

# Sub-regional workshop on land-use planning and industrial safety (South-Eastern Europe)

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Exchange of experiences and good practices:  
implementation of and integration between land-use  
planning and industrial safety in the framework of  
the SDGs – the case of Serbia

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# SDG implementation

- **The objectives** of the Sustainable Urban Development Strategy of the Republic of Serbia until 2030 (adopted in 2019), are **in line with the SDG 11**
- Of totally **40 indicators** for monitoring and evaluation the Strategy implementation, **12 are SDG 11** indicators
- One indicator for monitoring is "**Disaster-affected population and disaster-related material costs**"
- STRATEGIC DIRECTION IV: ENVIRONMENTAL QUALITY - Set of measures 4.2: Adaptation to climate changes and establishment of a system for emergency response to incidents and hazardous situations in urban settlements, and particularly Measure **4.2.6 Prevention of major chemical accidents** and limitation of consequences for human health and the environment in policies for planning and achieving urban development (existing and planned SEVESO complexes)
- PRIORITY AREA OF INTERVENTION 5 - Settlements or parts of settlements exposed to environmental problems and climate change
- **Type of areas:**
  - **Impact zones of environmentally hazardous activities**
- Character of interventions:
  - Establishment of a **monitoring system and response to risks and accidents**
  - Implementation of interventions and activities defined through **local environmental action plans**
  - Implementation of action plans in **the field of prevention** and response to climate change in local development and environmental policies

# Overview of legislation on industrial safety in relation to land-use planning/siting of hazardous activities

- **Law on Environmental Protection** and its bylaws give framework for management of industrial safety, partially **aligned with EU Seveso directive**.
- **Law on ratification of Convention on the Transboundary Effects of Industrial Accidents** gives framework for implementation.
- **Current environmental legislation is not fully aligned with relevant requests for spatial planning and siting of hazardous activities (Art. 7 of Convention)**, but it has a provision that enforces giving conditions and measures for identifying areas where appropriate distances will be maintained over the long term, between facilities where one or more hazardous substances are present or may be present in quantities larger than the prescribed, and residential areas, public spaces, as well as areas of special importance, for the protection of the life and health of humans and the environment.
- **Provisions of article 7** of the Industrial Accidents Convention are implement via **SEA transboundary consultation process**.



<http://www.unece.org/environmental-policy/conventions/industrial-accidents/about-us/envteiaabout/more.html>

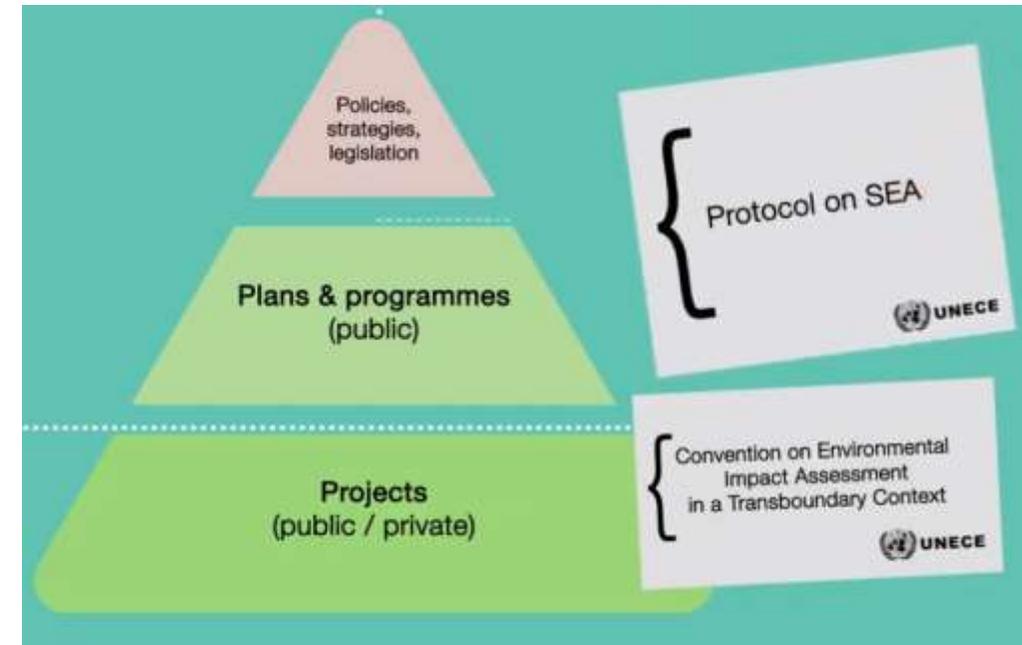
# Application of EIA/SEA when implementing industrial safety and land-use planning measures

