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SLOVAK ENVIRONMENT AGENCY

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is implementing an activity

INTERNATIONAL CONFERENCE
CONTAMINATED SITES
ZNEČISTENÉ ÚZEMIA
MEDZINÁRODNÁ KONFERENCIA

INTERNATIONAL CONFERENCE

CONTAMINATED SITES 2022

TRNAVA, SLOVAK REPUBLIC, 12 – 14 OCTOBER 2022

The activity has been implemented within the framework of national project
Information and providing advice on improving the quality of environment in Slovakia.
The project is cofinanced by Cohesion Fund of the EU under Operational programme Quality of Environment.

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PROGRESS IN MANAGEMENT OF CONTAMINATED SITES IN THE REPUBLIC OF SERBIA 2021

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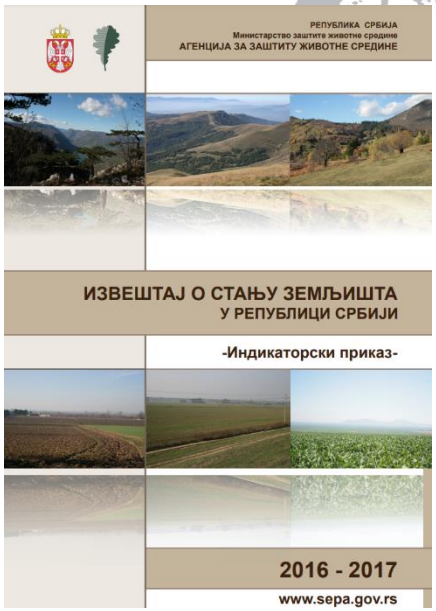
MINISTRY OF ENVIRONMENT OF THE SLOVAK REPUBLIC

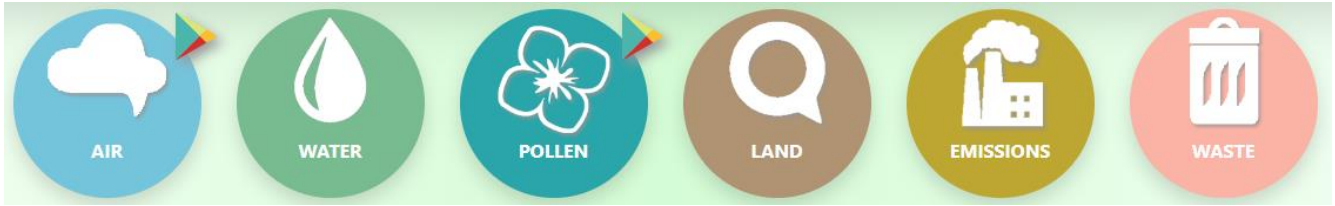
SLOVAK ENVIRONMENT AGENCY

Serbian Environmental Protection Agency (SEPA)

The Serbian Environmental Protection Agency is an administrative body within the Ministry of Environmental Protection, and performs state administration tasks related to:

- Development and management of the national environmental protection information system
- Implementation of state monitoring of air, water, soil quality and allergenic pollens
- Collection of environmental data, their processing and preparation of reports on the state of the environment
- Management of Cadaster of contaminated sites
- Cooperation with the European Environmental Protection Agency (EEA) and the European Information and Observation Network (EIONET)





ARUP

- **Arup** was established in 1946 and employs more than 16,000 people in 140 countries.
- The Belgrade office was founded in 2007 and is part of Poland&Serbia Group.

