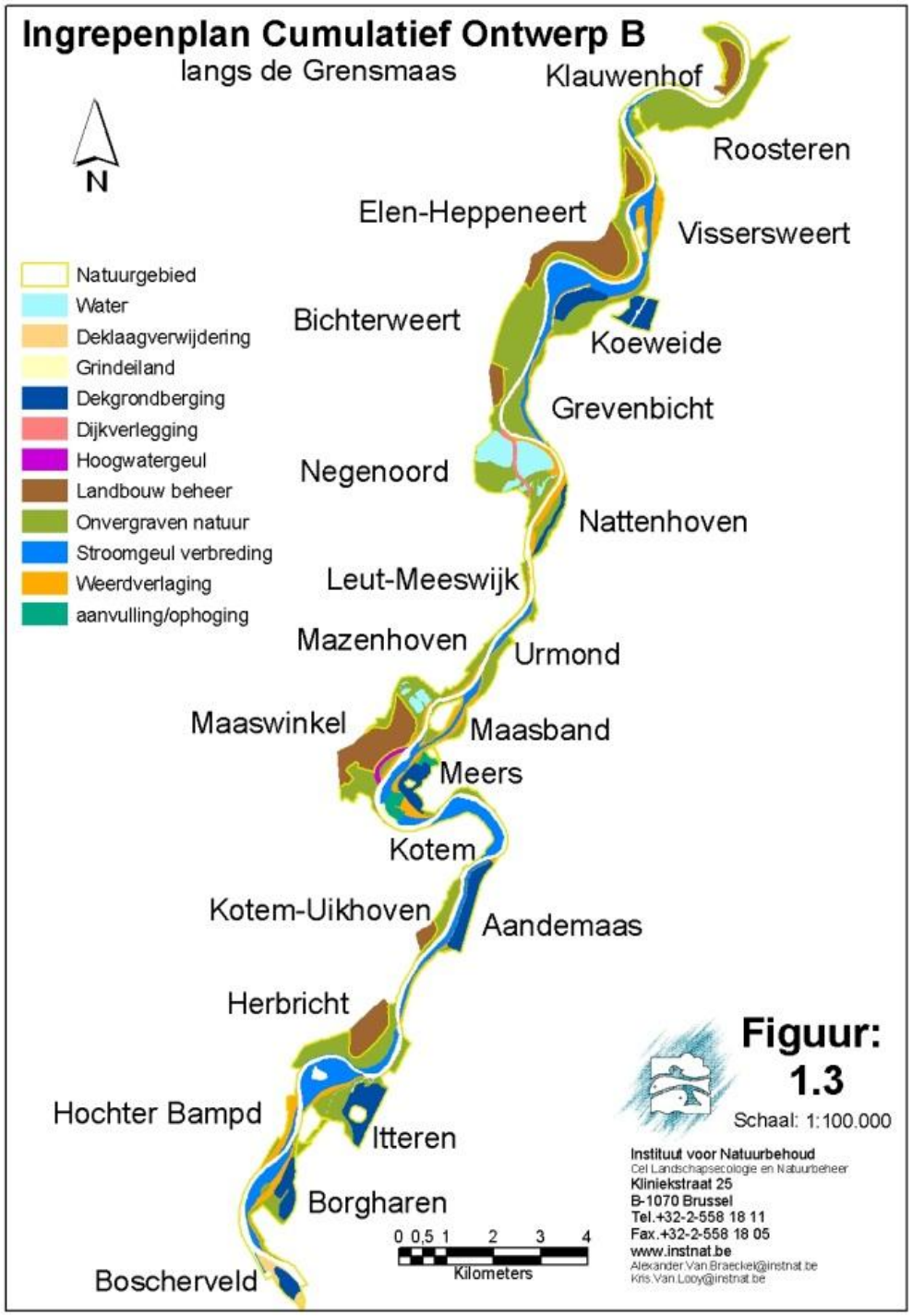

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Implementation process (2004-2025)

- Platform of decision making: VNBM (Flemisch – Dutch Bilateral Meuse Commission)
- VNBM:
  - 2x year
  - official level (different administrations)
  - topics related to watermanagement, nature development, monitoring, long term management, project-continuation

