

ATTRACTIVE DANUBE WP4 - DANUBE ATTRACTIVENESS

A. 4.1 Upgrading attractiveness indicators and databases for the entire Danube region Metadata for attractiveness indicators and indicator database for ROMANIA

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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 (<i>note: Indicator not available for Romania</i>)
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 data collection for the indicators:

NO.	ORGANISATION	ACRONYM
1.	Environmental Protection Agency Montenegro	EPA
2.	Statistical Office of Montenegro	MONSTAT
3.	World Health Organization	WHO
4.	GEO Portal MNE	GPMNE
5.	Ministry of Agriculture and Rural Development	MARD
6.	Ministry of Tourism and Sustainable Development	MTEP
7.	Ministry of Economy	OECD
8.	Ministry for Information Society and Telecommunications	MIST
9.	Ministry of Science	MS
10.	Ministry of Culture	MC
11.	Central Bank of Montenegro	CBCG
12.	Institute for Strategic Studies and Prognoses	ISSP
13.	OZON NGO	OZON
14.	Ministry of Labour and Social Welfare	MLSW
15.	European Statistical Office	EUROSTAT

2. INDICATORS FOR TERRITORIAL ATTRACTIVENESS AT A NATIONAL LEVEL

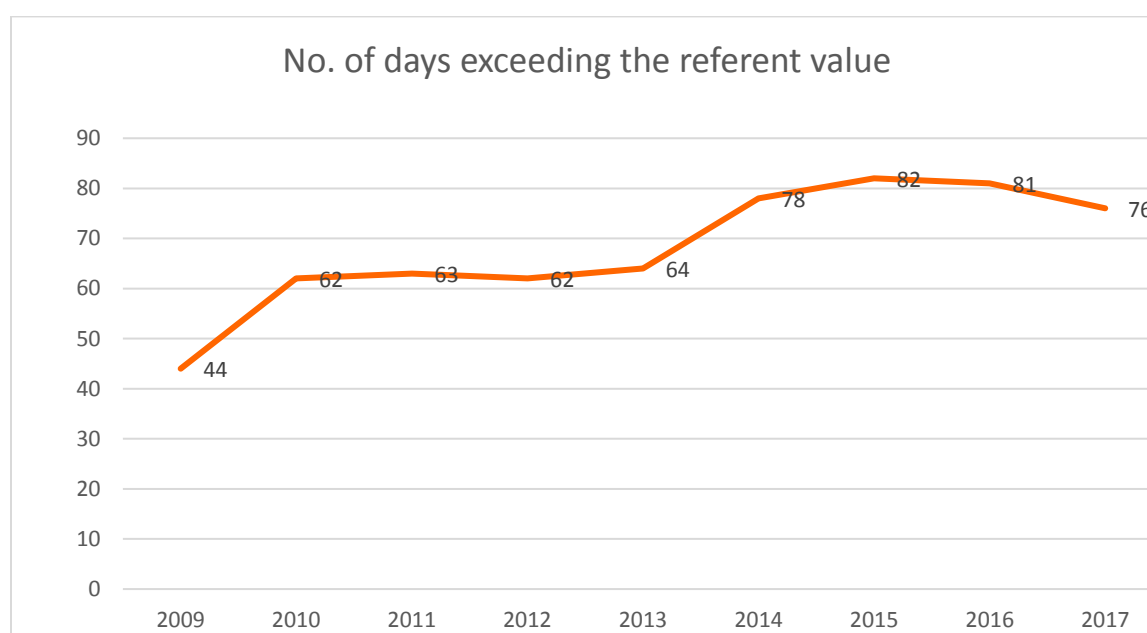
2.1. Air pollution: Ozone concentration (number of days/Year; yg/m3)

Description

Respective indicator has been defined as the number of days with ground level concentration exceedances of more than 120 yg/m3. In addition, the announcement/informing threshold is 180 yg/m3. The later has never been achieved in the country. The country itself still has respectively valid indicator that indicates attractive area/territory in respective regard. The number of increased emissions i.e. decreased healthier living conditions is still relatively low in the country due to lack of several sources. However, it still can be significantly reduced.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2009/2017
Data source for indicator	Agency for Environment Protection of Montenegro
Key statistical data used	Number of days exceeding the referent value/target for healthier living conditions
Spatial level	Data available at monitoring station / local level. Approximation given for the national level.

