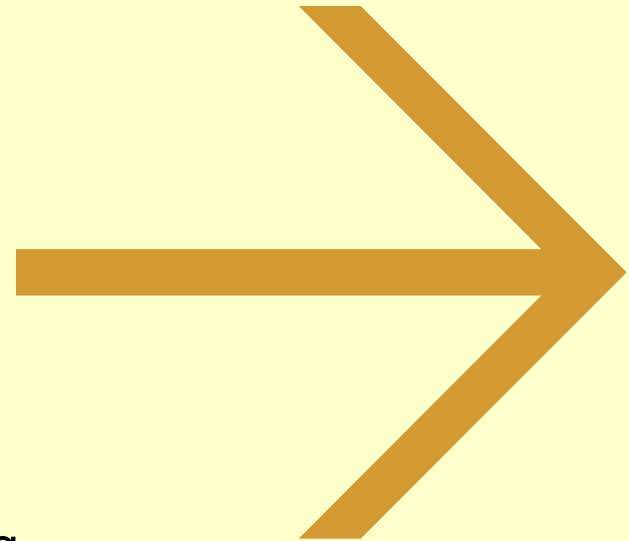


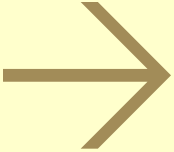
# *Cleaned soil, the basement for added value in rural and urban construction*

*Karel Valk, Programme manager construction*



The Dutch ministry of Housing,  
Spatial Planning and the Environment (**VROM**)





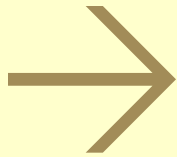
# Importance of this seminar, our soil is the only habitat our children will have available.

- Therefore, congratulations to the Israeli landdevelopers and authorities who have the wisdom and courage to start addressing the problem of soil pollution with its effect on ground water.
- Gratitude also to the ambassador and his staff to support our activities today so effectively.
- The message today will be three fold, start inventarising, chose the best method and tailor mate addressing local projects.
- Act collectively inclusive; therefore the practices shown to you later will reveal four different solutions for different problems.

# Sources of soil pollution remain



*Adapted usage and on site  
Regeneration.*



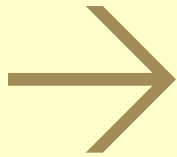
## Revaluation of Brownfield's



*Construction above soil prevents direct contact and allows us to preserve industrial monument*

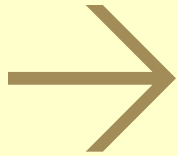
*Two times waterfront redevelopment obsolete and polluted harbour areas reused and upgraded*





# The Dutch Planning system

<b>National</b>	<b>Parliament Central Government</b>	<b>National Policy Document on Spatial Planning</b>  <b>National Structure Plan for Policy Sector</b>
<b>Regional</b>	<b>Provincial Council Provincial Executive</b>	<b>Structural Vision/ Regional Zoning scheme</b>
<b>Local</b>	<b>Municipal Council Municipal Executive</b>	<b>Local Zoning Scheme Project decision</b>



# Organisational structure of planning

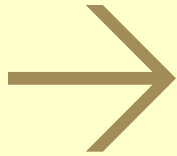
**National government;** overall planning and legislation

**Regional government;** regional planning and control  
on local authorities

**Local municipalities;** detailed plans and awarding construction  
measures according to the locally adapted building code.

AND



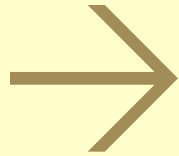


## Independent water authorities

**Water boards;** independent authorities responsible for most waterways, water treatment and water management (charged with an additional tax directly to citizens)

Established around 1200

Safeguard roughly the 60% of the Dutch population (16,5 million) in the lowlands from flooding and guarantee the water quality of the surface water (95 % of the sewage water is purified).



# The trivial role of planning

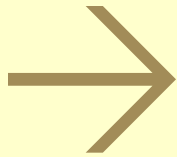
## *Responsibility of VROM*

Strategic policy document: making the “agenda”

- No legally binding statements
- No regulations about procedure or form:
- Basis for:
- Co-ordination of policies of national, regional and local authorities
- Implementation through agreements, subsidies, incentive programmes, voluntary agreements, etc. And....



# Land ownership the Kadaster



*The Kadaster, the agency  
Registering all properties and  
Rights including water and  
Polluted areas*

# Public information on soil quality and the value of the property



*Global trend; Growing wealth is more attention to health*

*Evaporation or attached pollution from your owned soil therefore reduce property value by at least the cost for cleaning up.*

*In NL the price of clean land ranges from € 2000-12000. (Sub-)urban areas to € 3-5 agricultural land. (up to 50% of initial construction costs)*



# Compact building to share facilities and regain the costs of cleaning up



Jiyu Bridge, Wuhan, China  
A joint venture between ING Real-Estate Investment Management and Gemdale Corporation

*Low energy e.g, using surface cooling high rise covers costly ground treatment*

REAL ESTATE



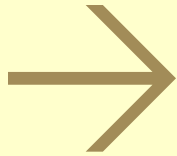
# → Triple use of public space



*The Dutch building code prevents of building to close high voltage corridors*



*Use unbuilt service and transport areas for recreation, storage and possibly initial purification.*



## Conclusions

Lack of space (especially in cities) when growing wealth will promote soil remediation.

Rediscovered approach, “build with Nature” instead of dig and dispose.

Water pollution and soil remediation are unavoidably interlinked. Using energy from landfill and waste waste (water-)treatment may add value with the ever yielding energy prices

## Present the Dutch team, all about joint forces



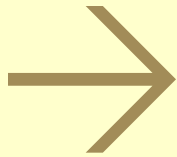
*Ministry VROM  
Karel Valk and Co  
Molenaar*

*A Dutch soil policy  
Building trust under users and  
practitioners by setting achievable  
targets and realistic standards*

*C Provide legislation preventing  
that land can be sold or used  
before being cleaned up.*

*B To avoid that polluted soil  
becomes too costly to redevelop  
set functional standards  
according to the planned use*





## From policy to practice, expert opinions



*Martin Plum,  
Terreco*

Stimulating organic cleaning of toxic pollution out by air Injection.



*Reinout Lageman,  
Holland milieutechniek*

Electro kinetic cleaning new energy for the organic bio diversity in the soil and leave the nature doing its work



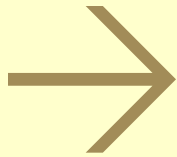
*John Smink,  
A&G milieutechniek*

Depollution start with separation of reusable and polluted fraction waiting for further treatment.

*Klaas de Jong,  
Hannover milieu-en veiligheidstechniek*

Pollution is often diverse therefore the best solution do no over simplify by sticking to just one technique.





## From policy to practice, expert opinions



*Martin Plum,  
Terreco*

Stimulating organic cleaning of toxic pollution out by air Injection.



*Reinout Lageman,  
Holland milieutechniek*

Electro kinetic cleaning new energy for the organic bio diversity in the soil and leave the nature doing its work



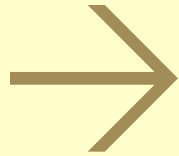
*John Smink,  
A&G milieutechniek*

Depollution start with separation of reusable and polluted fraction waiting for further treatment.



*Klaas de Jong,  
Hannover milieu-en veiligheidstechniek*

Pollution is often diverse therefore the best solution do no over simplify by sticking to just one technique.



Thank you for your attention

Questions?



[Karel.valk@minvrom.nl](mailto:Karel.valk@minvrom.nl)  
[www.minvrom.nl](http://www.minvrom.nl)

Website with legislation, some parts in English