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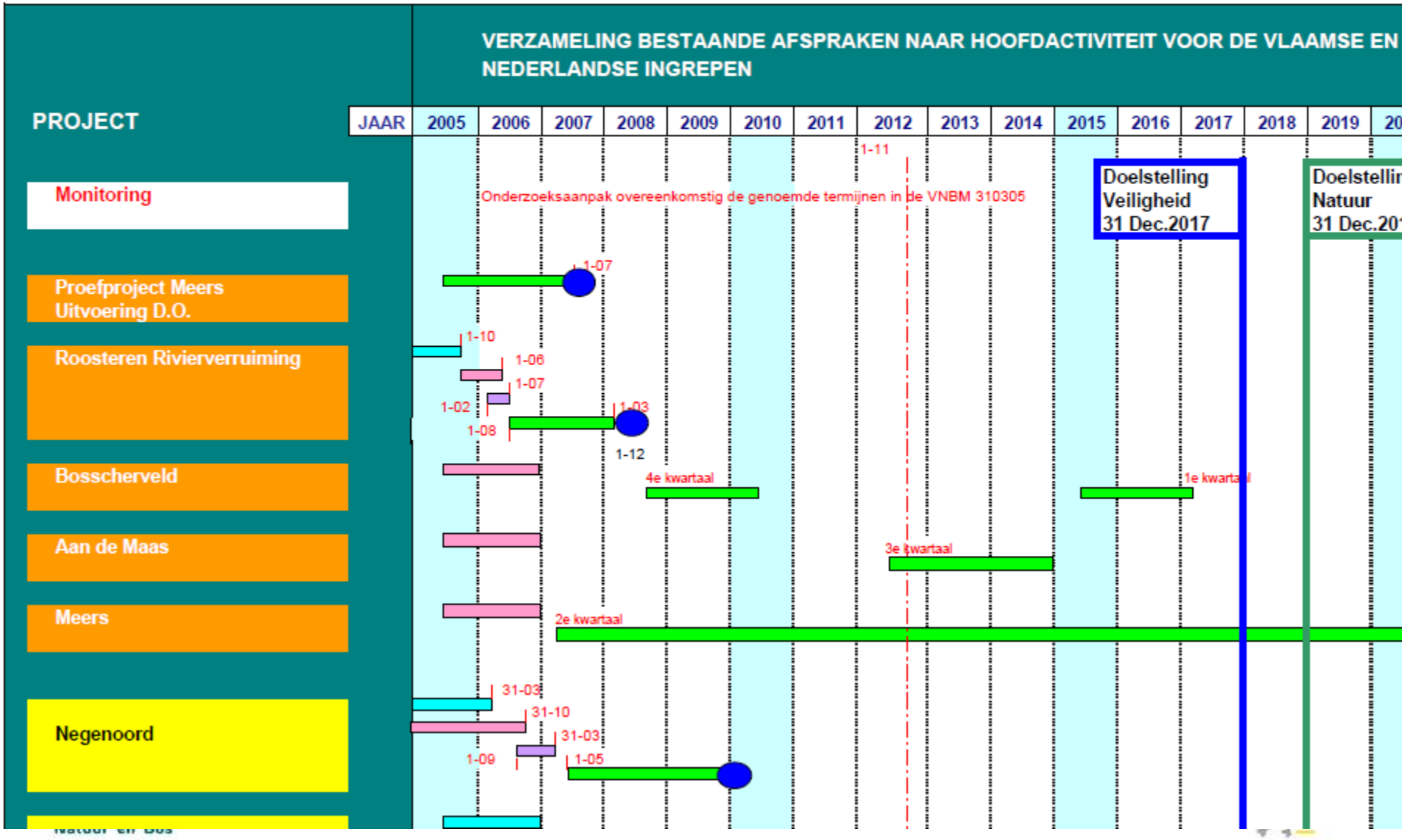
OPERATIONELE WERKPLANNING GEMEENSCHAPPELIJKE MAA

Standlijn 1 november 2012

concept



Since the implementation

- Different “Boertien” locations (projects for Dutch safety on Belgian river side)
- Several Projects of safety/nature development by the administration of waterways (solving bottlenecks)
- Mitigation measures in the river
- River improvement measures
- Ongoiing excavation of gravel

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Realisation on the field: succesfull!!