Data completeness	<p>There are three thresholds for Ozone concentration in Montenegro.,</p> <ol style="list-style-type: none"> 1. Reference target for human health protection: 120 mg/m³ 2. Informing threshold: 180 mg/m³ 3. Alert threshold: 240 mg/m³ <p>The number of days with concentration values recorded over 120 ug/m³ is listed in the reports as a graph of the days, per station.</p>
Policy/goals	N/A
Contact person if available	On behalf of the ATTRACTIVE DANUBE partner: David Radonjic, david.radonjic@gmail.com
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2.2. Population connected to urban waste water treatment with at least secondary treatment

Description

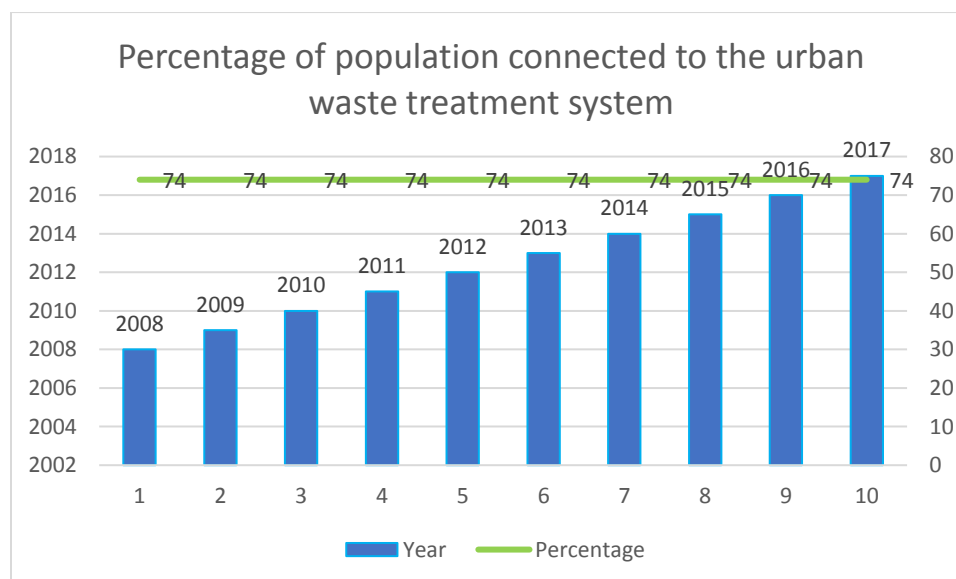
Respective indicator has been defined as the percentage of the urban population connected to waste water treatment systems with at least secondary treatment (% of equivalent population).

Urban wastewater treatment plant: a treatment plant for urban wastewater, formed generally from a mixture of domestic and industrial wastewater.

Industrial wastewater treatment plant: a treatment plant for treating the industrial (and possibly some domestic) wastewater in a proper manner to be discharged into an urban sewerage network or directly into a natural receiver or to be reused.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2017
Data source for indicator	Ministry of Agriculture and Rural Development
Key statistical data used	Indicator refers to the number of population connected to municipal waste water treatment plants with secondary treatment;
Spatial level	National,
Data completeness	Data available for the period 2008-2017
Policy/goals	n/a
Contact person if available	On behalf of the ATTRACTIVE DANUBE partner: David Radonjic, david.radonjic@gmail.com
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As it can be seen on the graph in the past nine years percentage is the same which refers to the lack of further investments into the waste treatment urban population connection. The current project for City of Podgorica will significantly increase the percentage of population. Project has been approved and the loan has been secured and it is expected to be started in 2018.



2.3. Electricity generated from renewable sources

Description

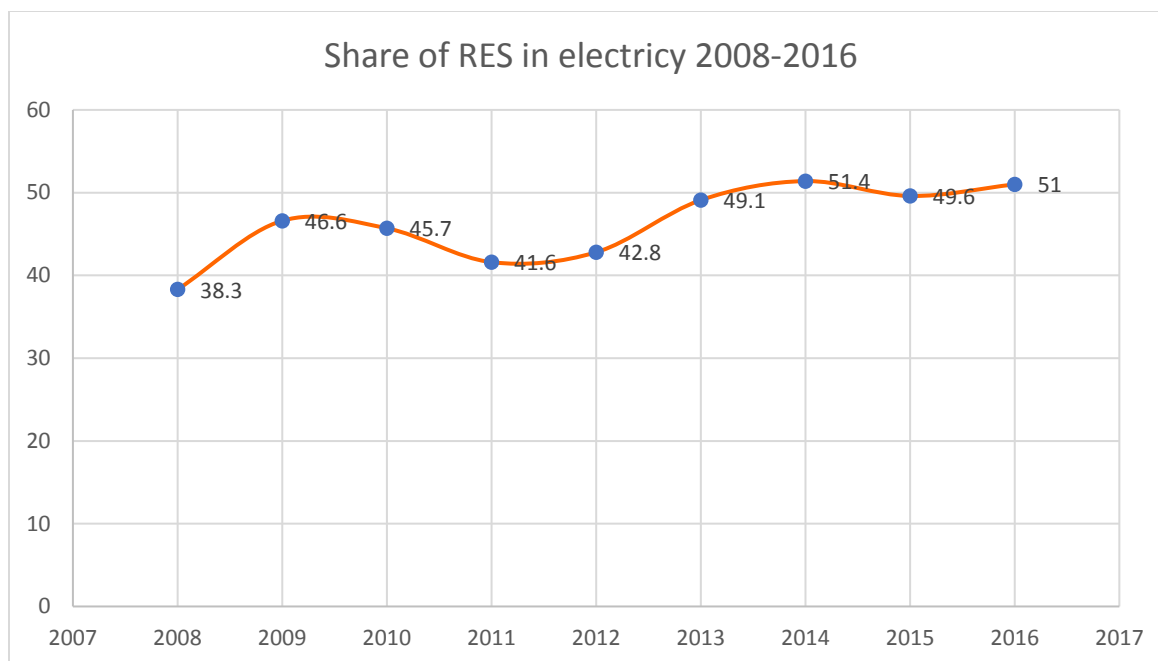
Respective indicator measures the share of electricity generated from renewable sources in total electricity. It is not related to the general energy consumed.

