

# Wageningen University & Research

‘Stikstof in politiek en beleid, stikstof in oppervlaktewater’

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Stikstof in politiek en beleid

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### Circular agriculture

- N, P, K, other nutrients
- Organic matter
- EU Green deal
- EU Fertiliser Regulation
- NL Vision ministry of agriculture

### Water quality

- Nitrate and phosphate
- EU Nitrates directive
- EU Water Framework directive
- NL Fertiliser act/manure policy

### Soil quality

- Organic matter
- Nutrients
- Biodiversity
- Heavy metals, Organic contaminants
- EU Soil strategy
- NL National Program Agricultural soils

### Nitrogen and nature

- Ammonia
- UN Gothenborg protocol
- EU Natura 2000
- EU NEC directive
- NL nitrogen act
- NL Nature inclusive agriculture

### Health

- Lung and respiratory diseases

### Climate/greenhouse gases

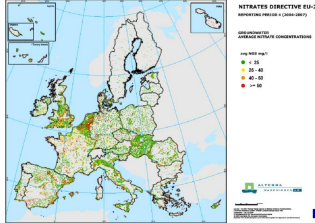
- Methane and nitrous oxide
- Carbon sequestration in soils
- CO<sub>2</sub> emissions peat soils
- UN Paris convention
- EU Green deal
- NL Climate agreement<sup>3</sup>

**Nitrogen issues**

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## Water quality: international policies

- EU Nitrates Directive
  - Agriculture
  - Nitrate leaching
  - Every four year an action plan with measures
- EU Water Framework Directive
  - All waters
  - Ecological status
  - Parameters: N, P, heavy metals, ...



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## Water quality: national policies

- Manure policy/fertilizer act = implementation of the Nitrates Directive
- River basin management plans for the Water Framework Directive
  - N and P measures are part of manure act
- Fertilizer act:
  - N and P application standards
  - Catch crops, buffer strips, closed periods, coefficient to calculate manure production etc.

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## Nitrogen and nature: international policies



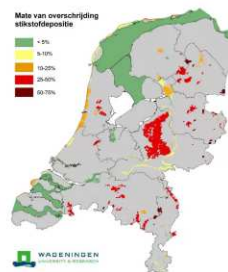
- EU National Ceilings Directive (NEC)
- UN Gothenburg protocol
- Birds and Habitats directive -> Natura2000
  - Quality of nature
  - No specific targets for N, but N affects nature quality



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## Nitrogen and nature: national policies

- Ammonia emission abatement techniques (housing and application)
  - Ammonia and livestock regulation
  - Fertilizer act
  - Soil protection act
- Protection of nature against nitrogen
  - Act nitrogen reduction and nature improvement



Figuur 9. Aantal van de gemeentelijke overschrijding van de nationale doelwaarde voor ammoniak op grond van de gemeentelijke actieplannen voor de landbouwsector, 2010-2019.

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## Climate: international policies



- UN Paris agreement
- EU Green deal
  - Farm to fork strategy

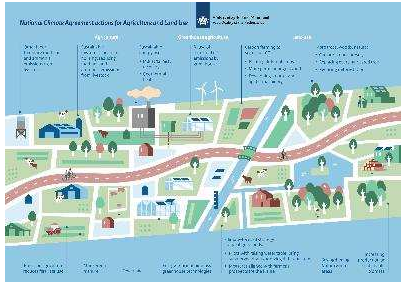


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## Climate: national policies



- National Climate Agreement
  - Methane emissions livestock
  - Carbon sequestration mineral soils
  - CO<sub>2</sub> emission peat soils
  - Nature and forestry
  - Glasshouses
- Link with N<sub>2</sub>O emissions



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## Circular economy: international policies


- EU Green deal Farm to Fork
  - Links to other directives, e.g. Nitrates Directives
- EU Common Agricultural Policy (CAP)
  - Farm Sustainability tool: FAST
- EU Zero pollution action plan
- EU Fertilizer Regulation

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## Circular economy: national policies

- Circular agriculture
- Fertiliser Act
  - Manure treatment
  - Application standards
  - Use of organic materials as fertilizers



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## Soil quality: international policies

- EU Green deal – Farm to Fork strategy
- EU soil strategy for 2030
- EU biodiversity strategy for 2030
- Links to EU climate and circular economy policies
- FAO Global Soil Partnership





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## Soil quality: national policies

- Soil strategy
- National Programme Agricultural soils

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## Nitrogen and health

Ammoniak en stikstofdioxide reageren in de lucht -> fijnstof -> vergroot de kans op longziektes en luchtwegaandoeningen. Jaarlijks sterven zo'n 13.000 Nederlanders als gevolg van de vervuilde lucht.