Starting conditions	
A heavily regulated lowland gravel-bed river with summer and winter dikes and a floodplain with intensive agriculture.	
Restoration measures	
2000-2006	- Bed widening (1km river length, 5ha gravel bar, 6ha shallow river bed). - Bank lowering (2km). - New flood channels (4ha). - Removal of bank protection (riprap) (5km). - Reshaping gravel pits in a more natural profile (500ha). - Restoration of flower-rich floodplain grasslands on former intensively used agricultural land (400ha).
Objectives	**Management measures**
Natural riverine landscape of gravel-bed river with wide alluvial plain; special attention for *Ranunculion fluitantis* vegetations, muddy riverbanks with pioneer vegetations, hydrophilous tall herb fringe communities, lowland hay meadows, xeric sand calcareous grassland and different types of riparian forest.	Natural grazing.

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Mitigation measures
in the river

Hochter bampd

Herbricht

Negenoord

Bichterweert

Role of ANB in VNBM

- Quality control of appropriate assessments
- Member of steering comitee on monitoring groundwatereffects and mitigation measures
- Advice in building licence of the projects
- Natura 2000 implementation
- Cooperation with the waterway administration/ de maaswerken (saveguard of nature aspects)
- Draft of mutual ‘nature’ vision (NL/Be) for long term management

biodiversity benefits: aims in natura 2000

Habitat, species	aim
3150	↑ 2 ha
3260	↑ increase, restoring habitat and quality
3270	↑ 19 ha
6120	↑ 96 ha
6430	↑ 37 ha
6510	↑ 127 ha
7140 Subtype 7140_meso	= 3 ha
9160	= ↑ 1 ha
91E0 *	↑ 62 ha
91E0 * subtype 91E0_wvb wilgenvloedbos	↑ 38 ha
91F0	↑ 58 ha
Triturus cristatus	↑ 1 pop.
Cobitis taenia	=
Hyla arborea	↑ 2 pop.
Rana lessonae	↑?
Gomphus flavipes	↑ impovement area
Cottus gobio	↑ improvement area
Castor fiber	= ↑
Lutra lutra	↑ link between existing areas
Rhodeus sericeus amarus	=
Crex crex	↑ 8bp

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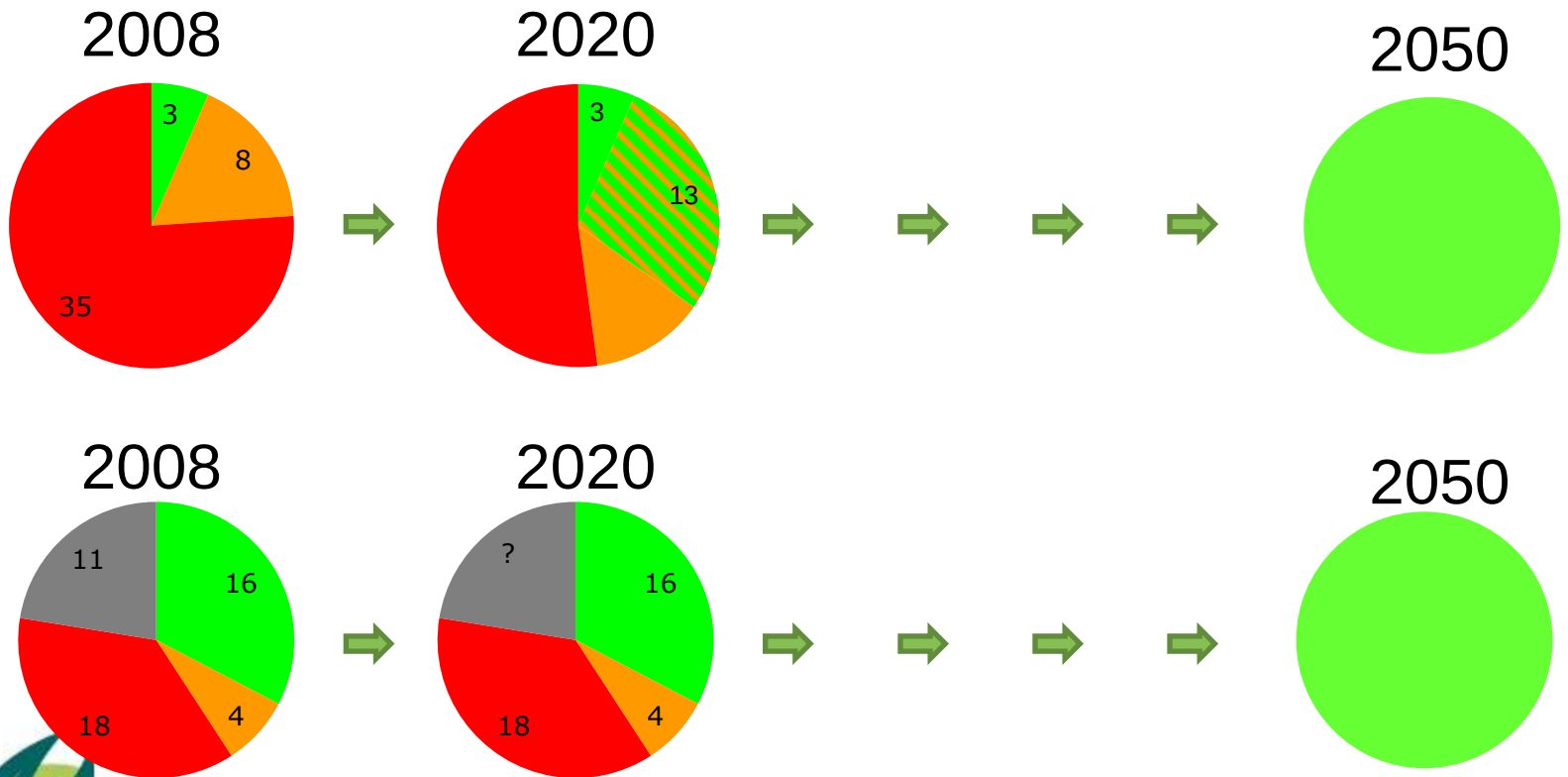
Link to Biodiversity strategy Flanders