Energy produced from renewable energy sources includes: energy generated by hydropower (excluding pumping), wind, sun, geothermal and biomass / waste electricity. Biomass / waste includes energy generated from wood burning / wood waste and other solid waste of renewable nature (straw), municipal waste incineration, biogas (including buried waste, sewerage and farm gas) and liquid biofuels.

The ratio of electricity generated from renewable sources to total electricity production is expressed as percentage.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2016
Data source for indicator	EUROSTAT
Key statistical data used	Electricity generation by category of power plants: <ul style="list-style-type: none">• Total (Million kW-hour)• Hydroelectric (Million kW-hour)• Wind power (Million kW-hour)• Solar power (Million kW-hour) Indicator has been collected by EUROSTAT and MONSTAT database
Spatial level	National
Data completeness	Data available for the period 2008-2016
Policy/goals	The indicator supports assessment and monitoring of national targets with respect to the share of renewable energy in total energy production by 2030. It also represents an indicator for territorial competitiveness.
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With a percentage over 40% (in all except one year) electric energy from RES, Montenegro is on a quite good trajectory. Target of having 33% till 2030 has already been achieved. However, another target should be related to achieving 33% of total generated and consumed energy.

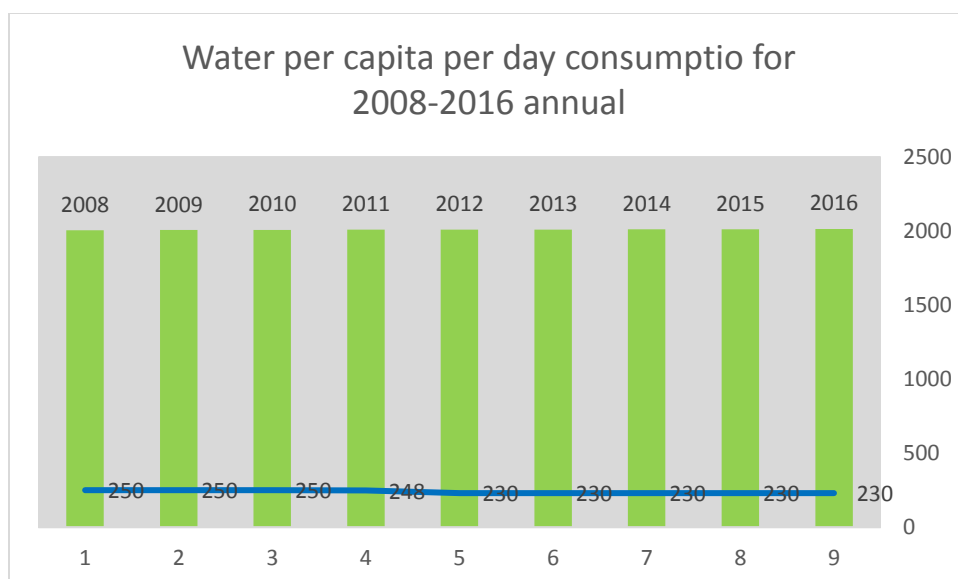


2.4. Consumption of water per capita

Description

Respective indicator measures how much water does the average person use and is a representation of the liters of water per capita (household use) per day.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2021
Data source for indicator	Ministry of Tourism and Sustainable Development
Key statistical data used	Indicator resident quantity of drinking water supplied to consumers by counties and localities in thousand cubic meters.
Spatial level	National
Data completeness	Data available for the period 2008-2016
Policy/goals	The indicator supports assessment and monitoring of quality of living conditions, as well as environmental and resource-use assessment.
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2.5. % of terrestrial area protected (total and by ecological region)

