

The contaminated sites management in Romania

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**Ministry of Environment and Sustainable
Development**

Directorate of Soil, Subsoil

The structure of the Ministry of Environment and Sustainable Development regarding the soil subsoil field

- Department of Environment Protection
- General Directorate of Soil, Subsoil, Waste Management
- Directorate of Soil, Subsoil
- Unit of Contaminated Lands

**Governmental Decision
regarding the survey
modalities and evaluation of
the soil and subsoil pollution**

The survey of the geological environment for the evaluation of the contamination is realized by specific geological and soils science methods, established by the investigator, depending on the geological features of the polluted formations, pollutant nature and its distribution on the surface and vertical.

The minimum package of methods will content the geological and/or hydrogeological, geochemical and geophysical survey.

The survey and evaluation of the soil and subsoil pollution represents the operator's / owner of the land obligation and responsibility which carried or/and carry on polluting activities or/and potential polluting activities for the geological environment.

The survey and evaluation for the soil and subsoil pollution will be executed in the following conditions:

a) to the observation of a pollution which represents a potential risk for human health and environment;

b) to the elaboration of the environment balance;

c) to the determination of the environment obligations in the case of changing of the land status where there was carried on a polluting activity;

d) to the identification of a potential polluting source of the soil and subsoil;

e) periodically, in order to check the evolution in time of the contaminated sites, whose remediation is achieved via natural attenuation, bioremediation, or remediation methods of great lengths;

f) for monitoring the sites at the end of platforms/ cleaning projects/ remediation/ ecological reconstruction

g) after accidents that lead to the pollution of the earth, after the removal of the source and pollutants overflowed in the geological environment.

The financing of the investigation works and of the works for the evaluation of the degree of pollution of the geological environment is sponsored by the operator or landlord, in the case of current and historical pollutions, or from budget funds and external sources for contaminated sites that are orphan and abandoned.

Given the order of the central public authority for the protection of the environment, the following are approved within 9 months of the publication of the current decision:

- the list of the historically contaminated sites, orphan, and abandoned
- the list of the currently contaminated sites, which will be periodically actualized.

The investigation and evaluation of the pollution of the geological environment for emplacement and adjacent areas goes through the following steps:

- the analysis and interpretation of the existent data
- the preliminary investigation and evaluation
- the detailed investigation and evaluation

The operator/ land owner, using his/her own specialty knowledge, or via physical or certified juridical persons, must write a geological report of investigation and preliminary evaluation of the polluting of the geological environment. This report must be presented to the appropriate authority for the protection of the environment.

After the analysis of the final geological report of investigation and evaluation of the pollution of the geological environment, the appropriate authority for the protection of the environment decides if the pollution of the geological environment from emplacement has a significant impact on the environment and people's health and if it requires that the operator/ landlord elaborates a study of the risk factors, according to the specific current legislation.

After the analysis, the appropriate authority for the protection of the environment decides on the rebuilding of the geological environment and notifies the operator/ landlord about the general conditions for achieving this.

**Governmental Decision
regarding the remediation of
the areas in which the soil,
subsoil, and terrestrial
ecosystems have been affected**

The central public authority for the protection of the environment, via its subordinate or adjacent institutions, establishes the necessity for the remediation of the areas in which the geological environment and terrestrial ecosystems have been affected.

The central public authority for the protection of the environment, via its subordinate or adjacent institutions, monitors and controls the application of the measures written in the platforms and cleaning projects or projects for remediation or ecological reconstruction.

The appropriate authority for the protection of the environment decides on the priority of the affected areas, which necessitate the remediation of the geological environment, according to the established criteria written in the technical guide, which will be released within 12 months from the publication of the current decision.

The appropriate authority for the protection of the environment approves local platforms and projects for the rebuilding of the geological environment.

