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Polluted sites and soils in Switzerland

**Legal changes to accelerate the treatment of
polluted sites and better protect children's health**

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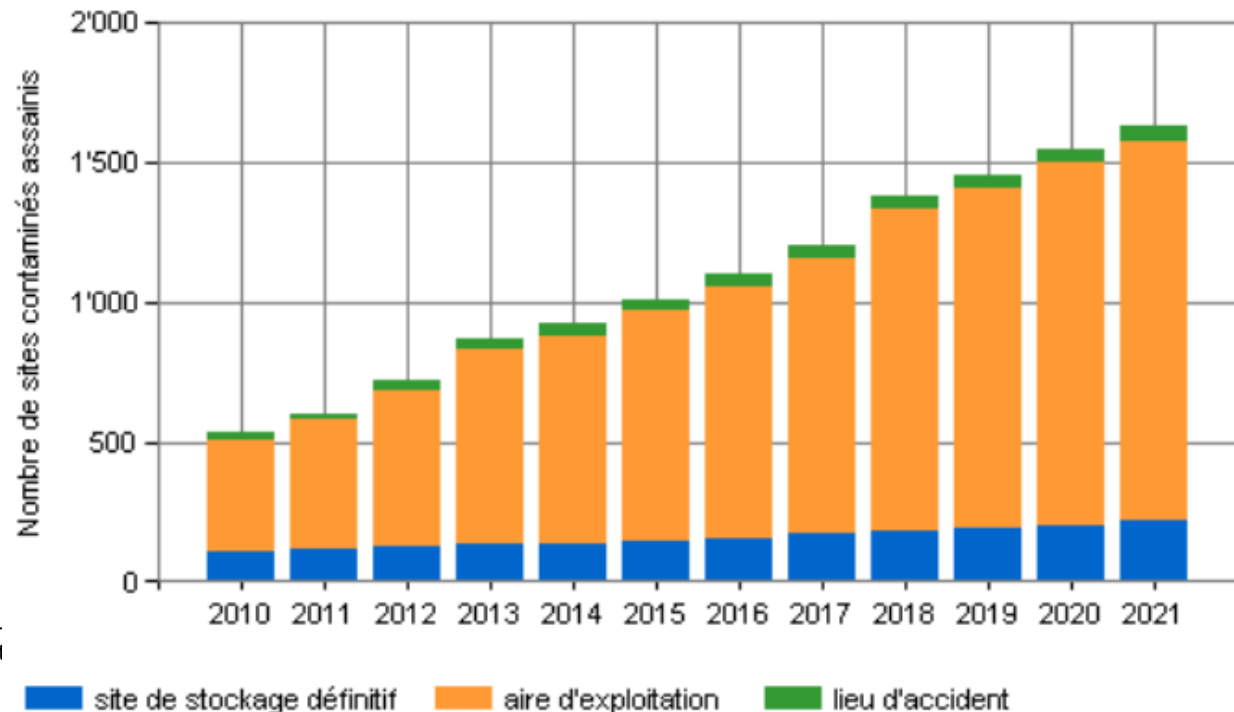
Environmental protection Act - History

- Environmental protection in the Swiss Constitution since 1972
- Environmental protection act in force since 1985
- Rules on polluted sites in force since 1997
 - Definitions
 - Required measures and their financing (specified in the ordinance on polluted sites)
 - Federal subsidies
- Some little amendments or new articles (financial guarantee)
- Since 2015 thoughts and discussions on setting deadlines
 - Concret proposal in consultation in 2021
 - Positive feedbacks
 - Treatment in parliament in 2023
 - Entry into force in 2024?



Why revise the Environmental Protection Act?

- Large cantonal differences in the prioritisation and progress of contaminated site treatment.
- The treatment of contaminated sites often reaches its limits due to the limited financial and human resources of the cantons.
- Of the approximately 4000 sites requiring remediation, 1600 have been remediated at the moment. At the current rate of progress, the target of completing the remediation of contaminated sites within a maximum of two generations (by 2050) will probably not be met.



