

The Dutch environment sector

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Pioneers in international business

The Netherlands



Some data

- 16,8 million inhabitants (18,6% younger than 15)
- fits > 208 times in Brazil

but::

- 5th in global competitiveness index (2013)
- 4th in global innovation index (2013)
- 4th in human development index (2013)
- 17th economy (GDP)
- 7th largest trading nation
- 6th largest trade partner with Brazil
- 2nd largest exporter of agricultural products
- 1st for environmental technology in Europe
- largest investor in food research and development
- 85% of our research universities in top 200 ranking
- 3rd in scientific citation index

Why is the environment so important for us?

Our roots

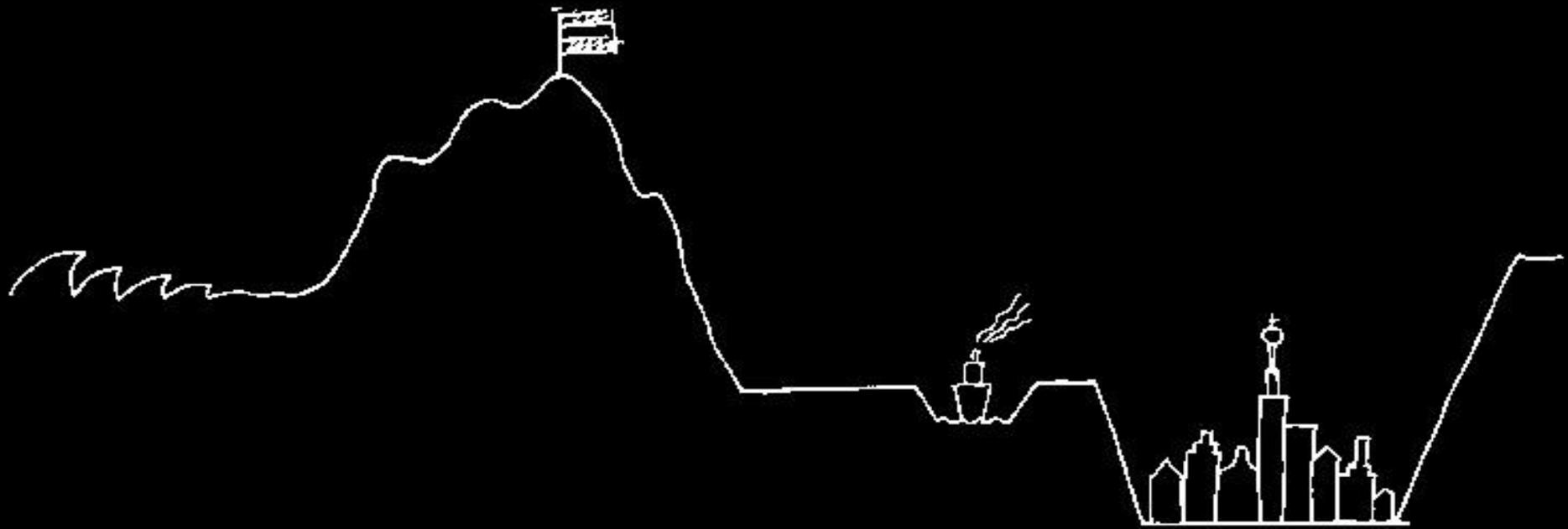
Around 1200



Present



The system



The reality



**Our ground water is our drinking water
and is close to the top layer of the soil.**

SO.....

**If we want to be safe and healthy.....
we have to protect this eco-system,**

Legislation and agreements:

- Spatial Planning Act
- Soil Protection Act
- Environmental Management Act
- Dutch Guidelines on Soil Protection for industrial activities (prevention)
- Agreements with organizations of drycleaners, railways, filling stations and industries

As a result of changing policy and legislation:

- new **targets:**

from removal of all pollution to "suitable for use"

- new **executors:**

from authorities and polluters to stakeholders

- new **approach:**

from case by case to sustainable use and development of the area

- new **technology:**

from dig and dump, pump and treat to "plug and play"

Policy targets:

- In 2015, no more unacceptable risks for current use (human, ecological and migration)
- In 2030 the soil should be fit for use; everywhere !