Description

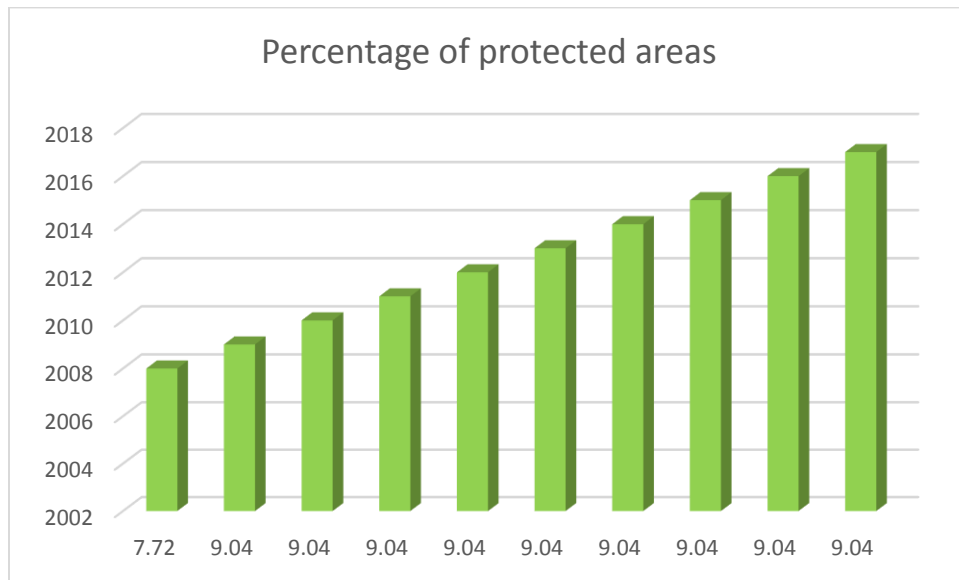
Respective indicator has been defined as the share of terrestrial area that has been reserved by law or other effective means to protect part or all of the enclosed environment. It can be calculated separately for different terrestrial ecological regions. The indicator may also be disaggregated by management category of the protected areas.

Protected areas comprehend:

- biosphere reserves;
- national parks;
- natural reserves;
- natural monuments;
- special protection areas.
- natural sites of universal natural heritage

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2021
Data source for indicator	Ministry of Tourism and Sustainable Development, EPA, National parks
Key statistical data used	The total terrestrial areas protected include the following main categories of sites: national parks, natural monuments and natural reserves, natural sites of universal natural heritage, natural monuments, natural reserves and sites of community interest
Spatial level	National
Data completeness	Data available for the period 2008-2016

Policy/goals	Protected areas are essential for maintaining ecosystem diversity in countries and ecological regions and they represent one of the key territorial attractiveness indicators.
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2.6. Population (or households) with accessibility to high-speed broadband

Description

Respective indicator is related to the share of population (households) with broadband access in the total population.

The share of households having Internet access at home, by types of connections represents the ratio between the number of households having Internet access at home using a specific connection within each breakdown and the total number of households in that breakdown.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008-2017
Data source for indicator	Ministry for Information Society and Media
Key statistical data used	Indicator refers to the share of households having Internet access at home by the types of connection used and residence area
Spatial level	National
Data completeness	Data available for the period 2008-2016
Policy/goals	.

	The dataset represents an indicator on living quality, communication infrastructure and services. In addition, it is indicating the innovation capacity and potential for economic development.
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2.7. European cultural sites on the UNESCO World Heritage List

Description

Respective indicator quantifies cultural sites Listed by the UNESCO as of special cultural or physical significance – number of sites.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2021
Data source for indicator	Ministry of Culture
Key statistical data used	This indicator represents the number of the properties inscribed on the World Heritage List for Montenegro
Data availability	National
Data completeness	Data available for the period 2008-2017
Policy/goals	UNESCO protected areas represent a strong value and territorial capital at national level, and their existence / approval represents a strong basis for developing policies.
Contact person if available	On behalf of the ATTRACTIVE DANUBE partner: David Radonjic, david.radonjic@gmail.com