Sector	Percentage
Industrie + energiesector	~10%
Verkeer en vervoer	~25%
Landbouw	~15%
Gebouwde omgeving	~10%
Buitenland + scheepvaart + NH3 uit zee	~35%

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## Future developments

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## Perspectives for agricultural entrepreneurs within the region-specific approach

**Societal challenges:** Increase sustainability, More extensive, End, Technological innovation.

**Perspectives:** New products and services, More extensive, Technological innovation.

**Solutions/Outcomes:** Biobased resources, Protein crops, Multifunctional agriculture & short supply chains, Biological agriculture, Lower production/ha, Changes in crop rotation, C-sequestration, nature & water conservation, Green-blue services, High-tech, mature processing, Low emission animal housing, Digitalization, Precision agriculture.


**Vertical text:** Circular agriculture As a basis for a sustainable agri-food sector and vital rural areas

Ministerie van Landbouw, Natuur en Voedselkwaliteit, Juni 2022

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### Zoning in policies: regional approach

- Yellow: agricultural areas
- Light green: Natura2000 areas
- Dark green: limitations to agriculture,
  - peat areas
  - nitrate vulnerable areas
  - areas close to Nature2000

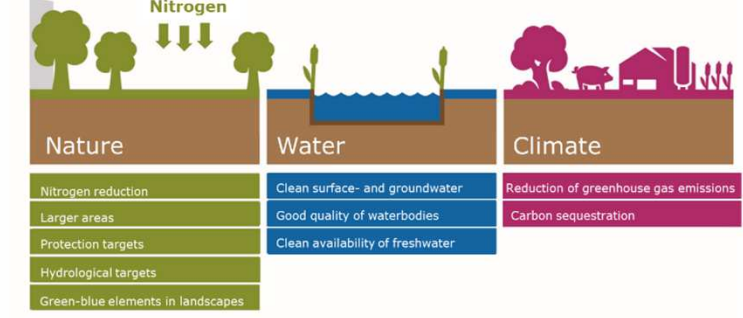


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### Spatial consequences

Soil and water give direction  
Regional targets for nitrogen  
Perspectives for agriculture

## NPLG: Integral region specific approach: Nationaal Programma Landelijk Gebied



Nitrogen reduction	Clean surface- and groundwater	Reduction of greenhouse gas emissions
Larger areas	Good quality of waterbodies	Carbon sequestration
Protection targets	Clean availability of freshwater	
Hydrological targets		
Green-blue elements in landscapes		

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### Stikstof in oppervlaktewater

