environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

ICCL
international
committee on
contaminated
land

Optimizing sustainable use of soil and subsoil
a transition in soil policy

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The aim of the presentation

:

- transition in soil policy is needed to help solving problem of contaminated land
- awareness sustainable use of soil-sediment-water system in relation to contribution societal tasks
- awareness of the need for a shared knowledge agenda on soil-sediment-water system
- Showing the concept of spatial planning of the subsurface

What is our common interest?

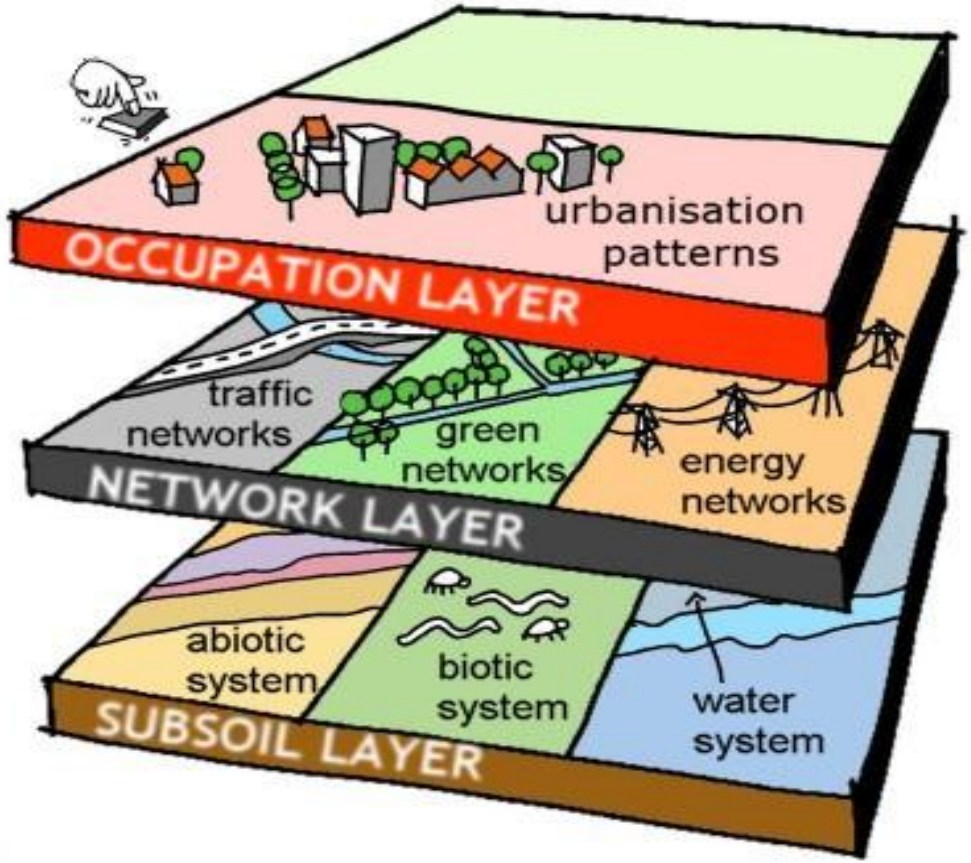
- Contaminated land
- Urbanization and redevelopment of brownfields
- Shared global challenges like climate change, food production and – safety, energy, raw materials, drinking water production etc.
- Policy and instruments
- Need to exchange and disseminate information and knowledge
- Share knowledge development