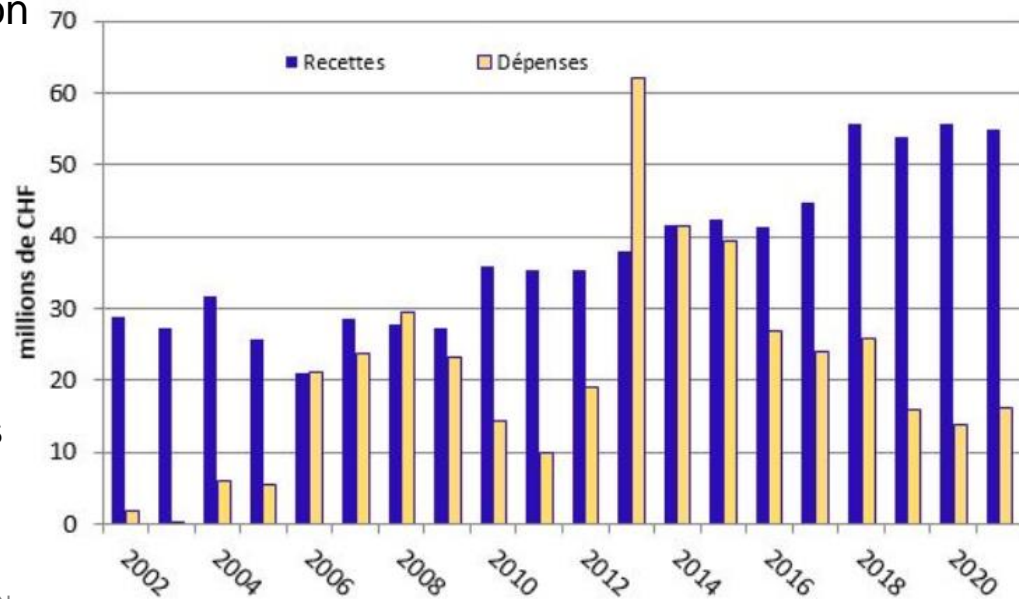


Why revise the Environmental Protection Act?

Federal Fund for the remediation of Contaminated Sites

- The fund is financed by a charge on the deposit of waste in landfills.
- The fund finances 40% of the measures (investigation, monitoring and remediation) if the site is :
 - a landfill with a significant proportion of municipal waste,
 - an orphan site or
 - a shooting range.
- Delays in remediation mean that revenues massively exceed fund expenditure, leading to an accumulation of capital in the fund.
- There are no legally binding deadlines for the remediation of contaminated sites and entitlement to federal compensation (the fund operates *ad infinitum*).
- There is a latent risk that the fund will come under political pressure in future years to finance other types of measures.

Recettes et dépenses OTAS de 2002 à 2021





Why revise the Environmental Protection Act?

Soil pollution at sites where children play regularly

- Soil, especially in urban centres, can often be contaminated with lead and other pollutants.
- Young children who ingest contaminated soil while playing can suffer permanent damage to their brain development.
- In the future, young children should not have to play on polluted soil.
- To protect them, the same rules should now apply to "diffusely polluted" soil as to sites listed in the registers of polluted sites, rather than inappropriate use restrictions.
- Polluted playgrounds have been a problem for years... there is now a consensus!



Main amendments

- Introduction of deadlines for federal subsidies:
 - 2028 (2032) for investigations and
 - 2040 (2045) for remediation.
- Increase of federal subsidies for remediation of orphan sites from 40% to 60%.
- Introduction of **additional, retroactive** fixed subsidies for the investigation and remediation of **all** polluted sites:
 - CHF 3000 for preliminary investigation
 - CHF 5000 for the remediation of shooting ranges and
 - CHF 10000 for other remediations.

These additional subsidies do not replace existing subsidies. However, there should be an incentive to deal quickly also with cases that do not fall under the federal fund.