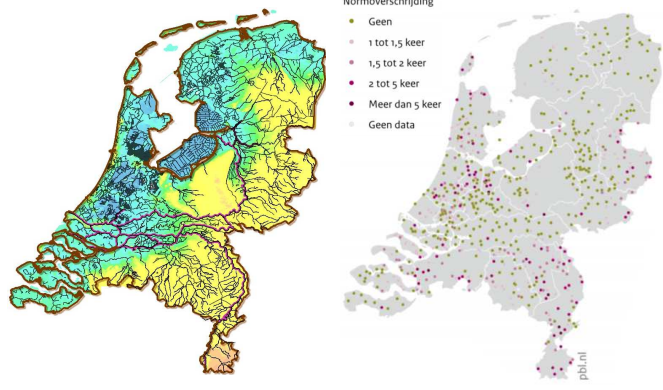


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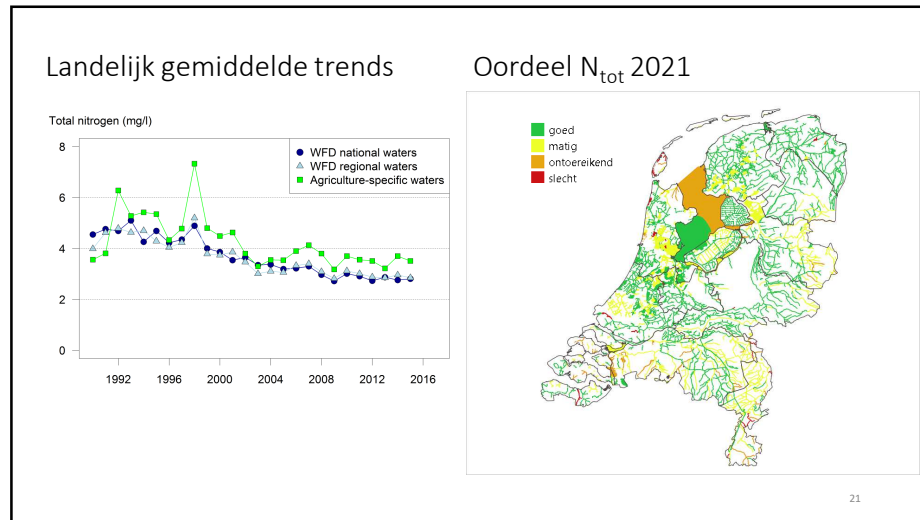
### Metingen op KRW-meetpunten

Normoverschrijding

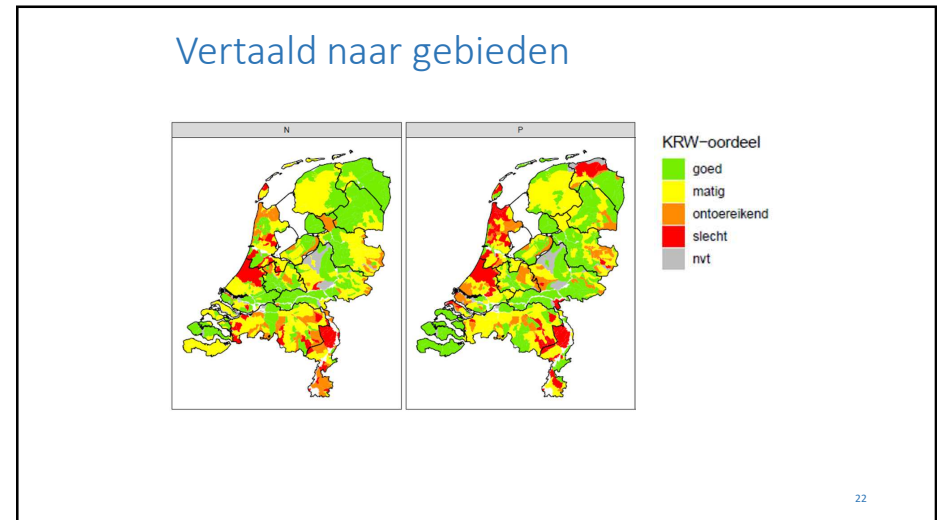
- Geen
- 1 tot 1,5 keer
- 1,5 tot 2 keer
- 2 tot 5 keer
- Meer dan 5 keer
- Geen data