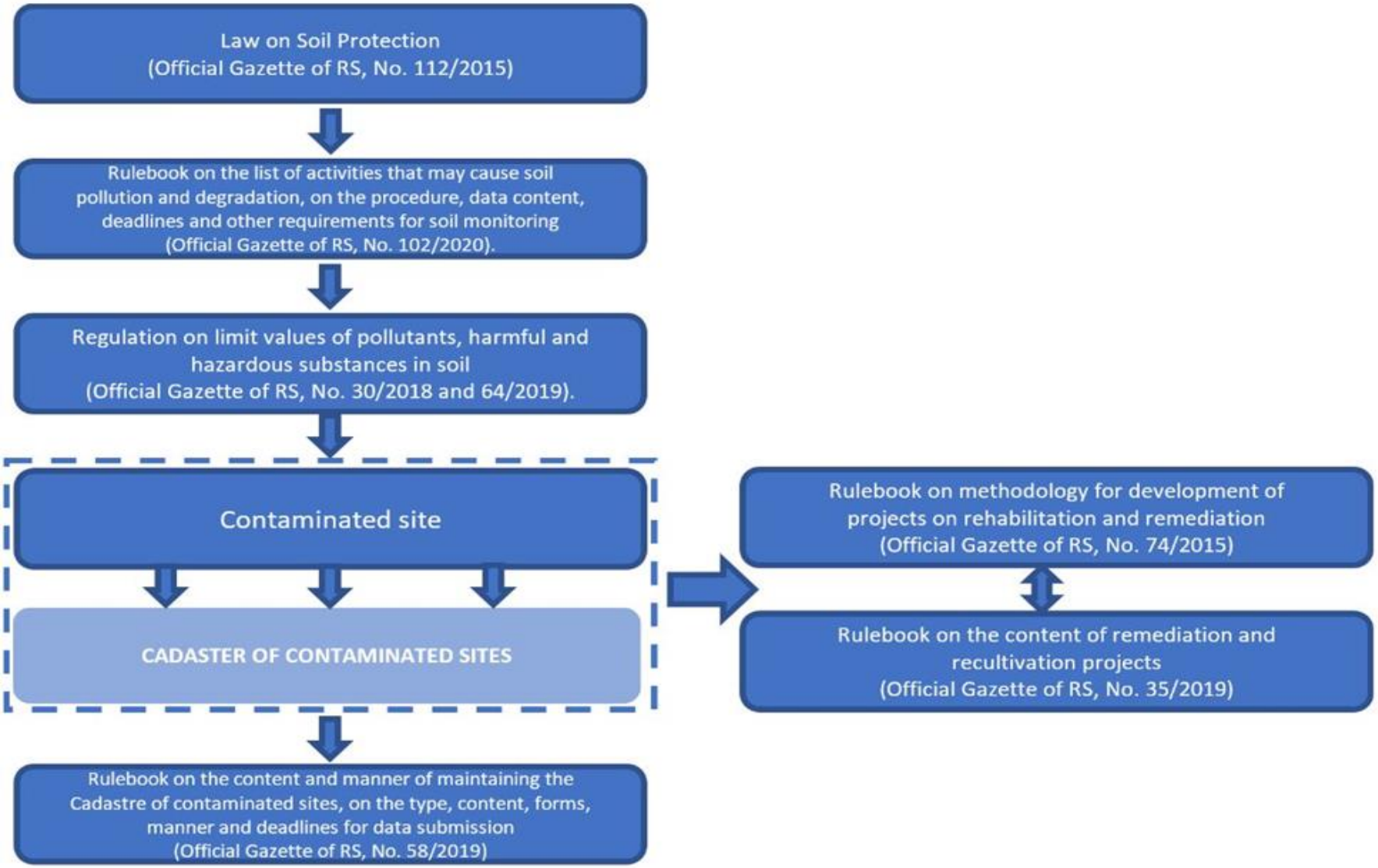
Belgrade office is focused on infrastructure projects in transport, water and wastewater, solid waste, energy and traffic industries. Arup is involved in all phases of project development and implementation, mainly from the aspect of assessing and monitoring socio-economic and environmental impacts.

Land and Soil Resources in Legislative Context

- Law on Environmental Protection (2004);
- Law on Soil Protection (2015);

- Regulation on systematic monitoring of the condition and quality of soil (2020);
- Regulation on limit values of polluting, harmful and dangerous substances in soil (2019);
- Regulation on the list of activities that may be the cause of soil pollution and degradation, procedure, data content, deadlines and other requirements for soil monitoring (2020);
- Regulation on the content of remediation and reclamation projects (2019);
- Rulebook on the content and manner of keeping the Cadaster of Contaminated Sites, as well as type, content and forms, manner and deadlines for delivering the data (2019).

