Implementation of the Nitrate Directive in the Netherlands

Role of stakeholders, politicians and research

WJ Willems PBL
OF Schoumans Alterra Wageningen-UR
GL Velthof Alterra Wageningen-UR
Outline

- Agricultural setting
- Action programmes & derogation
- Mineral policy
- Stakeholder & Actor position
- Concluding remarks

LuWQ Conference June 2013
Agricultural setting in 2011/2012

- Highest livestock density in Europa

Livestock
- Dairy cows: 1,5 mln
- Pigs: 12,4 mln
- Poultry: 99,2 mln

Agricultural area (1,85 mln ha)
- 52% grass
- 13% silage maize
- 29% arable
- 6% horticulture

Number of farms: 139.000 (1985) -> 69.000 (2012)

Manure-P production: 175 mln kg: 52% on farm, 48% off farm

Highest N-surrplus in EU
Livestock density

Livestock Units/ha

- < 1
- 1-3
- 3-5
- ≥ 5

All livestock (2005)

Alterra/PBL
Mineral production livestock

Nitrogen- and phosphate production per agricultural area, 2012*

Nitrogen

Phosphate

Production (kg/hectare)
- < 75
- 75 – 175
- 175 – 250
- 250 – 300
- > 300

Production (kg/hectare)
- < 35
- 35 – 65
- 65 – 100
- 100 – 120
- > 120

Source: CBS.

Uneven distribution
Action programmes of the Netherlands

1st: 1996-1999
2nd: 2000-2003
3rd: 2006-2009
4th: 2010-2013
5th: 2014-2017

3 year gap due to: regulation system change

All Action programmes apply to whole country
Derogation

NL-derogation adopted by the EC in 2005 (3rd attempt)
Farms ≥ 70% grassland; manure from grazing animals
Monitoring of 300 derogation farms

<table>
<thead>
<tr>
<th>Country</th>
<th>Heighth (kg/ha N)</th>
<th>% of agr. area</th>
<th>% of farms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>250</td>
<td>45</td>
<td>32</td>
</tr>
<tr>
<td>Belgium-Flanders</td>
<td>250</td>
<td>12</td>
<td>10</td>
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<tr>
<td>Denmark</td>
<td>230</td>
<td>4</td>
<td>3,2</td>
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<td>Germany</td>
<td>230</td>
<td>&lt; 1</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>250</td>
<td>1,5</td>
<td>1,3</td>
</tr>
<tr>
<td>Ireland</td>
<td>250</td>
<td>8</td>
<td>8</td>
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</tbody>
</table>

Derogation needs approval of the European Commission (EC)
Regulation of minerals

Manure and fertiliser Act + Soil Protection Act

<table>
<thead>
<tr>
<th></th>
<th>Manure</th>
<th>Fertiliser</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nitrogen</td>
<td>Phosphorus</td>
</tr>
<tr>
<td>1987-1997</td>
<td>Blue</td>
<td>Orange</td>
</tr>
<tr>
<td>1998-2005</td>
<td>Green</td>
<td>Grey</td>
</tr>
<tr>
<td>2006-present</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

Additional regulation:
Limit to livestock manure production (production control) by:
- Production rights (pigs & poultry)
- Indirect via: Milk quota (dairy cows)
Mineral accounting system (Minas) 1998-2005

Nutrient balance of the farm

Inputs
- Roughage
- Concentrates
- Livestock
- Manure
- Fertiliser
- Deposition

Outputs
- Livestock
- Animal products
- Crops
- Roughage
- Manure

Inputs - outputs = loss to environment

Loss standards for N and P$_2$O$_5$
Gradually tightened up
Mineral accounting system (Minas) 1998-2005

- End to Minas: Conviction of EU Court of Justice (2003)
  Motive: Not in compliance with Nitrate Directive

Assessment of system effects:
- Effective for dairy farms
- Less effective for arable farms
- Not effective for pig/poultry farms
- Administrative burden high
Mineral surplus

Overall decrease: 50% (dairy); 40% (arable)
Chemical N-fertiliser: 55% lower
Strong effect in Minas period
Average NO3 in shallow groundwater

Substantial improvement since early 90’s
Nutrients in surface water

Waters dominantly influenced by agriculture (2007-2010)
Stakeholders and Actors

Stakeholders

- Farmers organisations
- Environmental/nature organisations
- Water supply companies

Other:
- Market parties (Feed, Fertiliser, Dairy, Meat)

Actors

- Parliament
- Government (national)
- European Commission
Position of farmers (- organisations)

- Pressure on parliamentarians and policy makers
- Opposition to stricter rules & measures
- Since 2006: general acceptance of the mineral policy
- Plea for: less administration, less rigid measures (a.o. fixed application period) and a wider derogation
- After 2013: no stricter rules; more tailor made approach
- Nitrate Directive out of date: measure orientated
- Accept mandatory manure treatment: abolish production limits
Farmers face accumulation of policies

- Animal health & welfare
- Odor
- Atmospheric particulate matter
- Ammonia
- Manure & Fertiliser
- GHG
- Plant protection
Position of environmental organisations

- Pressure on parliamentarians and government
- Plea for quick & strong policy measures (reports, plans)
- Lawsuit against NL Government (1998)
- Strongly opposed to derogation (2005)
- Gradually less opposed towards farmers (more cooperation)
- Plea for more sustainable agriculture (& smaller livestock population)
Research: policy supporting role

Agriculture & environment

- Monitoring networks: relation farming practise & water quality
- Knowledge development & transfer from experimental farms to common farms (Nitrate projects)
- Proposals for application standards
- Scientific basis of derogation
- Model development (forecasting)
- Innovation (manure treatment)
Actions from parliament

- Discussion on monitoring depth ND

- Since WFD: critical at environmental initiatives from “Brussels”: “Too much ecology and too little economy”

- Passed motions (requests to the government):
  - No WFD measures (manure & fertiliser) on top of ND to prevent extra financial burden to farmers (2007)
  - Can scope of Action Programmes be reduced to Nitrate Vulnerable Zones? (2008)
  - Take steps in EU to integrate the obsolete ND with the modern goal oriented WFD & Groundwater Directive. Objective: relaxation of measure-oriented regulations of the ND (2011).
Position of actors/stakeholders in policy process

Careful navigating between Scylla and Charybdis

Parliament: between Farmers & Government

Government: between Parliament & European Commission
Concluding remarks Netherlands & ND

- NL: high ambitions but implementation difficult
- Mineral accounting: good management tool (legal instrument ?)
- Environmental effect: good for groundwater less for surface water
- Public concerns about environmental problems modest since 2005
- “Easy pickings” are gone: ambitions for the 5th AP (and WFD) ?
- Stakeholder cooperation: additional/voluntary ND/WFD measures?
- Mandatory manure treatment: solution? Can livestock grow again?
Thanks for your attention

Questions?