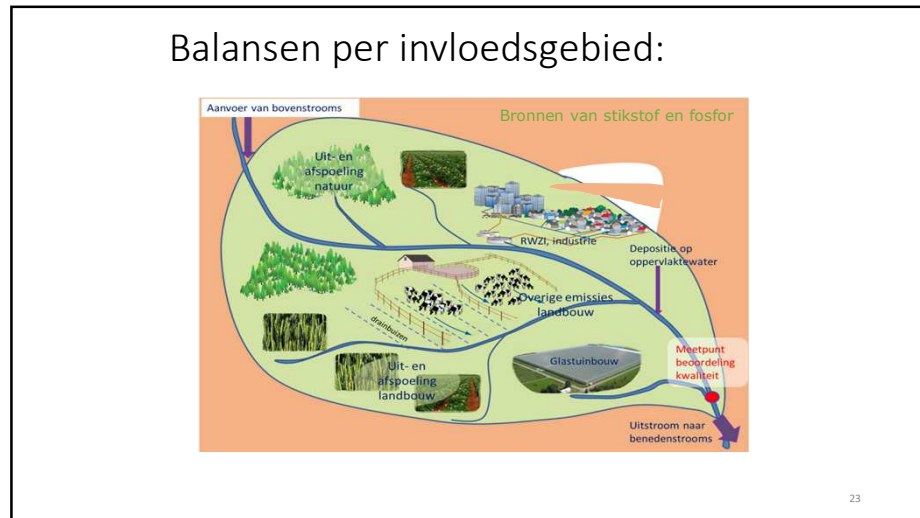
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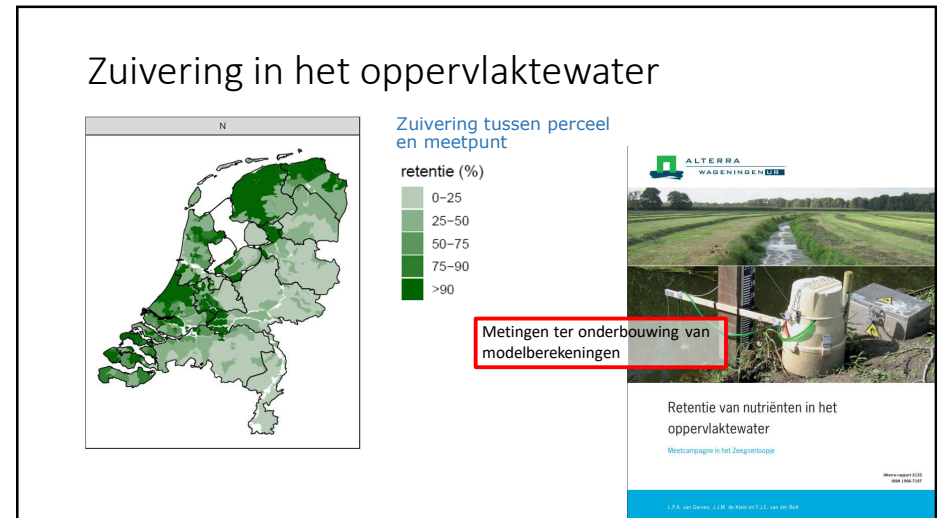
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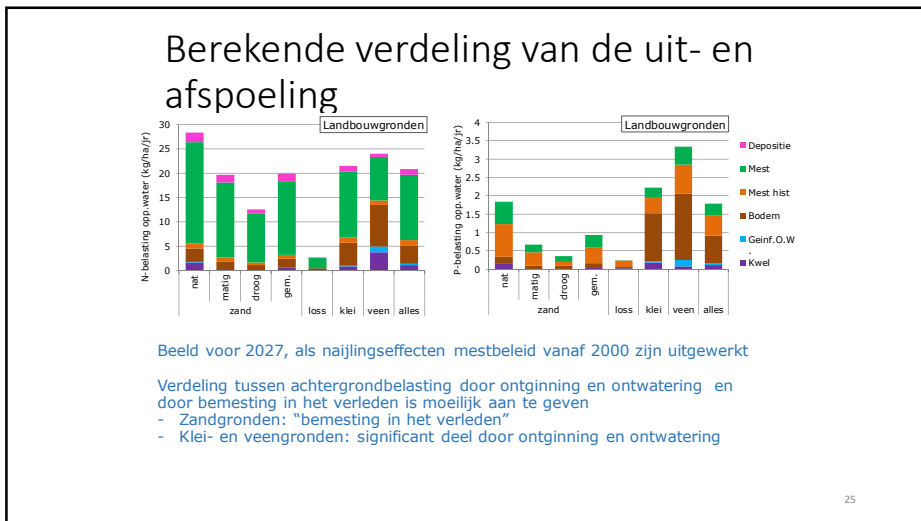
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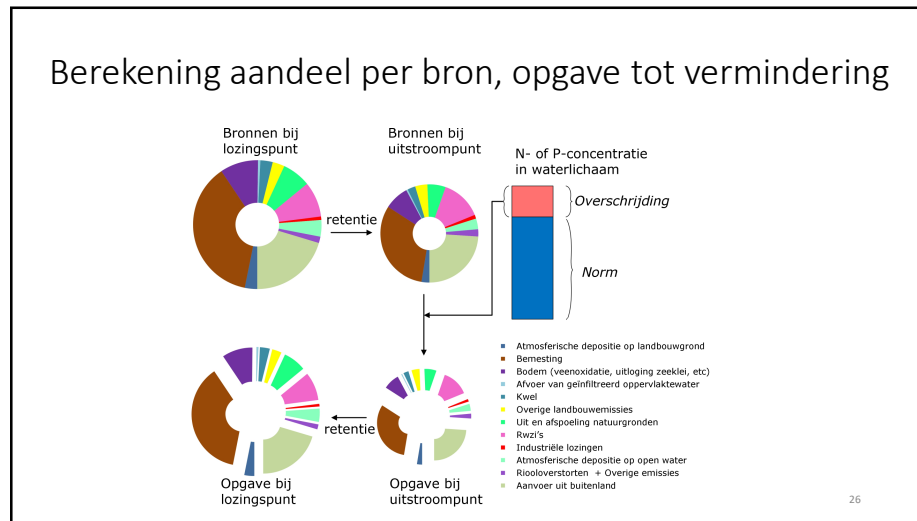
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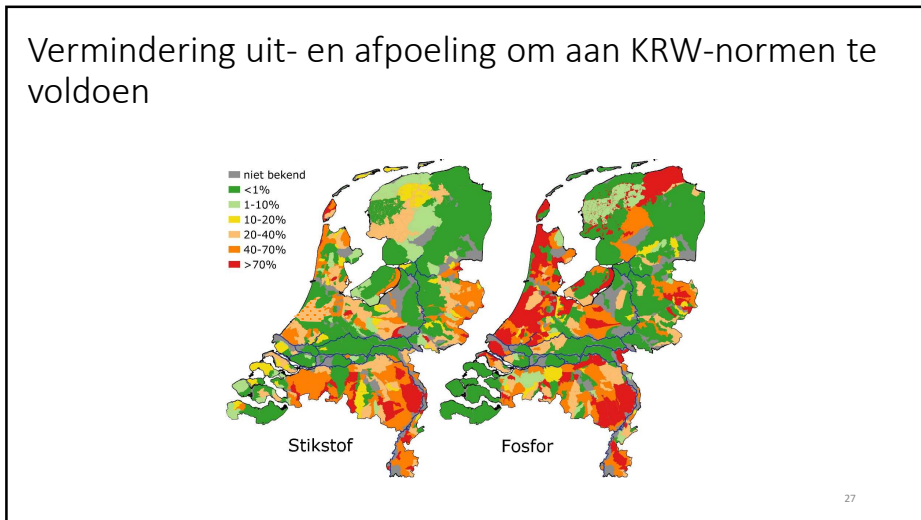
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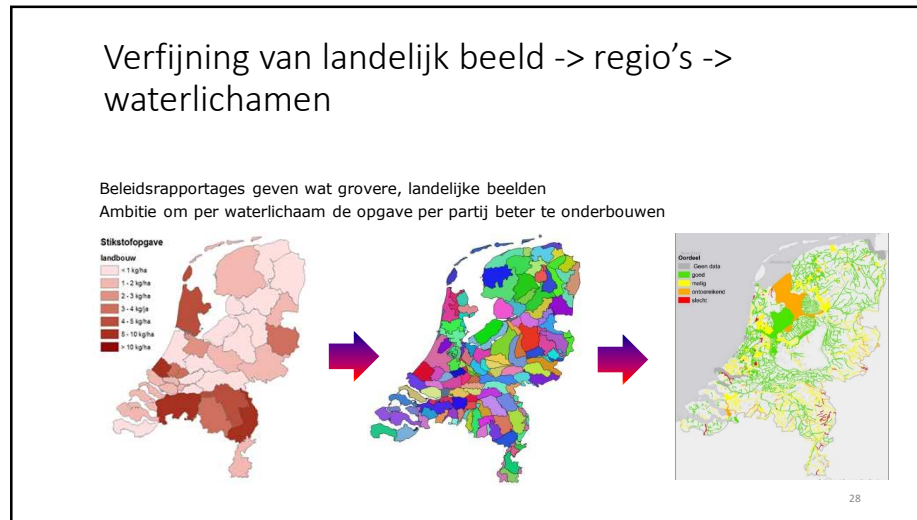
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## “Actueel” stikstof ↔ waterkwaliteit

### Concept derogatiebeschikking:

- aanwijzen verontreinigde gebieden per 1 januari 2024 op basis van slechte waterkwaliteit
- mestproductieplafonds 10% minder fosfaat, 6% minder stikstof (veestapel)
- bufferstroken langs alle waterlopen (5m, 3m, 1m)

### Uitwerking van klimaat-, natuur- en waterdoelen zoals verwoord in NPLG

#### Vraag:

Op welke manier kunnen de regionale doelen voor de landbouw op een zodanige gebalanceerde manier worden vastgesteld dat in ieder geval de internationale doelen in Vogel- en Habitatrichtlijn, de Kaderrichtlijn Water en de klimaatdoelstellingen gehaald kunnen worden?

#### Verkenning van:

Effecten maatregelpakketten op basis van structurende keuzes

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## Vragen?

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