Legal framework for contaminated sites management in Serbia



Article 34
Law on Soil Protection

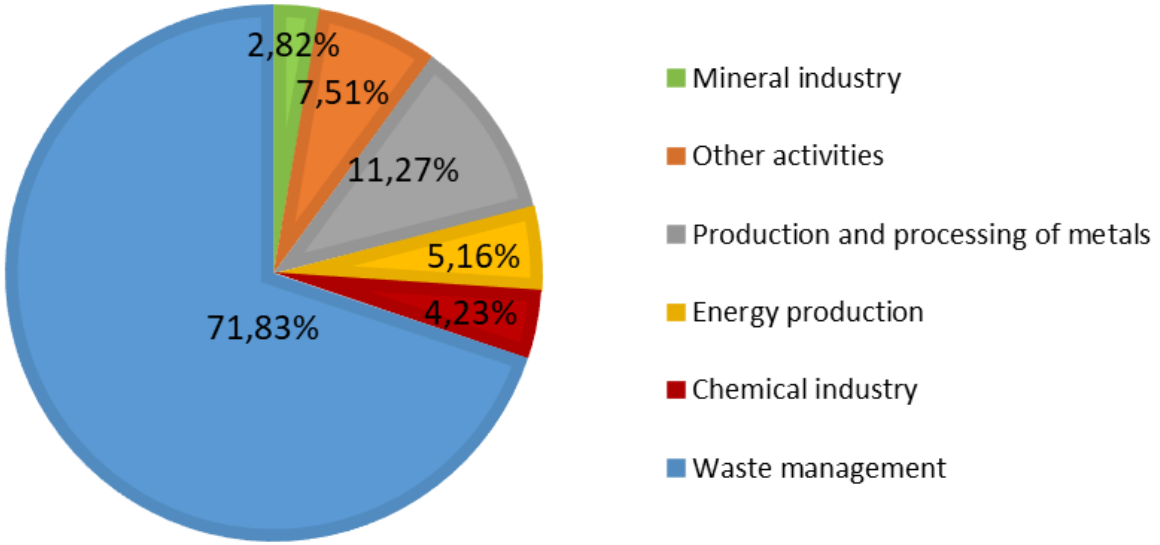
Cadaster of contaminated sites is:

- A database of polluted, endangered and degraded soils;
- The main purpose of the Cadastre is to provide systematic data on sources of pollution such as the type, quantities, methods, and location of discharges of pollutants into the soil, in order to implement preventive or remediation measures.
- An integral part of the Environmental Protection Information System administered by the Environmental Protection Agency;
- State organizations, local authorities, and polluters are obliged to provide information about the quality and state of the soil to the Environmental Protection Agency.

Cadastre of contaminated sites (2020)

- 213 sites are identified until now. Activities that are carried out on these locations are regulated by the Rulebook on the list of activities that may cause soil pollution and degradation, on the procedure, data content, deadlines, and other requirements for soil monitoring ("Official Gazette of RS", No. 102/2020).
- The report on soil monitoring was submitted by 21 companies
- Waste disposal sites have the largest share of **71.83 %** in the total number of sites.
- Total of 850,000 tons of municipal waste was landfilled at twelve sanitary landfills in Serbia, covering 42% of the population of the Republic of Serbia in 2021.

Share of main localised sources of soil pollution in the total number of identified sites (%)



The Integrated system for environmental monitoring and reporting

The National List of Indicators contains the methodology of Data Collection, the Manner and Time Frames for Submitting Data, Information, Indicators and Reports in the Information System.

