



Soil & Groundwater Regulations in Germany

Legal Framework and Best Practice for Investigation, Risk Assessment and Remediation

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September 25, 2019



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Agenda

- (1) Legal Framework
- (2) Implementation
- (3) What you “Need to Know”

(1) The Legal Framework

- **Federal Soil Protection Act (BBodSchG)**
initial version March 17th 1998, latest revision 2017
Bundes-Bodenschutzgesetz - <https://germanlawarchive.iuscomp.org/?p=322>
- **Federal Soil Protection and Contaminated Sites Ordinance (BBodSchV)**
initial version July 12th 1999, latest revision 2017
Bundes-Bodenschutz- und Altlastenverordnung
- **Federal Water Resources Management Act (WHG) 2002**
Wasserhaushaltsgesetz

(1) The Legal Framework

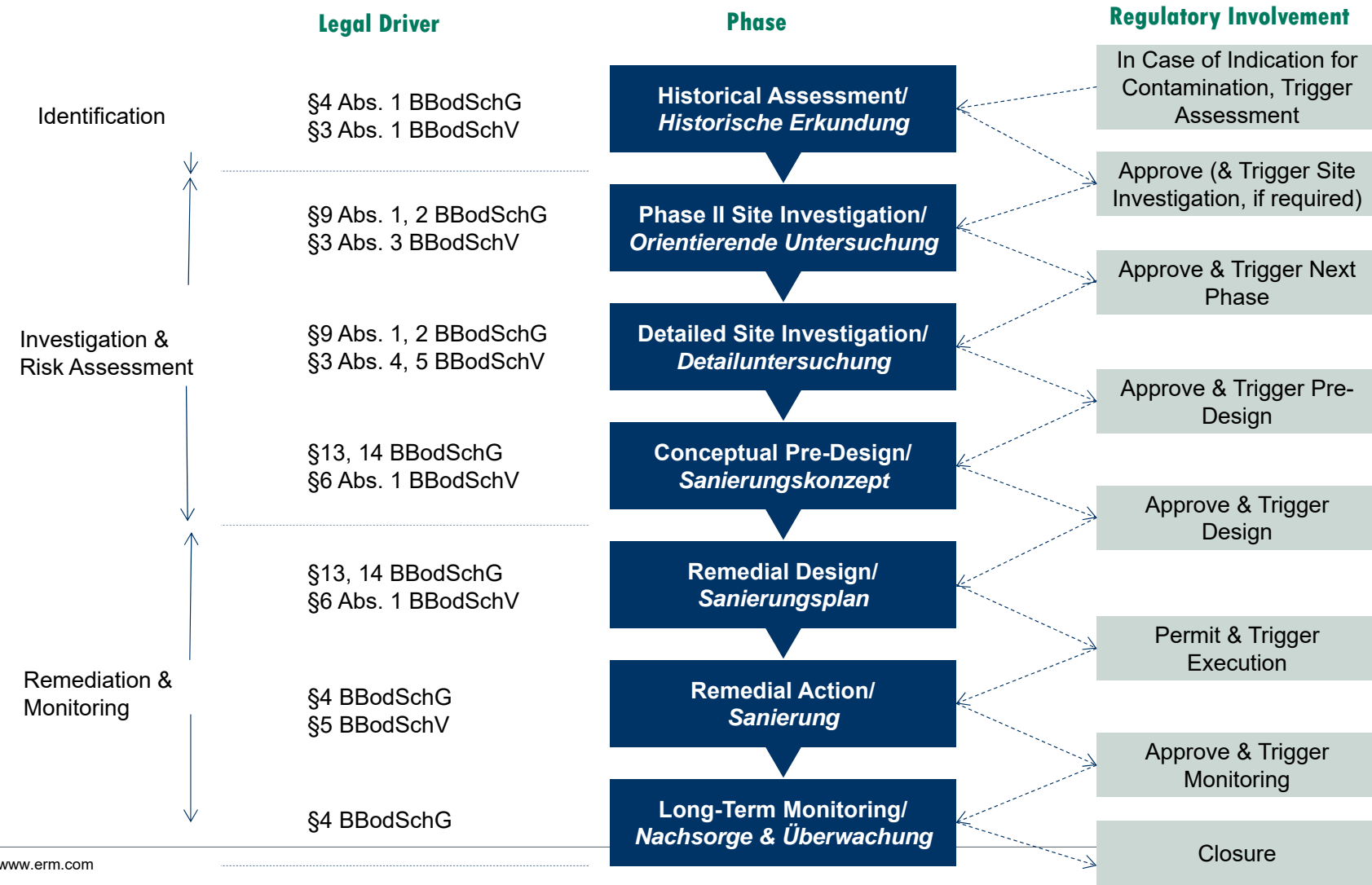
The **overall objectives** of Act (BBodSchG) and the corresponding Ordinance (BBodSchV), is:

- Preventive Soil Protection - “*vorsorgender Bodenschutz*”
- Prevention of hazards – “*Gefahrenabwehr*”

Also defines the framework for:

- Identification: is there a suspicion for an impact to soil (or groundwater)
- Site investigation and Risk Assessment
- Remediation & Monitoring

(2) Implementation



(3) What you “Need to know” – Who is responsible?

The “polluter pays” principle does apply in Germany

However - Reality is not that simple

Who can be held responsible/liable if polluter does no longer exist or can't be identified:

- Legal successor of polluter
- Site owner or its entitled representative
- Buyers and investors
- Vendors



Regulator can select anyone from this list.

(3) What you “Need to know”

Governmental control of Site investigation & Remediation is with the Federal States Environmental Authorities (16 states)

County administration controls implementation (294 counties “Landkreise”)

Takeaways:

- Federal states have established own implementation protocols and guidance documents
- They are not consistent – be aware where you are!
- County administration decides, federal state agencies provide them with guidance & advice on request



Germany, administrative divisions - de - colored.svg (von TUBS)
<https://commons.wikimedia.org/w/index.php?curid=29273127>

(3) What you “Need to know” – Risk Assessment

Generic Risk Assessment - pathway specific:

Soil – Human Health (depending on land use: industry, leisure, housing, play ground for kids)

Soil – Groundwater

Soil – Crop Plant

Takeaways:

- Groundwater is a sensitive receptor per se and can trigger the need for remediation (even without any risk to humans)
- Federal states have issued additional reference values that are not regulated on federal level
- Contaminant Mass Flux in groundwater increasingly important
- Reporting needs regarding identified contaminants are state specific (there is an obligation in almost every state)

(3) What you “Need to know” – Risk Assessment

Generic Risk Assessment → compare measurements vs. reference values

Quantitative Risk Assessment not common (but can be used)

Takeaways:

- Risk assessment is always site specific
- Quantitative (ASTM type) risk assessment not common, regulators follow federal state guidance, usually a verbal argumentation
- Contaminant Mass Flux in groundwater increasingly important
- Risk Assessment has to be endorsed by regulator – consultant recommends

(3) What you “Need to know” – Remediation

Any measure or approach that is suitable to mitigate the identified risks

→ decontamination, destruction of contaminants, containment

Any remediation must be suitable, necessary and proportional

Takeaways:

- Regulator cannot dictate remedial technologies
- Recommend to always establish site specific remedial targets
- Recommend to enter into an agreement under public law
 - defining objectives, remedial measures, end-point and how this is determined
- Keep waste law in mind ! Excavated contaminated soil is waste and waste law applies (different thresholds with specific recycling and disposal needs)

Thank you very much!

Any questions?

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