Policy developments in NL

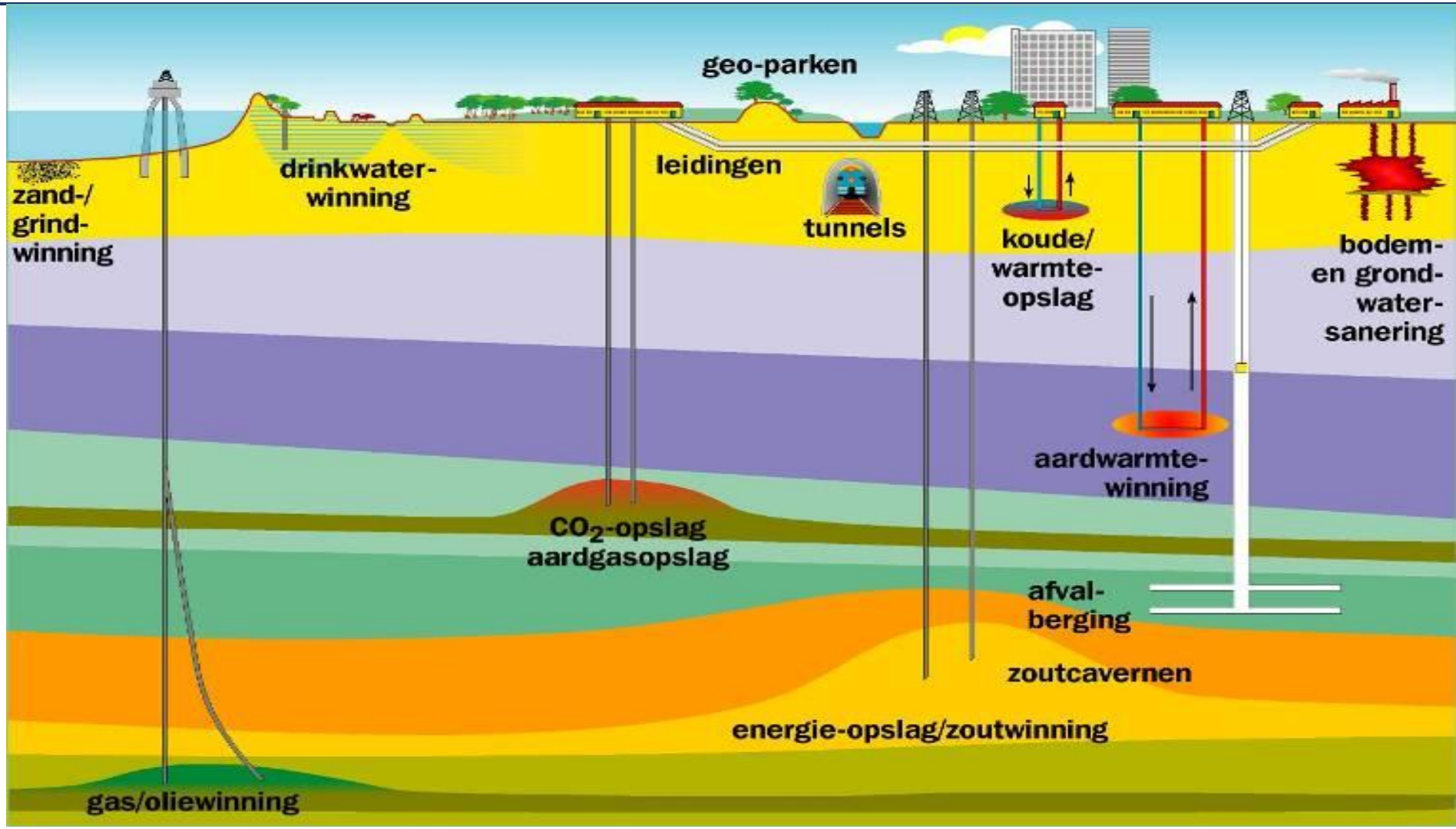
- Spatial planning vision on how to use the soil and subsoil vs soil quality (chemical, physical and biological)
- an integrated law for the environment (water, energy, noise, soil etc). No more sectoral legislation
- Updated knowledge agenda for soil (including subsurface), sediment and water system (Presentation Margot de Cleen)

National Policy Strategy Infrastructure & Spatial Planning : Ambition 2040 National

Interest 4: use of the subsurface



Topics subsoil



Transition in soil policy (1)

From soil protection and soil remediation towards

Sustainable use of soil-sediment-water system

Balance between protection, use and improvement

Transition in policy (2)

- From subsurface care to deep and broad use of ecosystem services
- From general regulations and prohibitions to tailor-made solutions on regional and local level
- From taking the lead to involving the energetic society (facilitator)

- More self regulation and
- Initiatives from society
- Facilitation of innovations

Instruments

- Less legislation towards an integrated act
- Spatial planning of the subsoil is needed
- Zoning of subsoil guarantees national interests
- To provide authorities an integrated assessment framework
- Authorities facilitate in identification, inventory and analysis of knowledge requirements
- Authorities take a lead in connecting stakeholders (process)
- Green deals and covenants in stead of licences
- Target goals in stead of singular prescriptions

Process developing vision (1)

Identification and inventory of interests

Meeting with all public and private stakeholders

- National interests:
  - sufficient drinking water
  - primary materials, gas and oil winning
  - infrastructure (cables and pipelines)
  - CCS
  - food safety and security

Process developing vision (2)

- Local or regional interests e.g.
  - management of groundwater table
  - employment
  - underground building activities like tunnels
  - liveable cities
  - nature preservation
  - recreation
- Private interests:
  - groundwater used as process water
  - energy (heat-cold storage)
  - waste storage
  -

Integrated assessment framework

- Needed for authorization of a permit or redevelopment of an area or brownfield
- Distribution of the underground space and ecosystem services of the soil sediment water system for economic and societal functions
- Instrument for 3D or even 4D spatial planning

Framework: conditions and criteria

- Soil and groundwater conditions: physical, chemical and biological conditions and processes
- Not ‘first come first served’
- Criteria:
  - current function of the land use
  - scarcity of the SSW service
  - priority national/local/private interest
  - (environmental) effects of the activity
  - irreversibility of the effects of an activity

Potential bottle necks

- Different authorities have competence for groundwater quality and quantity
  - Groundwater quantity: Government, Water boards, Provinces, Municipalities
  - Difference in quality in urban (Council) and rural areas (Government, Provinces)

- Lack of knowledge on the effects of activities in subsoil

- Lack of a good long term vision

Conclusion

- Soil-sediment-water system is our partner!!
  Only in a sustainable way
- Although countries are different, societal challenges in urban areas are often the same
- Sustainable use of raw materials and resources
- Spatial planning of soil and subsoil is THE instrument: integrated assessment framework
- Importance: competences authorities (groundwater in NL)