Indicators: Soil

Thematic area: pressures

1**. Progress in management of contaminated sites**

2. Soil eroson

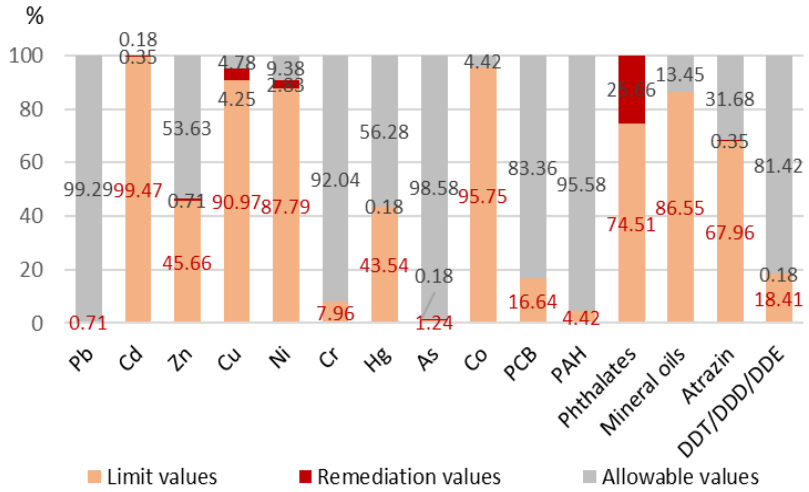
3. Land take

Thematic area: state

4. Soil organic carbon

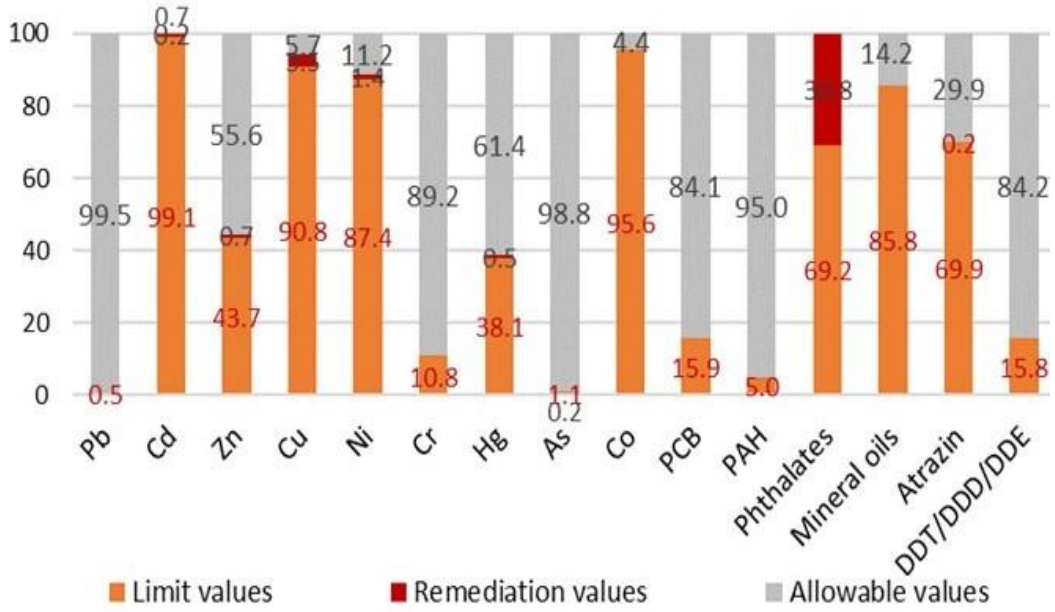
SOIL ANALISYS IN THE SURROUNDINGS OF DUMPSITES IN VOJVODINA REGION

- Degree of endangerment of non-agricultural land from chemical pollution in 30 municipalities and cities, at 113 illegal dumpsites.
- 1,130 soil samples were analysed



Percentage of exceedances at depths of 0-30 cm in the central points of the dumpsites

SOIL ANALISYS IN THE SURROUNDINGS OF DUMPSITES IN VOJVODINA REGION

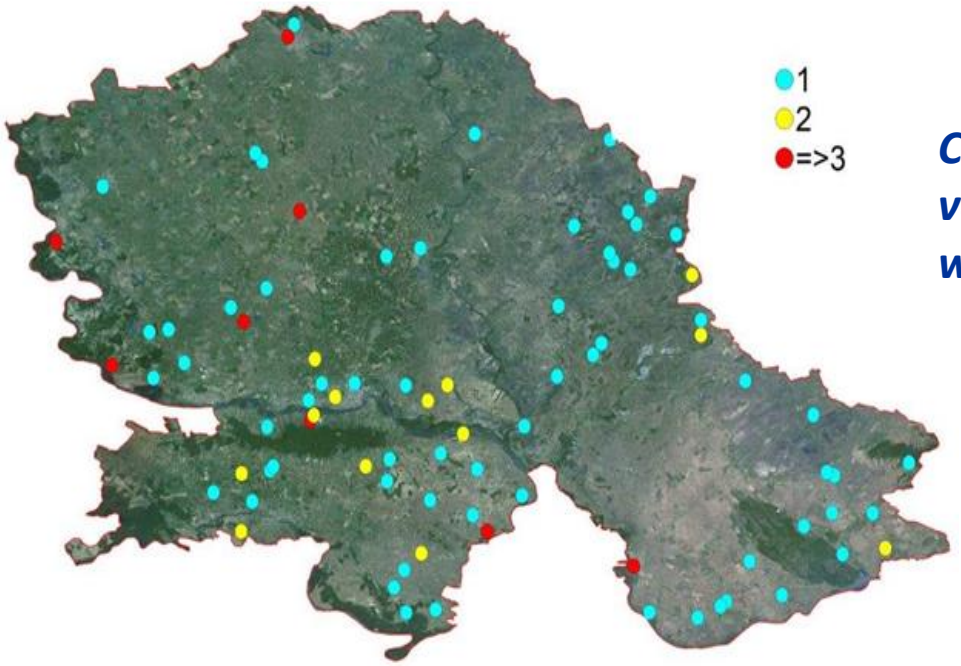


Percentage of exceedances at depths of 30-60 cm in the central points of the dumpsites