Main amendments

- All polluted soils where children play are polluted sites (even in the case of diffuse pollution)
- Remediation required by public sites (and 60% subsidies)
- Voluntary remediation by private sites (and 40% subsidies)
- Deadlines for federal subsidies 2060
- New remediation values:

Inorganic substances

Antimony	50 mg Sb/kg	
Arsenic	50 mg As/kg	
Lead	1000 mg Pb/kg	300 mg/kg
Cadmium	20 mg Cd/kg	
Chromium (VI)	100 mg CrVI/kg	
Copper	1000 mg Cu/kg	
Nickel	1000 mg Ni/kg	
Mercury	2 mg Hg/kg	
Silver	500 mg Ag/kg	
Zinc	2000 mg Zn/kg	



Main amendments

Inorganic substances

Volatile chlorinated hydrocarbons*
Polychlorinated biphenyls (PCBs)**

1 mg/kg
1 mg/kg

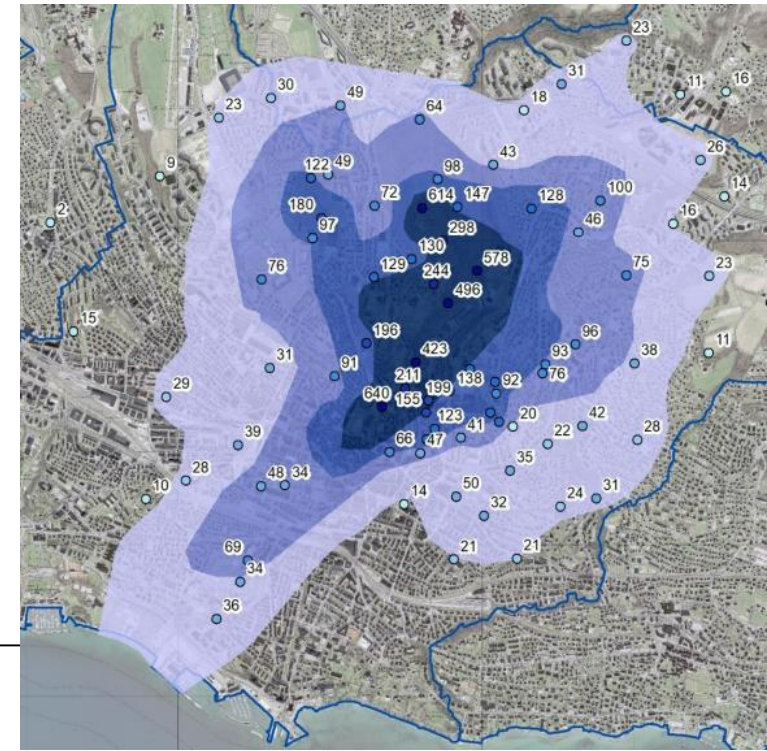
Dioxin

20 ng TEQ/kg

Benzene
Polycyclic aromatic hydrocarbons (PAHs)*****
Benzo[a]pyrene

1 mg/kg
~~100 mg/kg~~ **10 mg/kg**
~~10 mg/kg~~ **1 mg/kg**

Large soil pollution with dioxin!
Current challenge: finding remediation
methods that preserve soil functions.





Main amendments

The macroeconomic consequences of the proposal for polluted soils have been assessed:

- There is a need for action.
- Public action is justified.
- Intervention is very limited with regard to private surfaces, with the result that 'only' a small proportion of young children will be protected from potential health hazards.
- Households and local businesses (works) benefit from the proposal.
- From a purely monetary point of view, the costs (investigations, remediation) outweigh the direct gains (health costs, increased property values) and indirect gains (prevention of IQ reduction leading to loss of income and taxes).
- From an ethical point of view, a simple cost-benefit analysis is problematic, as it concerns long-term risks for young children, with potentially important consequences that are not yet known.



Thank you for your attention!

Questions?