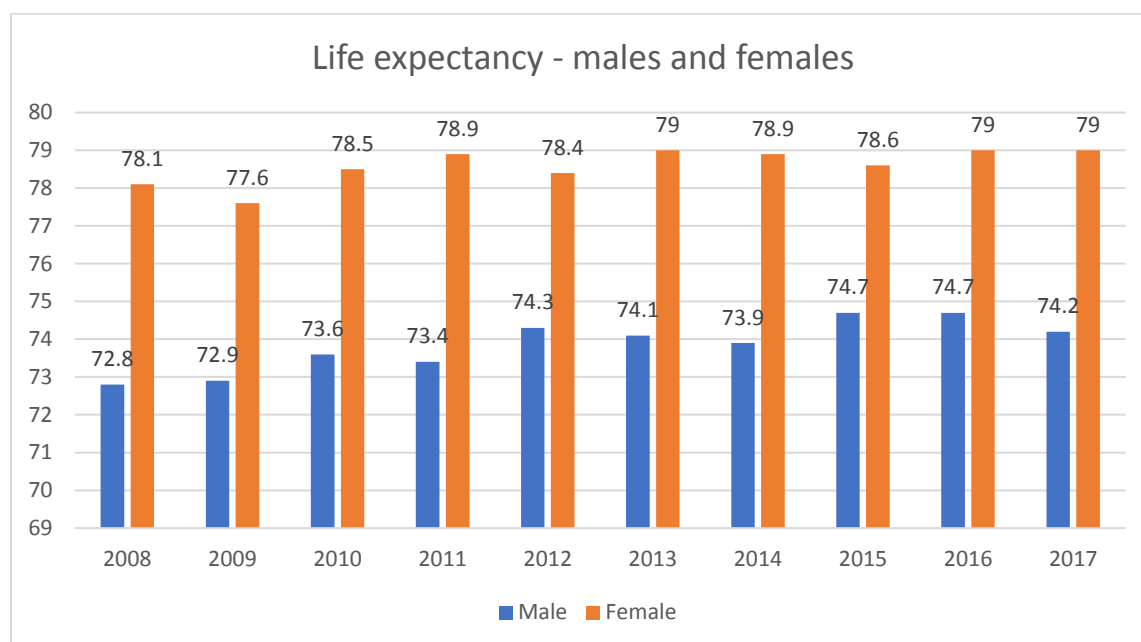
2.8. Life expectancy at birth by sex

Description

Life expectancy represents average number of years an infant would live, if he / she lived all his / her life, under the conditions of mortality by age in the reference period.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2017
Data source for indicator	MONSTAT
Key statistical data used	Life expectancy by urban/ rural area, sex, macroregions, development regions and counties: <ul style="list-style-type: none"> • Male (years) • Female (years)
Spatial level	National

Data completeness	Data available for the period 2008-2016
Policy/goals	The indicator is useful for assessing the health of the living environment and together with ageing index it allows to assess social policies projections and risk of exclusion.
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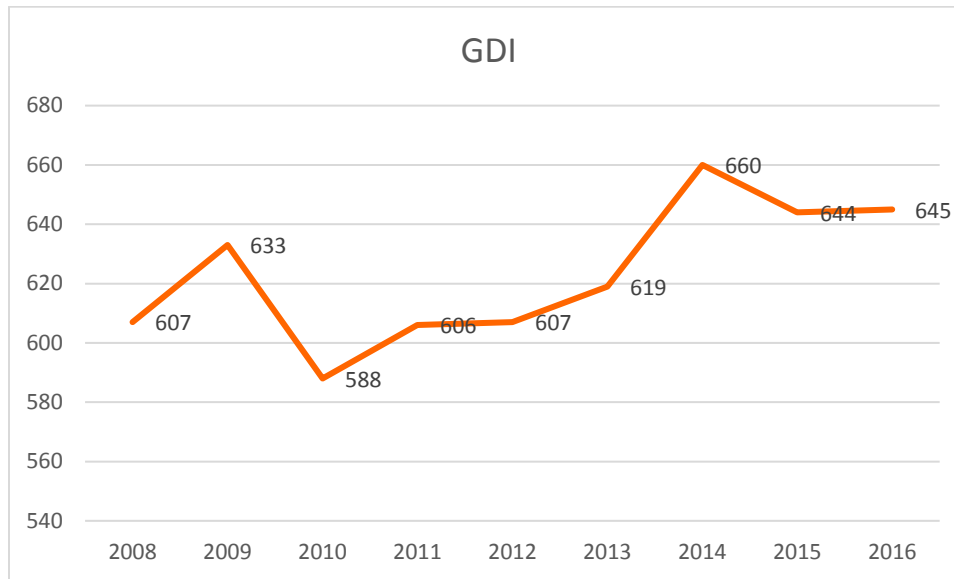
2.9. Gross disposable household income

Description

Respective indicator (GDHI) defines 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 (CO-TAMP), collection at national level
Annual range	2008/2017
Data source for indicator	MONSTAT
Key statistical data used	APD and household survey from MONSTAT
Spatial level	National,

Data completeness	Data available for the period 2008-2016
Policy/goals	Indicator provides relevant information on the welfare of the citizens over a certain period
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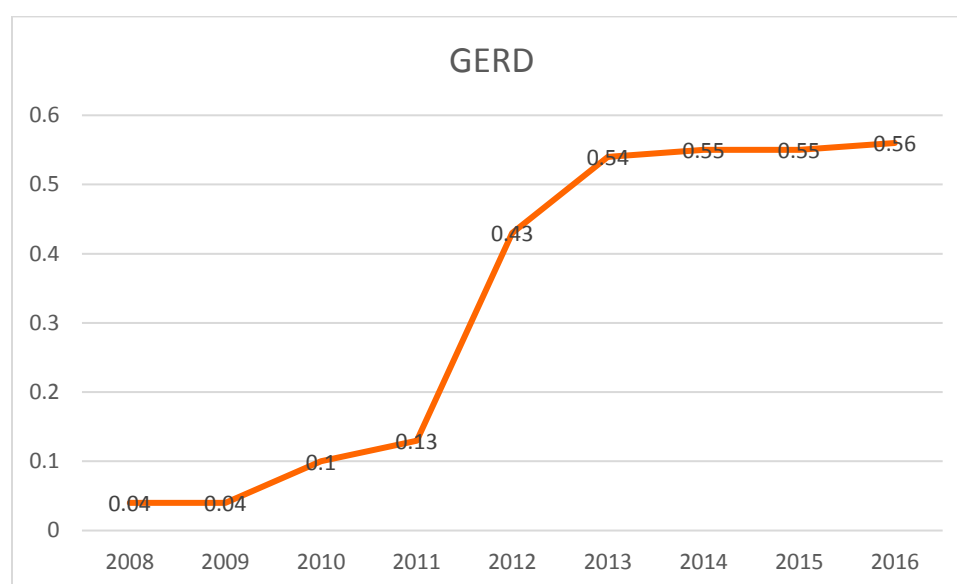
2.10. Research & Experimental Development expenditure as % of Gross Domestic Product