## SEA

- For purpose of adopting spatial plans on national level there is obligation to prepare SEA.
- Different planning solutions are examined from the perspective of the SEA objectives and on this basis it selects the best solution. **Problem is that sometimes objectives of SEA are generally formulated** and don't include data on impact of potential accidents, particularly regarding major accident hazards.

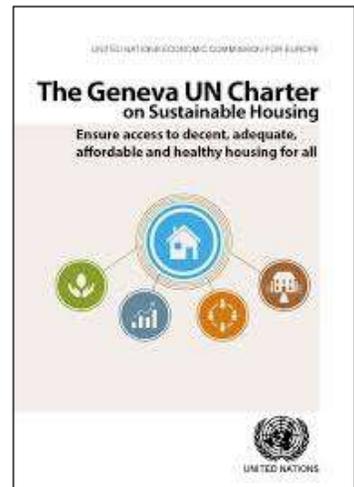
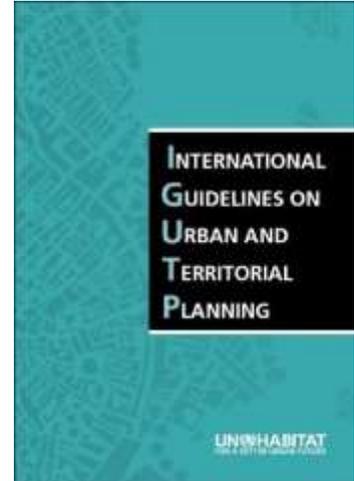
## EIA

- If EIA is developed for activity with dangerous substances present, or for project near such activity, EIA must have a chapter regarding major accident hazards.
- Safety experts are sometimes included in EIA process.



# Strategic framework for land-use planning and the siting of hazardous activities

- ❑ The umbrella strategic document for spatial planning was adopted in 2010 by the **Law on the Spatial Plan of the Republic of Serbia** («Official Gazette of the Republic of Serbia», No. 88/10),
- Part V - Spatial Development of the Republic of Serbia 2010–2014–2020, in section:
  - 1.2.1, which relates to the element of environment, prescribes that concept of environmental protection and improvement, inter alia, based on **“Protective zones and protective distances around objects with increased pollution and risk to the environment and human health”**
  - 1.3.6, which relates to the **natural disaster and technological accidents**, provides basic information on technological accidents in the past (transport of dangerous goods and bombing in 1999) and proposes a concept and measures to improve the situation, in terms of the need to **develop risk maps, improve legislation and strengthen institutions.**
- Chapter VI, Spatial Integration of the Republic of Serbia - **defines the spatial and functional aspects of RS integration with neighboring and EU countries**
- ❑ **The International Guidelines on Urban and Territorial Planning and the UN Geneva Charter on Sustainable Housing, have been translated into Serbian and the main principles have been incorporated into national strategic documents in the relevant field, the Sustainable Urban Development Strategy and the Draft National Housing Policy. It should be emphasized, however, that appropriate implementation instruments are lacking**