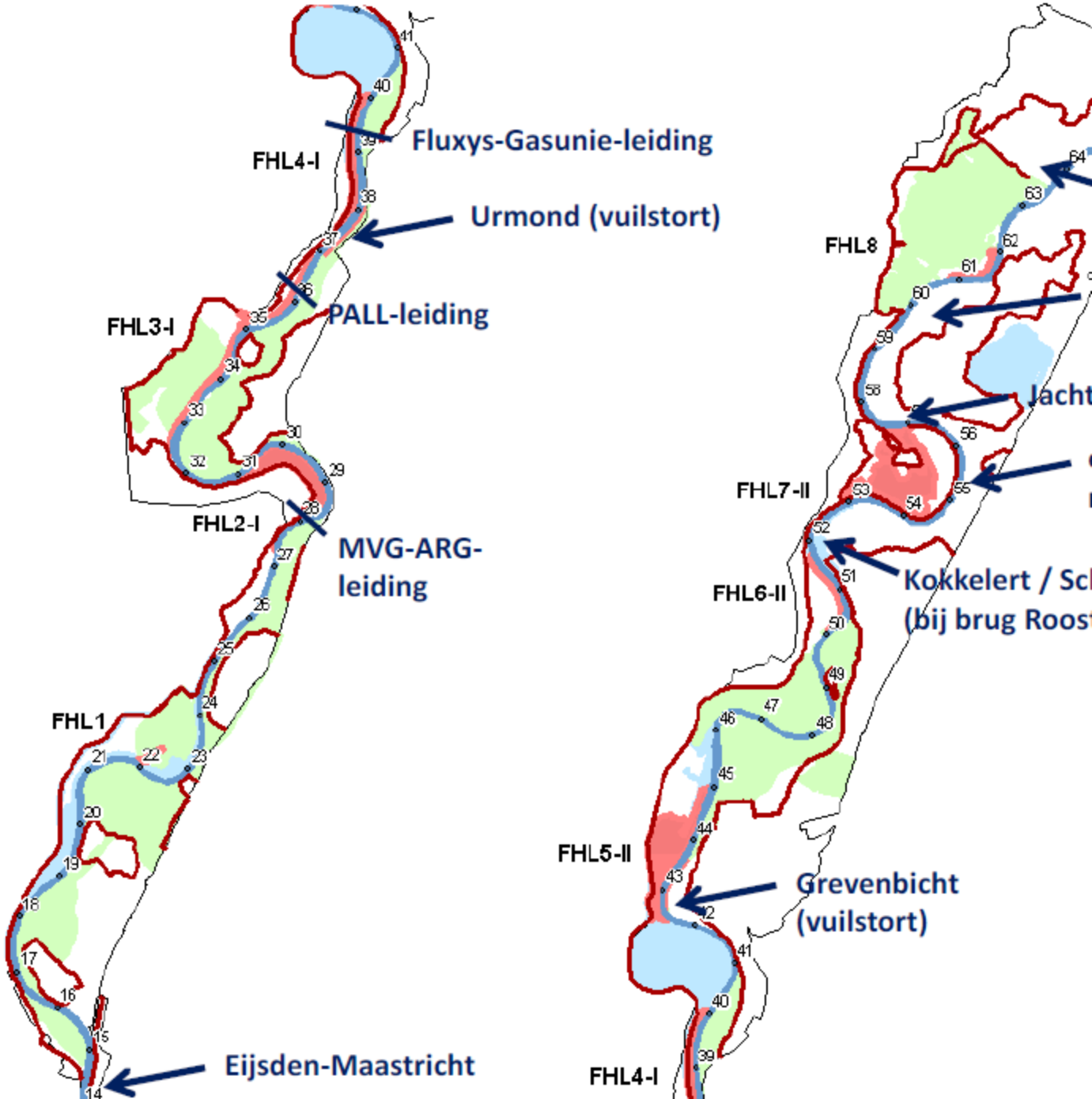
toegelicht.

