

ATTRACTIVE DANUBE WP4 - DANUBE ATTRACTIVENESS

A. 4.1 Upgrading attractiveness indicators and databases for the entire Danube region

Metadata template for attractiveness indicators and indicator database

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INTRODUCTION

1.1. Scope

The following document present the metadata information for the common attractiveness indicators and indicator database (at national level), as part of the **Activity 4.1 Upgrading attractiveness indicators and databases for the entire Danube region**.

The common attractiveness indicators are represented by the 22 indicators defined through the ATTRACT – SEE project, as follows:

COMMON ATTRACTIVENESS INDICATORS:

NO.	DESCRIPTION
1.	Air pollution: Ozone concentration
2.	Population connected to urban waste water treatment with at least secondary treatment
3.	Electricity generated from renewable sources
4.	Consumption of water per capita
5.	% of terrestrial area protected (total and by ecological region)
6.	Population (or households) with accessibility to high-speed broadband (1 Mbit/second up and down)
7.	European cultural sites on the UNESCO World Heritage List, 2010
8.	Life expectancy at birth by sex (Europe 2020 indicator)
9.	Gross disposable household income
10.	People at risk of poverty or social exclusion (Europe 2020 indicator)
11.	Population aged 25-64 with tertiary education
12.	Research & Experimental Development expenditure as % of Gross Domestic Product (Europe 2020 indicator)
13.	Employment rate 20-64 years by sex [%] (Europe 2020 indicator)
14.	Youth unemployment rate
15.	Share of employment by sector
16.	Number of overnight stays of tourists per capita per year
17.	Share of tourism related employment in total employment
18.	% of GDP of foreign direct investment stock
19.	Population growth rate
20.	% of population in age 20-64 years
21.	Ageing index
22.	Number of foreign students

1.2. Data sources

The following key data sources are used for the collection of the indicators at transnational level:

NO.	ORGANISATION	ACRONYM
1.		
2.	Statistical Office of the Republic of Serbia	SORS
3.	Serbian Environmental Protection Agency	SEPA
4.	Serbian Environmental Protection Agency	SEPA
5.	Serbian Environmental Protection Agency	SEPA
6.	Statistical Office of the Republic of Serbia	SORS
7.	United Nations Educational, Scientific and Cultural Organization	UNESCO
8.	Statistical Office of the Republic of Serbia	SORS
9.		
10.	Statistical Office of the Republic of Serbia	SORS
11.	Statistical Office of the Republic of Serbia	SORS
12.	World Bank	World Bank
13.	Statistical Office of the Republic of Serbia	SORS
14.	Statistical Office of the Republic of Serbia	SORS
15.	Statistical Office of the Republic of Serbia	SORS
16.	Statistical Office of the Republic of Serbia	SORS
17.	Statistical Office of the Republic of Serbia	SORS
18.	United Nations Conference on Trade and Development	UNCTAD
19.	Statistical Office of the European Communities	Eurostat
20.	Statistical Office of the Republic of Serbia	SORS
21.	Statistical Office of the Republic of Serbia	SORS
22.	Statistical Office of the Republic of Serbia	SORS

2. INDICATORS FOR TERRITORIAL ATTRACTIVENESS AT A NATIONAL LEVEL

2.1. Air pollution: Ozone concentration (number of days/Year; yg/m3)

Description (as in Attract-SEE Atlas or description from your data source for indicator)

Indicator defined as the number of days with ground level concentration exceedances of more than 120 yg/m3. Attractive regions of high ecological values and strong territorial capital. The indicator tries measuring the degree of reductions in emissions for healthier natural living environments. Territorial distribution of the annual average of exceedings of the concentration limit established by law.

Type of indicator	Transnational
Annual range	2008/2021
Data source for indicator	
Key statistical data used	
Spatial level	National

Data completeness	<i>Data are missing for 2008, 2009, 2014, 2015, 2016</i>
Policy/goals	<i>Environmental quality</i>
Contact person if available	
Conditions of use	

Interesting facts about specific indicator:

The number of measuring stations for O₃ concentration that were operational was significantly reduced, e.g. in 2015 only three station provided data for this indicator (in 2013, there were 15 operational stations) therefore the data are not comparable through the years.

