From statistics to policy

Environmental statistics and accounts in The Netherlands

June 1, 2016 | Arjan Ruijs
Lessons for WAVES Partnership countries

1. We need transparency about decisions with regard to environmental statistics and a long term vision

2. Translating statistics to policy is a different task than collecting them

3. Different channels exist to connect statistics and policy

4. Giving natural capital a role in decision making adds new requirements to data needs
1. Long term vision on statistics and accounts

1969: start of the Department Environmental Statistics
- focus on waste and emissions to air and water

1974 Pollutant Release and Transfer Register
- Focussing on health issues related to water, soil and air pollution

Throughout the years more statistics were added:
- Energy, manure, recycling, resource use, air-soil-water quality, noise and odor, nature and environmental costs/levies/sector
1. Environmental statistics: an example

Nutrient surpluses in agriculture.

On a given day in 2011 in the Netherlands there were:

- 16.7 million people
- 1 million sheep
- 4 million cows
- 12 million pigs
- 97 million chickens
1. Environmental statistics: an example

Nutrient surpluses in agriculture.

1960s: signs of environmental problems due to nutrient surplus.
1982: First statistics on nutrient surpluses published.
1984: First policies to reduce nutrient surplus.

Source: CBS.
1. Long term vision on statistics and accounts

1994: NAMEA

- **Physical supply and use accounts**
  - Waste accounts
  - Air and water emissions accounts
  - Energy and water accounts
  - Material flows

- **Subsoil Accounts**
  - Petroleum and natural gas reserves

- **Monetary environmental accounts**
  - Environmental taxes and charges, sector and costs

1996: Sustainable National Income (SNI)
2. Translating statistics into policy

Good statistics and accounts don’t make good policy but good policy needs good statistics and accounts.

Statistics and accounts are better able to inform policy if they are provided with context and interpretation.
The information pyramid

- Monitoring and research data
- Registers and databases
- Indicators
- Integrated policy studies
- Images

- Researchers
- Researchers and competent authorities
- Policymakers and researchers
- Policymakers
- Society
2. Translating statistics into policy

**Application in different phases of the policy cycle**
- Awareness raising and prioritization
- Support policy making
- Monitoring and evaluation

**Other applications**
- Allocation of environmental costs and benefits
- International comparison and obligations
- Research
3. Channels to translate statistics into policy

Institutionalization of data collection and use

- CBS Central Commission for Statistics with Ministries and data users.

- Independent, trustworthy agencies work on statutory products the government must comment upon.

- Governmental advisory councils that associate with scientific, social and economic stakeholders
3. Channels to translate statistics into policy

a. Statline
b. Environmental data compendium
c. Green Growth
d. Environmental Accounts
e. Assessment of the Dutch human environment
f. Nature outlook
g. Energy outlook
h. Sustainability monitor
i. Monitor business policy
j. Public Health monitor
k. Atlas natural capital

...and many more
4. Giving natural capital a role in decision making

The economy restricts nature

Impact
Pollution, emissions and overexploitation
The economy supports nature

Benefits
(Financial) support for nature development

Support
Higher social and economic appreciation leads to more support for conservation and protection

Nature supports the economy

Benefits
Nature creates value added
- Property values
- Recreation

Nature produces
- Wood
- Biomass
- Fish
- Crops

Cost savings
Nature prevents
- Floods
- Climate Change

Nature works
- Water purification
- Pollination

Well-being
Nature contributes to health, knowledge and happiness
Thank you
1. Dutch environmental accounts

<table>
<thead>
<tr>
<th>Economy</th>
<th>Domestic product (gross, market prices of 2010)</th>
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<tbody>
<tr>
<td></td>
<td>Final consumption expenditure (market prices of 2010)</td>
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<tr>
<td></td>
<td>Investments in fixed assets (market prices)</td>
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<td>Population</td>
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<td>Employment</td>
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</tbody>
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| Environmentally adjusted | Adjusted national income, reserves (net) |

<table>
<thead>
<tr>
<th>Energy</th>
<th>Net domestic energy use</th>
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<tbody>
<tr>
<td></td>
<td>Energy intensity</td>
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<tr>
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<td>Extraction natural gas</td>
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<td>Mineral reserves gas</td>
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<td>Valuation mineral reserves</td>
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</tbody>
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### Water
- Groundwater abstraction
- Tap water use
- Tap water use intensity
- Heavy metals to water
- Nutrients to water

### Materials
- Material consumption biomass
- Material consumption metals
- Solid waste production
- Landfilled waste

### Greenhouse gas emissions and air pollution
- Greenhouse gas emissions
- Greenhouse gas emission intensity
- CFK emissions (ozone layer depletion)
- Acidifying emissions
- Fine dust emissions

### Policy instruments and economic opportunities
- Environmental taxes and fees
- Share environmental taxes and fees in total taxes
- Environmental costs
- Labour input environmental goods and services sector
- Value added environmental goods and services sector (basic prices)