HS

AO

FHL

Solving last bottlenecks



Climate scenario's included in new modelling (study on bottlenecks)

Tabel 1 Overzicht toegepaste hydraulische randvoorwaarden in modelsimulaties Fasen
(markering: huidig beschermingsniveau Vlaamse en Nederlandse waterkeringer

(piek)afvoer (m^3/s)	status (bron)	overschrijdingsduur/ kans (j^{-1})	modelsimulaties		ruwheid
			stationair	dynamisch	
10	Betr.2010[4])	356 d	x		L13
40	Betr.2010	317 d	x		L13
100 [1])	Betr.2010	219 d	x		L13
200 [1])	Betr.2010	141 d	x		L13
300 [1])	Betr.2010	96 d	x		L13
500	Betr.2010	45 d	x		L13
975	Betr.2010	10 d	x		L13
1920	HR2001	1/5	x		H13
2710 [2])	HR2001	1/50	x		H13
3000 [3])	HR2001	1/115	x		H13
3275	HR2001	1/250	x	x	H13
3430	TMR2006	1/250	x	x	H13
3615	KL2050	1/250	x	x	H13
3800	HR2001	1/1250	x		H13
3950	KL2100	1/250	x	x	H13
4000	TMR2006	1/1250			H13
4200	KL2050	1/1250			H13
4600	KL2100	1/1250	x	x	H13