2.2. Population connected to urban waste water treatment with at least secondary treatment

Description

This indicator is defined as the percentage of the population connected to waste water treatment systems with at least secondary treatment. Secondary treatment of wastewater includes biological treatment with secondary collection or by other processes, which results in BOD reduction of at least 70% and COD reduction of at least 75%.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	
Policy/goals	<i>Environmental quality</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

The minimum value of this indicator was recorded in 2008 (7,1%), since then the value of this indicator is permanently increasing. The highest percentage of population connected to urban waste water treatment with at least secondary treatment was recorded in 2016 (12,6%).

2.3. Electricity generated from renewable sources

Description

This indicator is the ratio between the electricity produced from renewable energy sources and the gross national electricity consumption for a given calendar year. It measures the contribution of electricity produced from renewable energy sources to the national electricity consumption. Electricity produced from renewable energy sources comprises the electricity generation from hydro plants (excluding pumping), wind, solar, geothermal and electricity from

biomass/wastes. Gross national electricity consumption comprises the total gross national electricity generation from all fuels (including autoproduction), plus electricity imports, minus exports.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Serbian Environmental Protection Agency</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	<i>Data are missing for 2008, 2015, 2016</i>
Policy/goals	<i>Natural resources and energy / Energy efficiency</i>
Contact person if available	
Conditions of use	<i>Indicators available for view</i>

Interesting facts about specific indicator:

Minimum value was recorded in 2011 with 17,8 % share of renewable sources in gross national electricity consumption, maximum value was in 2013 with 26,95%. In the Republic of Serbia electricity produced from renewable energy sources up to 2012 covered only the production of electricity from hydropower plants, and from 2012 the production of biogas plants which is still on a low scale. Oscillations in the observed period are mainly due to changes in the precipitation regime.

2.4. Consumption of water per capita

Description

This indicator measures how much water does the average person use per day/year. To monitor freshwater issues in order to provide recommendations, develop case studies, enhance assessment capacity at a national level and inform the decision-making process.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Serbian Environmental Protection Agency</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	<i>Data are missing for 2015, 2016</i>
Policy/goals	<i>Natural resources / Freshwater issues</i>
Contact person if available	
Conditions of use	<i>Indicators available for view</i>

Interesting facts about specific indicator:

Minimum value was in 2014 (142 Liters per capita per day), while the maximum value was recorded in 2008 (173 Liters per capita per day).

2.5. % of terrestrial area protected (total and by ecological region)

Description

The indicator is defined as the share of terrestrial area that has been reserved by law or other effective means to protect part or all of the enclosed environment. The indicator is calculated as the percentage of the territory under protection with regard to the entire area of the Republic of Serbia.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Serbian Environmental Protection Agency</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	<i>Data are missing for 2016</i>
Policy/goals	<i>Landscape quality/identifying areas for conserving biodiversity, cultural heritage, scientific research, recreation, natural resource maintenance etc.</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of this indicator was in 2009, maximum value was in 2015.

2.6. Population (or households) with accessibility to high-speed broadband

Description

This indicator is a share of population (households) with broadband access.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	<i>Data are missing for 2008, 2009</i>
Policy/goals	<i>Infrastructure/ Broadband access</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of this indicator was in 2010 (26,7%), maximum value was in 2016 (57,8%). In the observed period, the number of households with broadband access increased around 31%.

2.7. European cultural sites on the UNESCO World Heritage List

Description

European cultural sites listed by the UNESCO as of special cultural or physical significance. The programme catalogues, names, and conserves sites of outstanding cultural or natural importance to the common heritage of humanity.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>UNESCO</i>
Key statistical data used	
Data availability	<i>National</i>
Data completeness	
Policy/goals	<i>Culture / Conservation sites of outstanding cultural or natural importance to the common heritage of humanity</i>
Contact person if available	

Interesting facts about specific indicator:

Eight cultural sites from Serbia were included in UNESCO World Heritage List until 2016: Stari Ras and Sopoćani, Studenica Monastery, Gamzigrad-Romuliana, Palace of Galerius, Stećci Medieval Tombstones Graveyards and the Medieval Monuments of Kosovo (consisted of: Dečani Monastery as well as Patriarchate of Peć and Gračanica Monastery and the Church of Our Lady of Ljeviška in Prizren).