Results

- The analysis of heavy metal content in soil samples showed that remediation values were exceeded for cadmium, zinc, copper, nickel, mercury, and arsenic;
- Analysis of the pesticide content and their metabolites in soil samples showed that remediation values were exceeded for DDE/DDD/DDT and atrazine;
- Concentrations of total PCBs, PAHs and mineral oils exceeded the limit values, but did not exceed the remediation values;
- Analysis of the content of phthalate esters shows that the content of phthalate esters is higher than the remediation value in 319 out of a total of 1,130 samples – more than 25% of total samples (State of the Environment Report for 2020, SEPA, 2021).

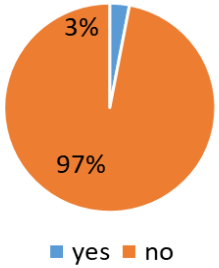
Results



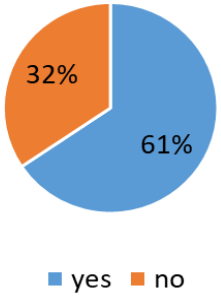
Contaminated sites where remediation values (RV) of individual elements were exceeded

Basic characteristics of dumpsites that refer to potential soil pollution

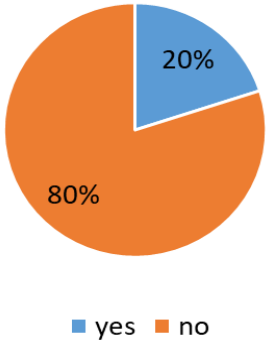
Is there a leachate treatment system in place (93)?



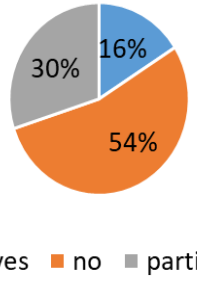
Has a remediation, closing down and recultivation project been developed (93)?



Is the site loacted on the floodplain (93)?



Are there any works related to the remediation, closing down and recultivation project on the site (61)?



Projects related to Contaminated sites

- **GEF-funded project "Enhanced Cross-sectoral Land Management through Land Use Pressure Reduction and Planning" - (2015 – 2019) – Implemented by UN Environment Programme in close cooperation with Ministry of Environmental Protection and SEPA and with support of Italian Ministry for the Environment, Land and Sea.**
- Project Duration: October 2015 – June 2019.
  - Capacity Building for Investigation of Contaminated Sites
  - Sampling and analysis of specific pollutants ongoing at 32 sites
  - Development of Characterisation Plans for abandoned chemical industries
  - Application of PRA.MS methodology for preliminary risk assessment to human health and environment
  - Development of the Cadaster of Contaminated Sites – upgrade to SEPA's information system
- **UNIDO project "Environmentally sound management and final disposal of PCBs in Serbia" – PCB contaminarted sites**
- **"Strengthening Serbian national capacities and inter-sectorial synergies for safe management of contaminated sites and related hazardous substances to prevent negative impact on human health and the environment" - UN Environment, WHO**
- **Implementation of the Green Agenda in Western Balkan**

Capacity building

[360° video] UN Environment rolls up its sleeves to clean up contaminated sites, Serbia

euronews (in English)
5 months ago • 761 views
This Euronews 360 video takes you into the so-called 'ghost cities' where abandoned factories risk damaging health in Serbia.

4K 360°

CONCLUSION

- The results of improved legislation and cooperation between different UN Agencies, ministries, scientific and other organisations include the improved contaminated sites data management and developed capacity for the investigation of contaminated sites.

- When talking about actual remediation (which was the ultimate longer-term aim of all projects), financial sustainability is limited and depends largely on external funding.

- Key staff and institutions suffer from funding and budget limitations.

Thank you for your attention!