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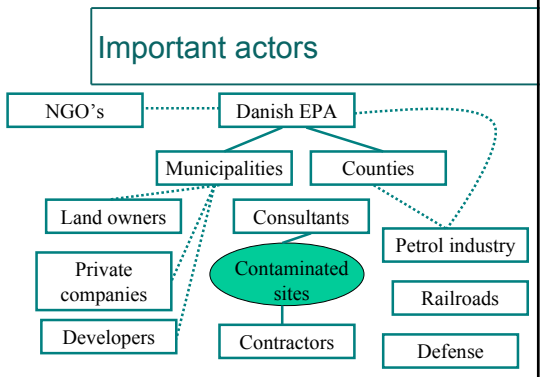
Important actors



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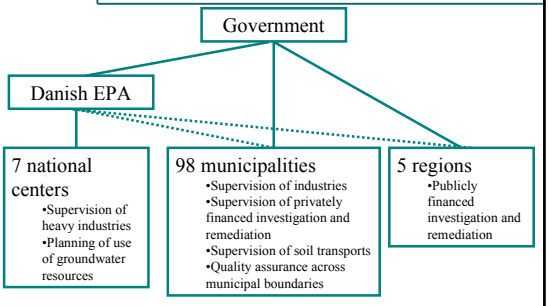
Organisation changes by 2007



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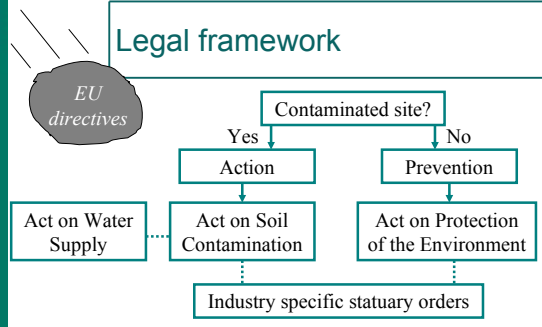
Legal framework



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Policy – revision by 2006

- No registration of light contaminated sites
  - Instead classification of larger areas
  - Focusing efforts on actual risks
  - Less inconveniences for site owners
- Registration of contaminated sites
  - Classifying in 3 risk levels: no restriction, simple precautions and restricted use
  - Registration within 2 years
- 0,5 m of clean soil at domestic sites
- Registration of soil transports

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Investigation – status 2005

- Sites with proven contamination:
  - 10,991
- Sites with risk of contamination:
  - 11,852
- Additional number of sites:
  - 55,000 (estimated)
- Estimated costs of additional sites:
  - 14.3 billion DKK (incl. remediation)

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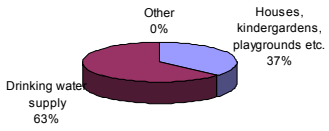
Investigation – public prioritation



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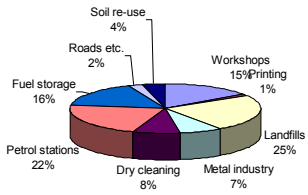
Investigation - sources of contamination



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Investigation – the next 40 years…

55,000 possibly contaminated sites

31,000 actually contaminated sites

14,000 contaminated sites in areas of priority

4,000 groundwater

10,000 human health

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Investigation - technology development

- Soil vapour monitoring
- Soil sampling and uncertainty
- Pesticide point sources
- Isotop fractioning of PCE
- Risk assessment – JAGG-tool
  - Dealing with the unsaturated zone
  - Determination of behaviour of mixtures from model compounds

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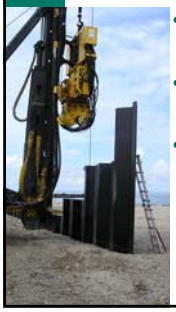
Remediation - status 2005



- Sites with remediation activities:
  - 8,349 (approx.)
- Avg. costs:
  - 0,6 – 1,4 mio. DKK/site
- Remediation techniques
  - Excavation (671.000 tons for ex situ treatment and deposit in 2005 only)
  - Pump and treat
  - Soil vapour control

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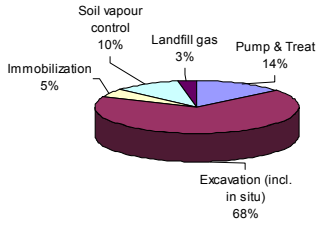
Remediation - methods



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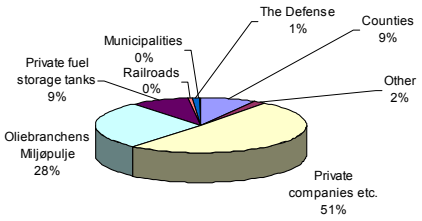
Remediation – percentage of total number of sites



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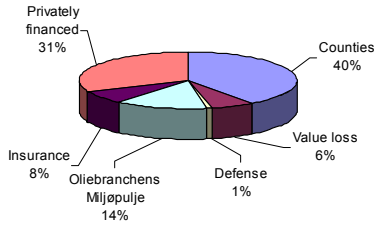
Investigation and remediation – percentage of total costs 2005



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Remediation - technology development

- Nano/micro-size iron particles
- Reductive dechlorination
- Remediation of pesticide pool
- Thermal heating
- Chemical oxidation
- Ex situ soil treatment
- Controlling soil transport
- Natural attenuation of oil, creosote

Perspective

- New organisation in 2007
- Solid legal framework – but what about EU?
- Investigation and remediation of existing sites at least 40 years ahead
- Need for improved risk assessment method to prioritize remediations
- In situ remediation – will it become more feasible?