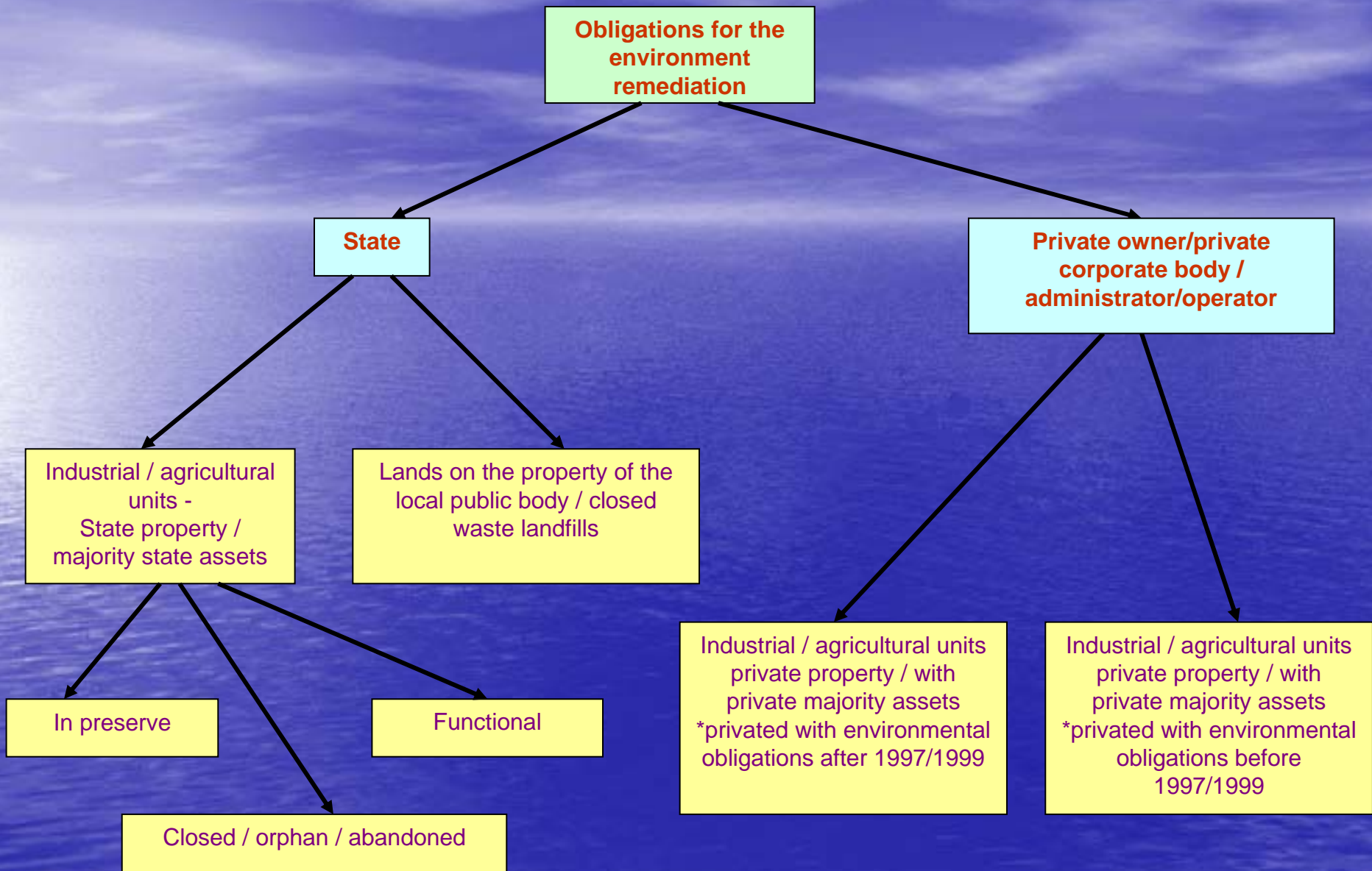
The rebuilding of the geological environment and affected terrestrial ecosystems consists in bringing these back as close as possible to their natural state, by applying the steps in the cleaning projects/ remediation projects/ ecological reconstruction projects, complementary and compensatory, and the elimination of any significant impact risk, according to the soil's category of usage.

The methodologies for the rebuilding of the geological environment are established at the end of the analysis of the final geological report of investigation and evaluation of the pollution of the geological environment, along with the risk assessment, the following being taken into consideration:

- a) the features and functions of the soil/ geological formations/ underground waters;
- b) type and concentration, along with the degree of risk of the pollutants, and of the noxious organisms or micro-organisms;

- c) pollutants' distribution in the geological environment;
- d) the volume of the polluted soil or subsoil, which necessitates treatment; its localization, depth, and accessibility;
- e) the objectives for the rebuilding of the geological environment and the interval of time necessary for attaining them;
- f) the cost/benefit ratio of the methodologies for the rebuilding of the geological environment;
- g) the destination of the land after the rebuilding of the geological environment and the possibility to use it, taking into account the area's potential for development/ the land's projected future use.

The operator or land owner must execute the steps written in the platform or project for cleaning or remediation or ecological reconstruction at the end of the activity and/or when the destination of the land is changed.



Contaminated sites in Romania

(according NEPA)

The categorization of contaminated sites in accordance to activity types that have polluting effects

- ***siderurgy, ferrous and non-ferrous metallurgy*** - 8 contaminated sites with a total surface area of 89961,60 ha;
- ***extractive industry*** - 170 contaminated sites with a total surface of 2725,46 ha;
- ***oil industry*** - (including extracting areas, separating areas, transportation pipelines, processing units, deposits, wethers of oil waste, PECO stations etc.) - 232 contaminated sites with a total surface of 2664,78 ha;
- ***electrical energy*** - 10 contaminated sites with a total surface of 1700, 28 ha;
- ***industrial waste deposits*** - (chemical industry, car building industry, building materials etc) - 110 contaminated sites with a total surface of 954,92 ha;
- ***municipal waste deposits*** - 475 contaminated sites with a total surface of 684,62 ha;
- ***agricultural farms*** - 47 contaminated sites with a total surface of 30,90 ha.

Conclusions I

- The necessity for the elaboration and implementation of a legislation for the department of soil and subsoil, which will tackle the investigation in the geological environment and the application of the steps towards remediation
- The improvement of the organizational structure at the NEPA/ REPA/ LEPA level, which has to do with the improvement of professional ability in regard to issues concerning soil and subsoil
- The promotion of district platforms and projects for the investigation, characterization and evaluation of contaminated areas/sites, as well as for the application of local platforms for ecological cleaning/remediation

Conclusions II

- For the Romanian, European, and international mass-media, we believe that it is important to know the official directions of development for the Ministry of Environment's activities for the environment factor 'land = soil + subsoil = geological environment', as well as our intentions for using modern methods of geological investigation in the area of environment protection and the promotion of modern technologies for ecological reconstruction
- Based on the current strategy and platforms, we estimate that in approximately one year, the market for geological works for environment protection will develop significantly
- The Romanian market will completely open up after adhering to the European Union, including the market for specialty works in the department of environment
- The Ministry of Environment is already open to any foreign contacts, consultations, and collaborations

**THANK YOU
FOR YOUR
ATTENTION!**

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