Description

Respective indicator refers to GERD (Gross domestic expenditure on R&D) as a percentage of GDP. Research and experimental development (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2016
Data source for indicator	Ministry of Science
Key statistical data used	GERD
Spatial level	National
Data completeness	Dataset complete for 2008-2016
Policy/goals	Compliance the Europe 2020 Strategy and the concept of "Innovation Union". R&D expenditure represents one of the major drivers of

	<p>economic growth in a knowledge-based economy. As such, trends in the R&D expenditure indicator provide key indications of the future competitiveness and wealth of the EU.</p> <p>GERD includes expenditure from business enterprise, higher education, government and private non-profit expenditure on R&D. The indicator measures the key R&D investments that support future competitiveness and result in higher GDP.</p>
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2.11. 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.

Employment comprises, according to the methodology of Statistical household labor force survey, all persons aged 15 years and over who carried out an economic activity producing goods or services of at least one hour (at least 15 hours for self-employed and contributing family workers from agriculture - previously to 2011) during the reference period (one week), in order to get income as salary, payment in kind or other benefits.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008-2016

Data source for indicator	MONSTAT
Key statistical data used	Employment by age group and by sex The indicator has been collected through sample statistical survey, on households.
Spatial level	National
Data completeness	Data available for the period 2008-2016
Policy/goals	The employment rate is considered as a key social indicator for analytical purposes when studying developments within labor markets.
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2.12. Youth Unemployment Rate

Description

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

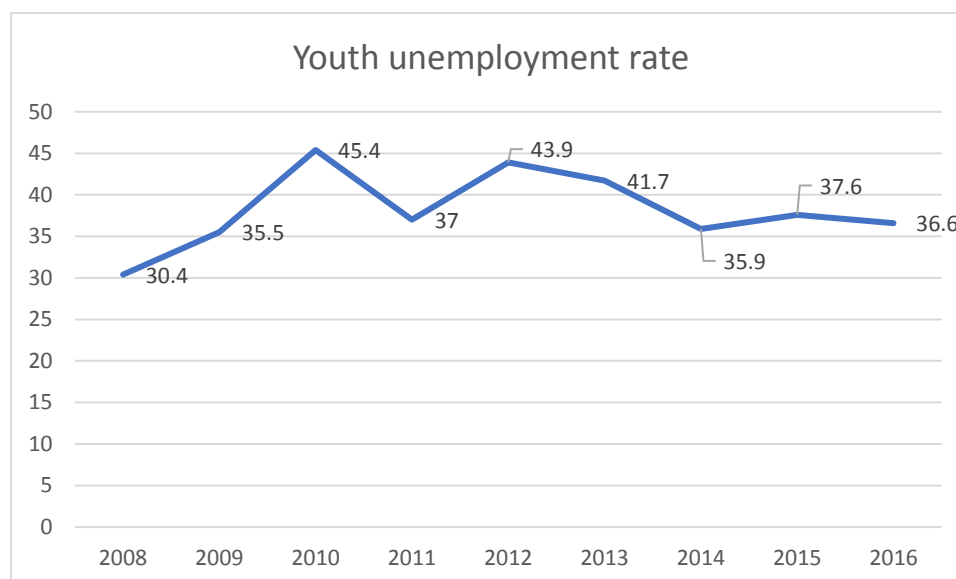
Unemployment rate represents the ratio of the unemployed, according to international definition in economically active population.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2016
Data source for indicator	MONSTAT
Key statistical data used	The indicator is collected through sample statistical survey, on households.

Spatial level	National Level
Data completeness	Dataset complete for 2008-2016
Policy/goals	This indicator counts the economically active young population - employed and unemployed - and the economically inactive young population. High youth unemployment rates do reflect the difficulties faced by young people in finding jobs.
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Interesting facts about specific indicator:

Youth unemployment in respective context is result of various reasons: (i) gap between educational and market needs; (ii) gap regarding the mentality context and (iii) domination of service industry jobs and lack of readiness from young employees to be engaged in respective sectors.