Position in Europe

	Regulation in force	Public and/or private organizations	Allocated financial tools	Methodological and technical tools	Inventories	National remediation industry share of remediation country's average	
Austria	4	3	3	4	5	3	10 %
Belgium	5	5	4	4	5	5	60 %
Bulgaria	3	2	3	2	1	1	10 %
Cyprus	1	2	1	2	3	1	0 %
Czech Republic	2	4	4	3	3	3	25 %
Denmark	5	5	5	5	5	4	40 %
Estonia	2	1	2	1	3	2	25 %
Finland	5	5	4	4	5	4	70 %
France	4	5	4	5	4	5	80 %
Germany	5	5	4	5	5	5	50 %
Greece	3	2	4	2	3	1	10 %
Hungary	4	2	2	3	4	4	25 %
Ireland	2	2	2	2	2	3	75 %
Italy	5	4	4	5	4	4	80 %
Latvia	3	3	3	3	4	3	10 %
Lithuania	2	2	4	3	3	3	20 %
Luxembourg	1	1	1	2	3	2	0 %
Malta	1	1	2	1	2	1	10 %
Netherlands	5	5	5	5	5	5	55 %
Poland	3	2	4	1	2	2	10 %
Portugal	1	2	3	1	1	3	70 %
Romania	4	3	2	2	3	2	80 %
Slovakia	4	3	3	2	4	3	80 %
Slovenia	3	2	3	2	2	3	10 %
Spain	5	5	3	5	3	5	60 %
Sweden	4	4	5	5	5	4	60 %
UK	5	5	4	5	2	5	70 %

GROUP COUNTRIES

Group A Belgium, Denmark, Germany, Netherlands

Group B Austria, Finland, France, Italy, Spain, Sweden, Hungary, United Kingdom

Group C Bulgaria, Czech Republic, Estonia, Greece, Latvia, Lithuania, Poland, Portugal, Romania, Slovakia, Slovenia

Group D Cyprus, Luxembourg, Malta, Ireland

Our position globally:

- Large number of expert companies, operating world wide
- Leading in knowledge and technologies for soil remediation

The Value of our environment

- Pro-business
- 85% of Dutch waste is put to good use
- Excellence in:
 - Waste collecting and processing
 - Water purification
 - Soil remediation
 - Environmental management and consultancy



Source: Bollegraaf Recycling Machinery

Water purification

- Distinguishing between grey and black water
- Nereda new treatment technology
- ANAMMOX reactor



Source: DHV

Waste collection and processing

- From discharge and land filling, to incineration and recovery
- New ways to collect waste
- Recycling glass and paper
- Reducing size and number of landfills
- Waste to energy



Source: NLA Agency

Soil remediation

- 1,200 projects, up to €400 million a year
- Sense of urgency spurs development of new technologies
- PER-eating bacteria
- BioSoil: in situ and on site expertise
- HMVT: enhanced natural attenuation
- Groundwater Technology: heat enhanced extraction

Clean technologies and consultancy

- Focus on clean technologies and clean production, e.g.
 - Better oil separation
 - New coating techniques
 - Underground heat and cold storage
- Environmental consultancy
 - ISO/EMAS standards
 - Impact studies
 - Sustainability reports
 - CSR advice

Air purification and noise management

- Economic and urban growth mean more air/noise pollution
- Expertise in modelling, measuring, climate change and bad odours
- Expertise in noise abatement facilities and technologies
- Including companies like
 - Mesys
 - U.C. Technologies
 - Vermeulen Product Engineering
 - DGMR

Collaboration

- TNO - environmental and geoscience research
- Imares - applied marine research
- Wetsus - biotechnology and separation technology
- NWP - NGO with 175 members in the area of water
- NSP - promoting exports of Dutch soil technology
- NWMP - Export of waste disposal technology
- VLM – environmental techn.



Source: Bakker Magnetics

Expertise for the world

- Urgency of climate change and related problems
- Stringent regulations and issues of sustainability
- Need for expertise in
 - Recycling, incineration, organic waste
 - Cleaning and managing water
 - In situ, biological soil remediation
 - Management and consultancy

Source: Paques

Dutch-Brazilian collaboration

- Lol on environmental cooperation, regarding waste management and remediation
- Program for International Business for Brazil on waste management
- MoU S&T&I between governments
- Several agreements in the area of Bio Based Economy (incl. bamboo)
- Technical Cooperation Term on environmental management of water

Obrigado, thank you !