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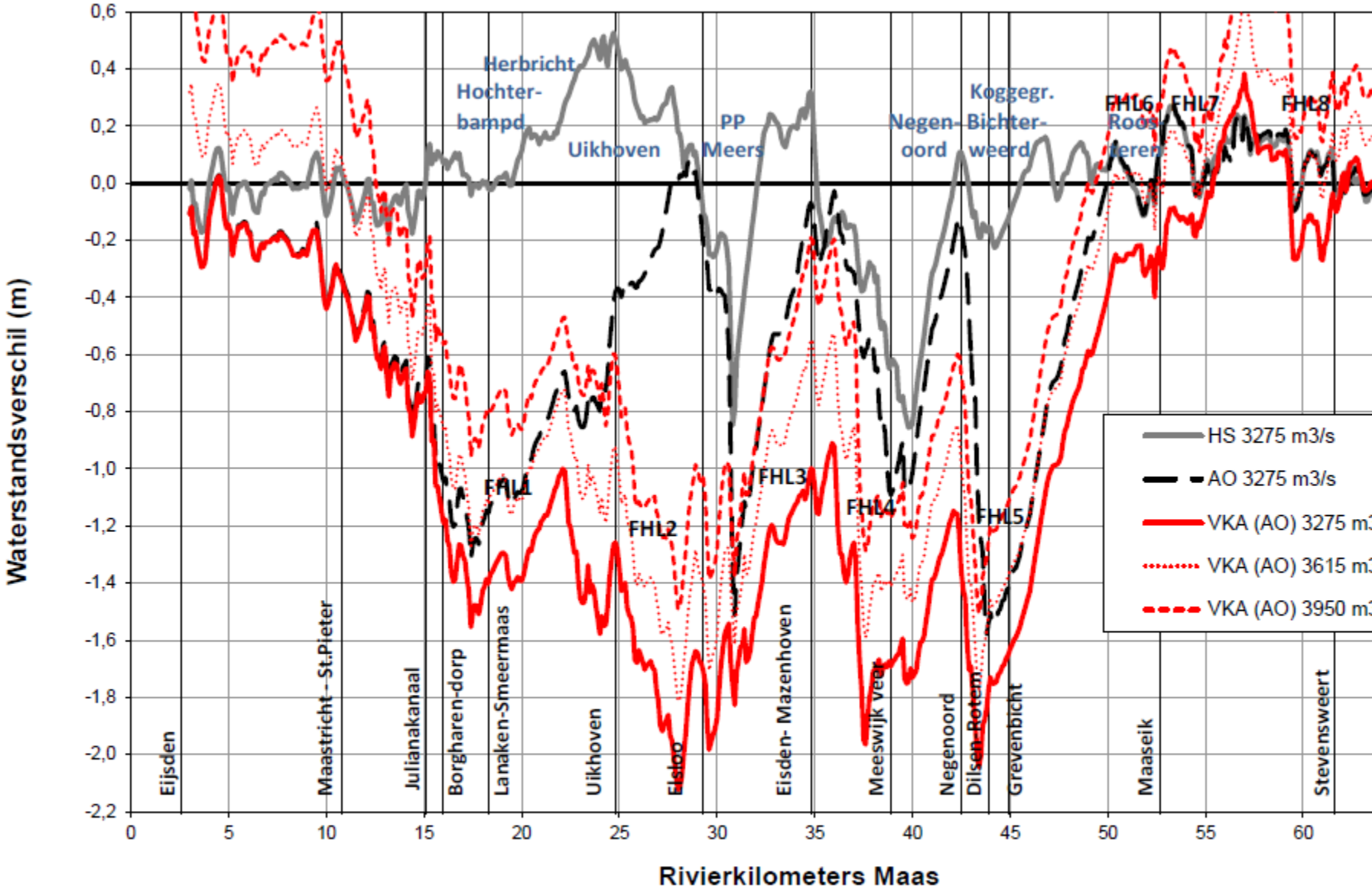
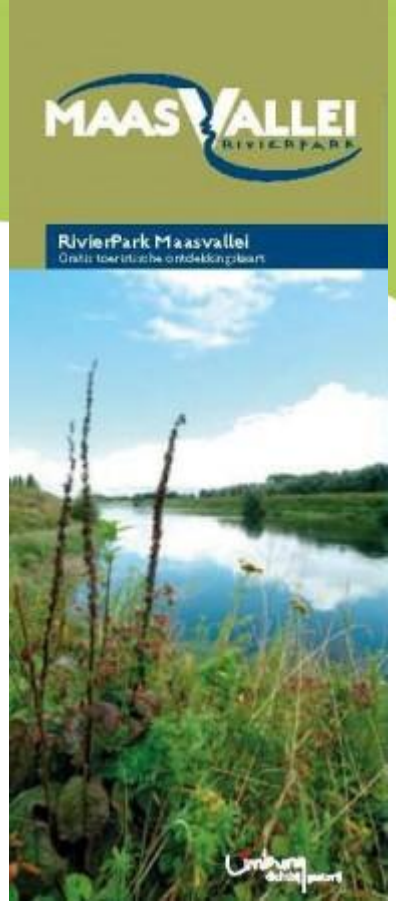


Figuur 25 Waterstandseffecten voorkeursalternatief in combinatie met de autonome ontwikkeling (VKA in AO) ten opzichte van referentielijn 1995 (3275 m^3/s) bij toenemende maatgevende afvoeren als gevolg van geprognotiseerde klimaateffecten

Benefits on recreation



- Charter between different communities
- Strategic open space project – regional landscape
- Opening 24 oktober 2012 of riverpark

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Some (personal) toughts on the process

- Mutual cooperation between flemish administrations could be improved
- Clear the link between Natura 2000 and Water Framework Directive
- Cross Border Alignment on Natura 2000 deals with different proces/timing
- Focus of VNBM on implementation less on policy level
- Different operational fora
- From ad hoc measures to overall view on the river

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future

- Decision on natura 2000 conservation objectives
- New projects on river-restoration (safety, sloving remaining bottlenecks) after finishing feasability study
- New projects on gravel excavation (EIA study ongoing)
- Study on future integrated river management: focus on “natural” management

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