2.8. Life expectancy at birth by sex

Description

Simple indicator expressing the average life expectancy at birth for both women and men in years.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	
Policy/goals	<i>Quality of life / Improving quality of the health-care system</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Minimum values of this indicator were in 2008, maximum were in 2016. In the observed period, the values of this indicator are slowly increasing for both males and females.

2.9. Gross disposable household income

Description

The indicator (GDHI) is the amount of money that individuals (i.e. the household) have available for spending or saving. This is money left after expenditure associated with income, e.g. taxes and social contributions, property ownership and provision for future pension income. It is calculated gross of any deductions for capital consumption.

Type of indicator	Transnational
Annual range	2008/2021
Data source for indicator	
Key statistical data used	
Spatial level	
Data completeness	Data are missing for 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
Policy/goals	Quality of life / Measuring welfare of residence population
Contact person if available	
Conditions of use	Indicator is not available

Interesting facts about specific indicator:

Data for this indicator are not available for Serbia at this moment.

2.10. People at risk of poverty or social exclusion

Description

This indicator is the share of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers. It's a union of the three sub-indicators below:

- People living in households with very low work intensity: People living in households with very low work intensity are people aged 0-59 living in households where the adults work less than 20% of their total work potential during the past year
- Severe material deprivation rate
- At-risk-of poverty rate: The persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income.

Type of indicator	Transnational
Annual range	2008/2021
Data source for indicator	Statistical Office of the Republic of Serbia
Key statistical data used	
Spatial level	National
Data completeness	Data are missing for 2008, 2009, 2010, 2011, 2013, 2014, 2015, 2016
Policy/goals	Quality of life / Risk of poverty or social exclusion

Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Data for this indicator are not available for Serbia at this moment, except the year 2012.

2.11. Population aged 25-64 with tertiary education

Description

Indicator is defined as population aged 25-64 with tertiary education as percentage of all population aged 25-64.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	
Policy/goals	<i>Knowledge & Innovation / the highly-qualified labour force</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Considering minimal and maximal values for this indicator data shows considerable increase of this population (16,5% up to 21,46% in period of 8 years (2008-2016)).

2.12. Research & Experimental Development expenditure as % of Gross Domestic Product

Description

This indicator is total gross domestic expenditure on research and experimental development (GERD) as a percentage of gross domestic product (GDP).

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>World Bank</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	<i>Data are missing for 2016</i>
Policy/goals	<i>Knowledge and innovation / Raising competitiveness and wealth</i>
Contact person if available	

available	
Conditions of use	<i>Indicators available for view</i>

Interesting facts about specific indicator:

Values of this indicator show oscillations in the observed period. Minimum value was in 2008 (0,4%) while the maximum was in 2012 and 2015 (0,9%).

2.13. Employment rate 20-64 years by sex

Description

The employment rate is calculated by dividing the number of persons aged 20 to 64 (by sex) in employment by the total population of the same age group.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	
Policy/goals	<i>Employment/Raising employment</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Rate of employment decreases from 2008 to 2016 more for male population (11,5%) than the female (5%).

2.14. Youth unemployment rate

Description

This indicator refers to the share of the labour force ages 15-24 without work but available for and seeking employment.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	<i>World Bank</i>
Spatial level	<i>National</i>
Data completeness	
Policy/goals	<i>Employment / Raising youth employment</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Values of this indicator show oscillations in the observed period. Minimum value was in 2016 (34,9%) while the maximum was in 2012 (51,1).