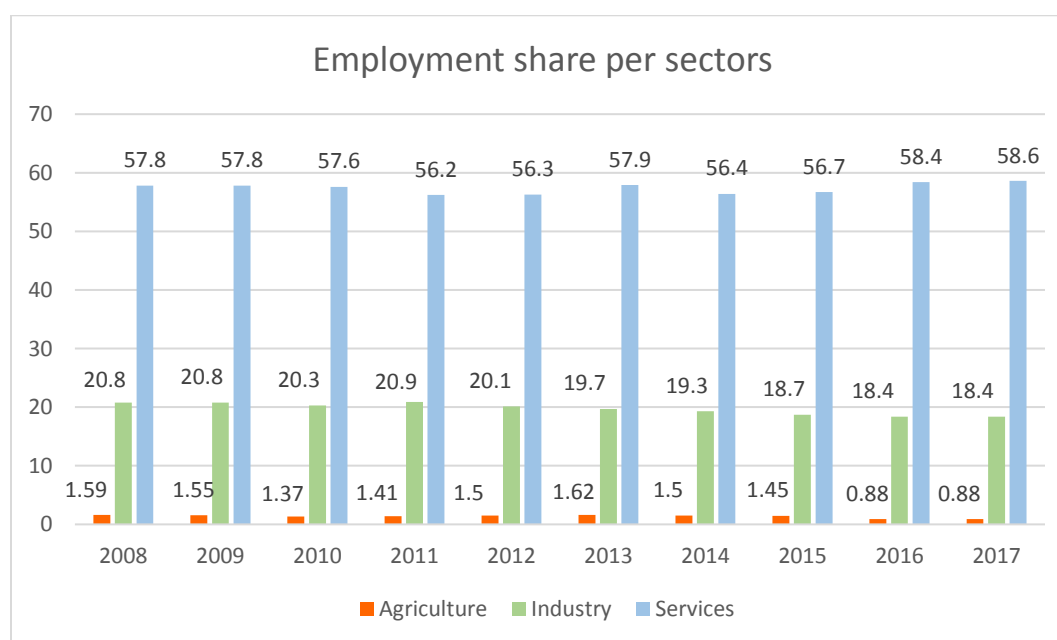
2.13. Share of employment by sector

Description

Respective indicator refers to the share of the employment in the following sectors: (i) Agriculture; (ii) Industry (Mining; Manufacturing, electricity, gas, steam and air conditioning supply; Water supply, sewerage and waste management; Construction) and (iii) Services: Market services: Wholesale and retail trade; Accommodation and food service activities; Communication; Financial and insurance activities; Real estate activities; Professional scientific and technical activities; Administrative and support service activities. Mainly non-market services: Public administration; Education; Health; Arts, entertainment and recreation; Other services activities; Activities of households as employers; Activities of extraterritorial organizations.

The civil employed population includes all the persons who work for an income and whose work is usually done in one of the activities of the national economy, being defined as an economic or social activity, based on a work contract or a free-lance activity (self-employed) in order to get income such as salary , in kind payment, etc. The following categories of persons are included:

- employees who work in one of the activities of the national economy in the public (integrally of state and public of national interest), mixed, private, cooperative and collective;
- employers - managers of private units - that employ labour force for the activity of their units;
- self-employed;



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

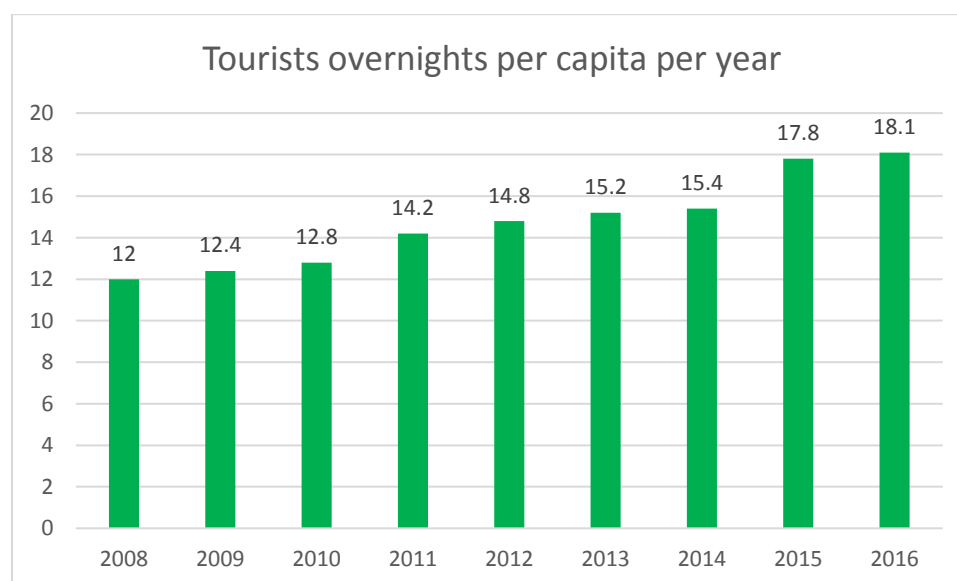
Description

Respective indicator is a ratio of yearly tourist stays by total resident population.

Tourist overnight stay it is the 24hour interval, beginning with the hotel hour, for which a person is registered in the evidence of the tourist accommodation establishment and benefits of accommodation in exchange for the fee paid for the occupied space on the premises, even if the actual duration of stay is inferior to the mentioned interval. The overnight stays for additional beds (paid by tourists) are also taken into account.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2016
Data source for indicator	MONSTAT, ISSP