# Overview of legislation and institutional structures on land-use planning and the siting of hazardous activities

- **Law on Planning and Construction** (“«Official Gazette RS, No. 72/09, 81/09-corr., 24/11, 121/12, 42/13-CC, 50/13-CC, 98/13, 132/14, 145/14 83/18, 31/19, 37/19, 9/20 and 52/21), prescribes:
  - **Mandatory content of territorial/spatial and urban plans:**
    - Environment protection measures are integral part of any spatial plan and planning rules in urban plans;
    - **Spatial plans contain report of SEA as part of documentation basis**, which affects to the formulation of measures;
  - **Environmental Impact Assessment as a part of conditions on siting in the General Project;**
  - **Mandatory Environmental Impact Assessment** for large infrastructure facilities, inter alia **Seveso facilities and complex;**
- The LPC stipulates that the issuance of a construction permit for facilities under the jurisdiction of the RS, referred to in **Article 133**, **requires the preparation of a preliminary feasibility study**, which **includes an EIA** within the general project, **but not for facilities for which location conditions can be issued basis of the planning document.**
- Conditions from the point of view of environmental protection are also contained in the provisions governing the procedure for **issuing building permits, technical / professional control, removal and inspection of constructed buildings, inspection supervision.**

# Linkages between the industrial safety and land-use planning procedures

Linkages between industrial safety and land-use planning procedures:

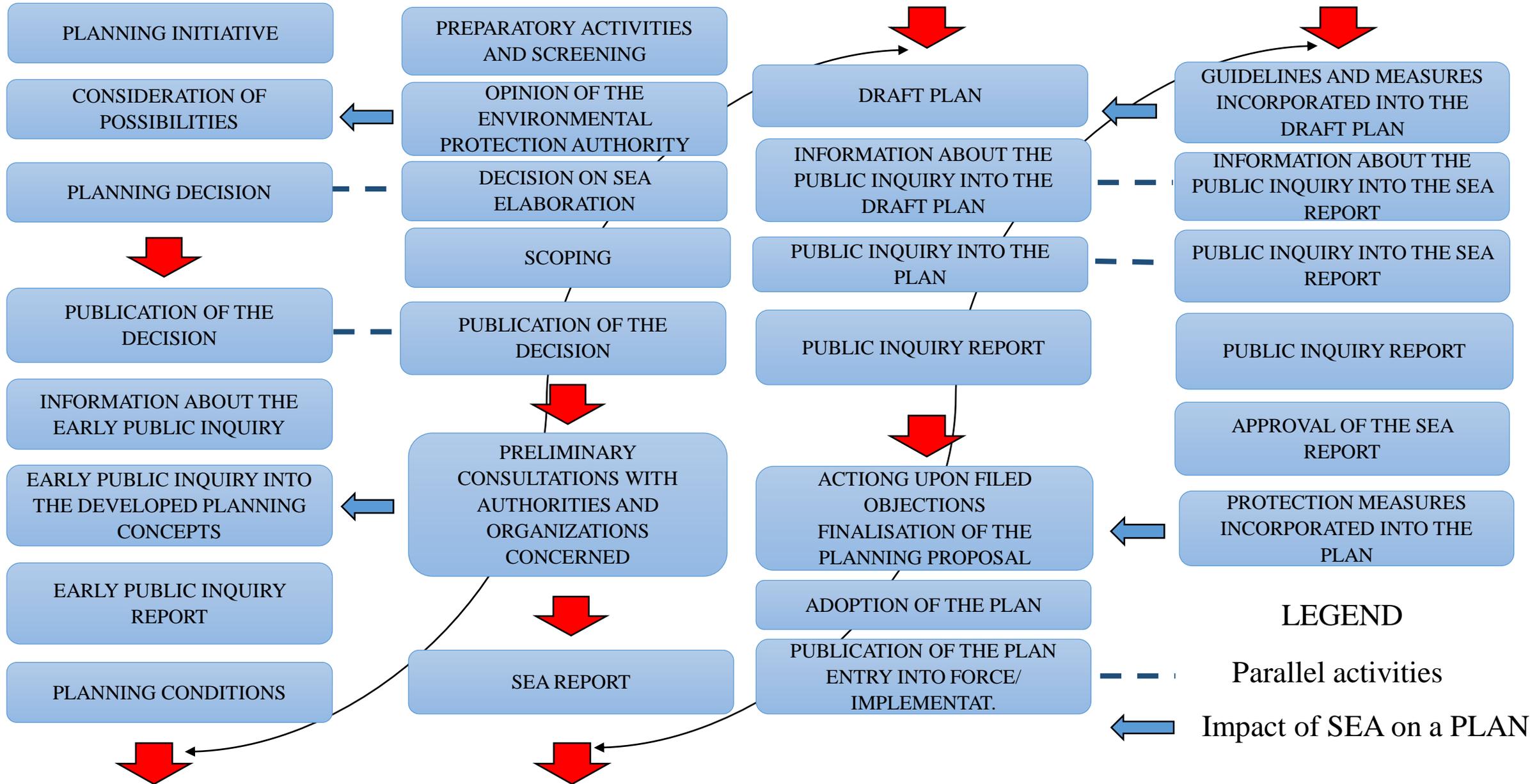
- Art.15, 18, 20. and 21 prescribes content of planning documents, which mandatory includes “environmental protected measures” and that “ The Strategic Environmental Impact Assessment report is an integral part of the documentation basis of the planning document”
- Art. 46 – prior to making a decision on the plan preparation holder of the drafting plan obtain the opinion of the competent authority for environmental protection regarding the need to prepare SEA;
- Art. 53. - prescribes the possibility of issuing location information containing data on the possibilities and limitations for construction on the cadastral parcel
- Art. 55 – prescribes the content of siting conditions which include the condition on obtaining or not obtaining a study on environmental impact assessment (EIA);
- Art. 117 – General project is part of preliminary feasibility study which prepare also for Seveso buildings and mandatory includes EIA;
- Art. 129 – technical control of project and construction products includes effect to the environment;
- Art. 132 – professional control of buildings includes effect to environment;
- Art. 133 – in point 4a) it is prescribed that MCTI issues a permit for SEVESO
- Art. 156 – if there was necessary to prepare EIA for construction, expert for subject area participate in technical control for purpose of issuing use permit, but not this expert who participate in preparation of the EIA;
- Art. 175-177 – Rights and duties of construction inspector also include supervision regarding the aspect of environmental threats.