2.15. Share of employment by sector

Description

This indicator refers to the share of the employment in different sector: agriculture; industry and construction; services. Regional sector specialisation is broadly understood to be the extent to which particular economic sectors attract larger shares of employment or output in one region as compared with another.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	<i>Data are missing for 2008, 2009, 2010</i>
Policy/goals	<i>Specializations / Employment in key sectors</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of share of employment in agriculture was in 2016 (6,09%) while maximum value was in 2011 (15,9%). Minimum value of share of employment in industry and construction was in 2013 (25,59%) while maximum value was in 2016 (28,4%). Minimum value of share of employment in sector of services was in 2011 (57,78%) while maximum value was in 2016 (65,51%).

2.16. Number of overnight stays of tourists per capita per year

Description

This indicator is a ratio of yearly tourist stays by total resident population and it defines land use change and pressure.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National, regional and counties level</i>
Data completeness	
Policy/goals	<i>Economic development / Tourism</i>

Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of this indicator was in 2014 (0,85 per capita) while maximum value was in 2016 (1,07 per capita).

2.17. Share of tourism related employment in total employment

Description

This indicator refers to the share of employees working in tourism related employment to total employment. The importance of employment in tourism is: continuous growth of tourism in the last decades; importance of economic contribution of tourism to national economies (TSA); general recognition of tourism as a major job generator, especially for youth, women, unqualified workers, etc.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	<i>Data are missing for 2008</i>
Policy/goals	<i>Economic development / Employment in tourism</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of indicator was in 2011 (1,16%) while maximum value was in 2016 (3,38%).

2.18. % of GDP of foreign direct investment stock

Description

This indicator refers to the share of foreign direct investment (stock) in GDP. Foreign direct investment (FDI) is defined as an investment involving a long-term relationship and reflecting a lasting interest in and control by a resident entity in one economy (foreign direct investor or parent enterprise) of an enterprise resident in a different economy (FDI enterprise or affiliate enterprise or foreign affiliate). FDI stock is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprises.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>UNCTAD</i>
Key statistical data used	

Spatial level	<i>National</i>
Data completeness	
Policy/goals	<i>Economic development / Investment promotion</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of this indicator was in 2008 (35,19%) while maximum value was in 2016 (68,48%).

2.19. Population growth rate

Description

The indicator corresponds to the number of births and deaths during the certain period and the number of people migrating to (immigration) and from (emigration) a country. Population growth rate is a measure of change of population of a certain area.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Eurostat</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	
Policy/goals	<i>Population</i>
Contact person if available	
Conditions of use	<i>indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of this indicator was in 2011 (-7,89 per 1000 inhabitants) while maximum value was in 2009 (-4,01 per 1000 inhabitants).

2.20. % of population in age 20-64 years

Description

This indicator refers to the share of persons aged 20-64 to total population. Indicator measures working age persons out of total population.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>

Data completeness	
Policy/goals	<i>Population</i>
Contact person if available	
Conditions of use	<i>indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of this indicator was in 2011 (61,34%) while maximum value was in 2012 (62,7%).

2.21. Ageing index

Description

Indicator is defined as the ratio of the population aged 64 and above divided by population of 15 years and below. This indicator measures the balance of the age structure of the society.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National, regional and counties level</i>
Data completeness	
Policy/goals	<i>Population</i>
Contact person if available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Minimum value of this indicator was in 2008 (105,9%) while maximum value was in 2016 (134,7%).

2.22. Number of foreign students

Description

The indicator refers to a number of international students and/or professors enrolled in tertiary education.

Type of indicator	<i>Transnational</i>
Annual range	2008/2021
Data source for indicator	<i>Statistical Office of the Republic of Serbia</i>
Key statistical data used	
Spatial level	<i>National</i>
Data completeness	<i>Data are missing for 2008, 2009, 2010, 2011, 2012, 2013, 2014</i>
Policy/goals	<i>International relations</i>
Contact person if available	

available	
Conditions of use	<i>Indicators available for download</i>

Interesting facts about specific indicator:

Data for this indicator are available for the years 2015 (4,26% of total students) and 2016 (4.43% of total students).