## PLANNING PROCEDURE

## SEA PROCEDURE

## PLANNING PROCEDURE

## SEA PROCEDURE



# Overview of institutional structures on land-use planning and the siting of hazardous activities

## NATIONAL LEVEL

- **MCTI issuing acts of siting conditions** and building and use permits for large infrastructure facilities, which also include **Seveso establishments**;
- **Ministry of Environmental Protection gives consent to EIA, SEA and Safety report**

## LOCAL LEVEL

- The local self-government is responsible for issuing acts on location conditions, as well as for construction and use permits for certain types of facilities (based on local spatial plan, general regulation plan or detailed regulation plan) for which impact assessment analyzes are performed, but not for Seveso establishments;
- Local authorities in charge of the environment **have no jurisdiction over these issues.**

## CROSS-BORDER COOPERATION

- **Aspects of cooperation** between RS and neighboring countries, as well as within European integrations, **are formulated in the Law on Spatial Plan of the Republic of Serbia** as an umbrella strategic document; **cooperation in practice is different.**

# Institutional framework and responsibilities

- Ministry of Environmental protection (Seveso CA) is responsible for Major accident prevention and preparation of conditions and measures for identifying areas where appropriate distances will be maintained over the long term, between facilities where one or more hazardous substances are present or may be present in quantities larger than the prescribed and residential areas, public spaces, as well as areas of special importance, in order to protect the life and health of humans and the environment.
- Government of Republic of Serbia is responsible for adoption of certain spatial plans (Spatial Plan of the Republic of Serbia, Regional Spatial Plans and Spatial Plans for Special Purpose Area, which are prepared by the Ministry of Construction, Transport and Infrastructure (MCTI).
- MCTI is main authority responsible for urban land policy on national level, through preparation and implementation of strategic framework and law enforcement in the area of territorial and urban planning and construction.
- Local self-governments (LSG) are responsible for adoption of spatial and urban plans (Spatial Plan for territory of LSG, General Urban Plan, Plan of General Regulation, Plan of Detailed Regulation, all prepared by the local administrative unit responsible for urbanism (LAU).
- LAU is also responsible for urban land policy on local level, through implementation of relevant laws and local acts and on local level
- There are also local urban planning institutions, which are responsible for preparation of the local plans.



# INSPIRE Directive 2007/2/EC in Serbia

INSPIRE (INfrastructure for Spatial InfoRmation in Europe) - foundation for comprehensive harmonization of geoinformation within EU for environmental policy making. A uniform infrastructure enables data exchange and makes geodata available on national level and across Europe.

- Annex III of INSPIRE relates to themes:
  - **land use, industrial systems and natural risk zones**

RGA is NSDI Coordinator and INSPIRE National Contact point

Law on National Spatial Data Infrastructure;

- Regulation on implementing rules for metadata of NSDI;
- Regulation on implementing rules for monitoring and reporting on NSDI;
- Regulation on implementing rules for interoperability

Direct specific implamentation plan (DSIP) of INSPIRE;

Government strategic policy documents set out the goals of NSDI:

- Government Working Plan 2021, Economic Reform Program; Action Plan - Doing Business; Action plan for the Urban Development Strategy 2030.

## 2018 Law on NSDI in Serbia

Metadata

Interoperability

Network services

Data sharing

Coordination

34 themes of spatial data from  
the three INSPIRE Annexes

# Practical examples - Risk Register and Espace

Action Plan for Implementing the Strategy of Sustainable Urban Development of the Republic of Serbia till 2030, for the period 2021 to 2022 defines package of measures:

Digitalization and introduction of e-services within urban development management:

- E-Space (RGA and MCTI) - Geosrbija 2.0 updated national geoportal into National Distributional Centre for facilitating E-space;
- E-Plan (plan workflow for planning process);
- Monitoring of five indicators related to SDG 11 (RSO and MCTI)

Adapting to climate change and establishing a response system in risky and disastrous situations in urban settlements

- Risk Register Project (RGA, OPI and MIA) -maintained by RGA- element of spatial planning tool for protection against disasters (industrial accidents)

# Practical examples - Other

*Action Plan for Implementing the Strategy of Sustainable Urban Development* of the Republic of Serbia till 2030, for the period 2021 to 2022 defines also package of measures:

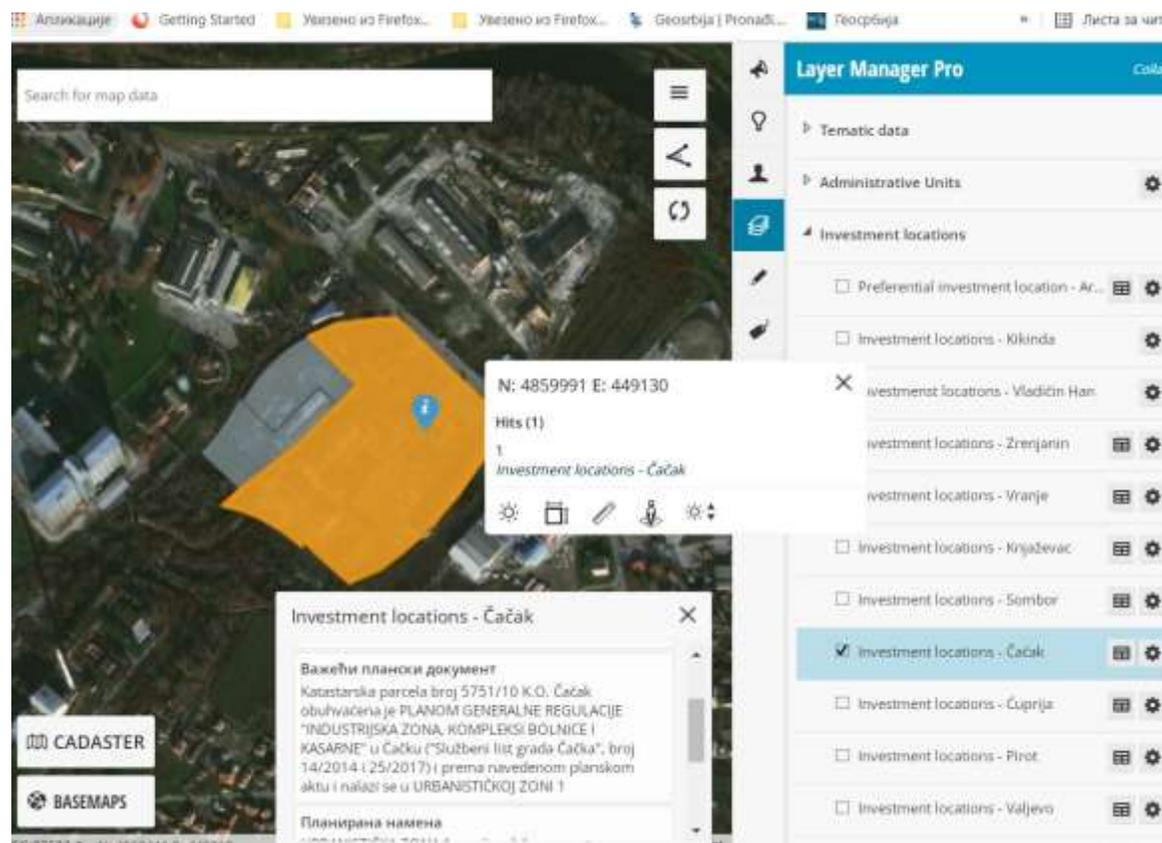
- Improving the efficiency of use, financing and management of construction land, utilities and utility services (WB Project Real Estate Management)
- Incenting development and management of brownfield locations (SIDA Project)
  - Establishment of a National Register of Investment Maps for creation, maintenance and monitoring of investment locations for the territory of Republic of Serbia with a platform for stakeholder communication and decision making ([invest.geosrbija.rs](http://invest.geosrbija.rs))

# GEOSERBIA – GEOSPATIAL PLATFORM

## Key components of the platform:

- Metadata catalogue
- Digital platform (discovery, view, download service...)
- Data distribution services, OGC, APIs, analysis and processing services
- 310 data sets and over 73 metadata sets, 40 data services - 60 M requests per year

“a plug-and-play business model that allows multiple participants (producers and consumers) to connect to it, interact with each other and create and exchange value.”



# Practical case example – Investment Locations



## On going process

- 11 pilot municipalities are providing locations for testing of Register;
- Initial publication on Geosrbija provided immediate response from target group (Investors, Investment Brokers);
- Attributes for locations are selected and verified both by beneficiaries (local self governments) and user (Development agencies of Vojvodina and Serbia);
- Planned to be fully developed by end of 2021

# Practical case example – Investment Locations on Geos Serbia

The screenshot displays the Geos Serbia web application interface. At the top, there is a navigation bar with a search bar, a 'Register' button, and links for 'Advanced search', 'Professional users', and 'About project'. The language is set to 'EN' and a 'Login' button is visible. Below the navigation bar, a filter bar includes a location pin icon, a dropdown for 'Type of investment' (with options for Greenfield (11), Grayfield (1), and Brownfield (2)), and several other filters: '% It belongs to the free zone', 'Surface', 'Build parameters', 'More filters', and 'Save filter'. The main content area is divided into a map on the left and a list of investment locations on the right. The map shows a satellite view of a region with several red location pins. A 'Ortofoto' button is located at the bottom left of the map. The list of investment locations includes three entries, each with a title, location, area, and status:

ID	Type of investment	Location	Area (m <sup>2</sup> )	Status
ID MTWZ	Grayfield	Investicione lokacije Vranje - Preferentna zona 1	218,441	Free zone Verified
ID HUZU	Greenfield	Investicione lokacije Vranje - Preferentna zona 2	71,197	Free zone Verified
ID FVUV	Greenfield	Investicione lokacije Vranje - Preferentna zona 3	114,077	Free zone Verified

The bottom of the map shows a scale of 1:2500000 and the EPSG:32634 coordinate system.

# Practical case example – Regional spatial plan

- Spatial plan was developed for major infrastructural corridor (new highway) in central Serbia.
- Highway is planned within territories of 8 different cities.
- Interventions to spatial plan were made in two iterations between CA for major accident prevention and CA for spatial planning.
- At first iteration, total of 9 hazardous activities were identified either in borders of spatial plan, or near its borders.
- From identified, 4 are upper tier and 5 are lower tier hazardous activities.
- All of them are known to CA for major accident prevention and all have passed the process requested by Law on environmental protection.
- At second iteration, more detailed cooperation between CA's was in place to identify if all 9 can influence, in case of accidents, planned route of new highway.
- At the end 2 have been identified as ones with possible direct influence to planned new highway, 1 lower tier and 1 upper tier hazardous activities.



# Practical case example – Regional spatial plan

- All 9 hazardous activities are noted in spatial plan.
- For those 2 with direct influence to highway it was elaborated in more detail about types of effects.
- Since both hazardous activities have dangerous substances that are hazardous to environment, for this spatial plan, accent was placed on possible effects of substances generated in case of accident (fire in this case).
- On both hazardous activities substances generated in case of fire are acute toxic and safety distances were defined according to modelled IDLH and 0,1IDLH values.
- Total of 5 measures defining areas to maintain appropriate distances between hazardous activities and residential areas, public areas and areas of particular sensitivity or interest for protection of human life and health and the environment, were issued.
- One of them proscribes that emergency planning must include stopping and evacuating all the traffic from highway in case of fire accident, for both hazardous activities.

*Note: other practical examples where given in presentations from Serbia at workshops in Mechelen (2018) and Chisinau (2019), available at <http://www.unece.org/index.php?id=47225> and <http://www.unece.org/index.php?id=52356> .*

# Successes and challenges in the implementation of and coordination between land-use planning and industrial safety

- Addressing the challenges:
  - Digitalization and development of the e-Space;
  - Map of spatial coverage impact of the potential industrial accidents;
  - Prescribe legal obligation to make SEA for General Urban Plan and restore the significance of this type of strategic urban plan;
  - Improvement of information base for purpose of creating the new generation of GUP.
- Enhancing the implementation of and coordination between land-use planning and industrial safety:
  - Improving the plan-making procedure;
  - Creation of the new Spatial Plan of the Republic of Serbia as a umbrella planning document is opportunity to improve basis for all planning document in this sense;
  - New generation of Local Spatial Plan is also opportunity for improvement;
  - Better vertical and horizontal alignment of plans in relation to Seveso facilities.

# Opportunities/ideas for overcoming challenges

- New Law on control of major accidents involving dangerous substances is being drafted.
- Among other, it`s aim is to fully transpose relevant spatial planning requirements which will remove current legal obstacles in cooperation between spatial planning and industrial safety.
- Joint efforts must be made with relevant spatial planning authorities for continuous improvement of knowledge of relevant stakeholders regarding cooperation between spatial planning and industrial safety.
- Awareness raising campaign is being planned through the new National policy dialogue for industrial safety.
- All stakeholders are planned for participation to this National policy dialogue.

# Thank you for your attention!

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