Key statistical data used	Number of overnight stay derived from tourism statistical survey
Spatial level	National Level
Data completeness	Dataset complete for 2008-2016
Policy/goals	This indicator offers information on the tourism attractiveness of the country for the purpose of assessing and monitoring the state of play, and for developing tourism support policies.
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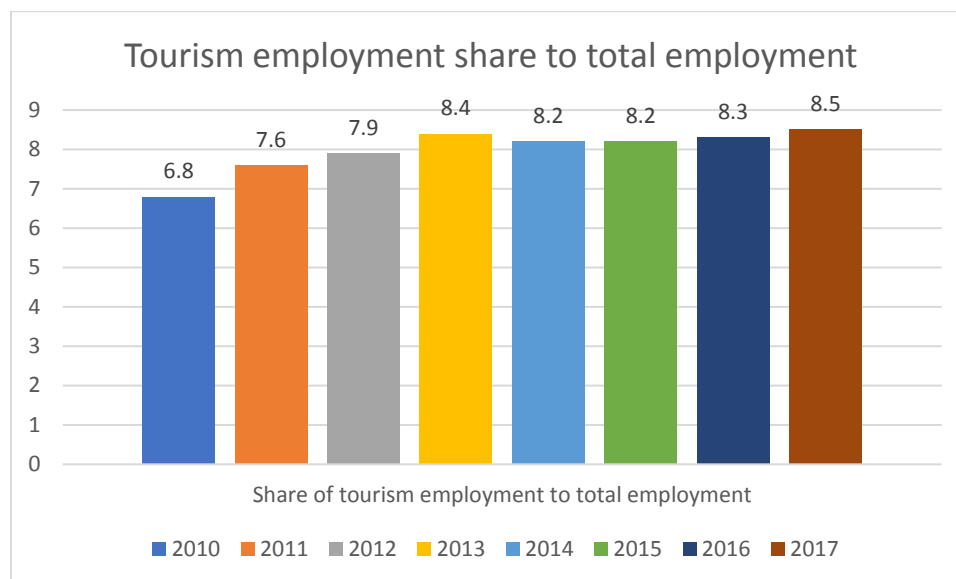
2.15. Share of tourism related employment in total employment

Description

Respective indicator refers to the share of employees working in tourism related employment to total employment. This data collection covers all main labor market characteristics.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2010/2017
Data source for indicator	MONSTAT
Key statistical data used	Indicator comprehends comparable information on the total number of employed persons in tourism related economic sectors) Air transport, Accommodation and food service activities, Accommodation, Travel agency, tour operator reservation service and related activities
Spatial level	National Level

Data completeness	Dataset complete for 2010-2017
Policy/goals	This indicator offers relevant information for policy design and implementation related to smart specialization and tourism. The importance of employment in tourism.
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2.16. % of GDP of foreign direct investment stock

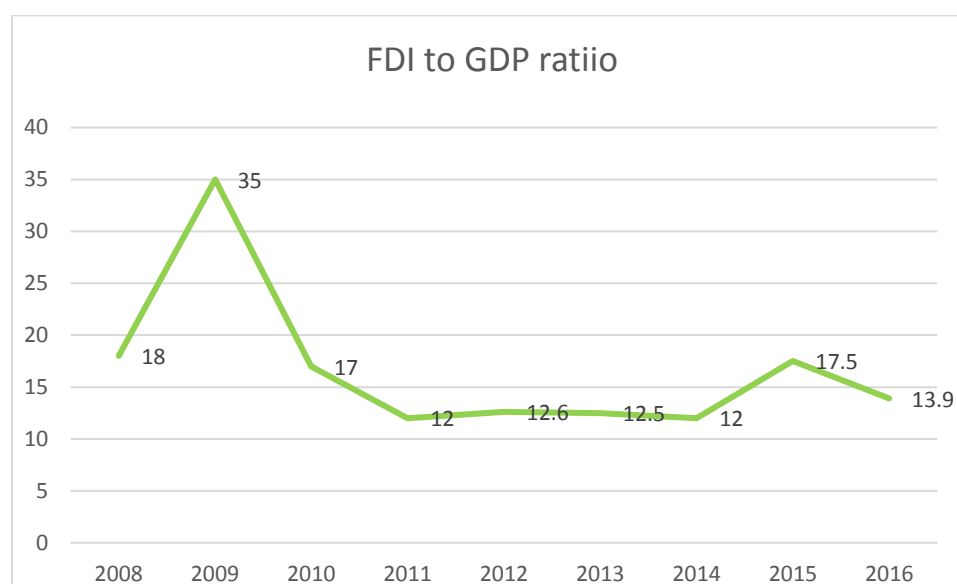
Description

This indicator refers to the share of foreign direct investment (stock) in GDP.

Foreign direct investment (FDI) is an investment made by a resident enterprise in one economy (direct investor or parent enterprise) with the objective of establishing a lasting interest in an enterprise that is resident in another economy (direct investment enterprise or foreign affiliate). The lasting interest implies the existence of a long-term relationship between the direct investor and the direct investment enterprise and a significant degree of influence on the management of the enterprise. The ownership of 10% or more of the voting power of a direct investment enterprise by a direct investor is evidence of such a relationship.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2016
Data source for indicator	Central Bank of Montenegro
Key statistical data used	Foreign direct investment: Inward and outward flows and stock, annual.
Spatial level	Transnational (CO-TAMP), collection at national level

Data completeness	Dataset complete for 2008-2016
Policy/goals	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). Such an investment is illustrative of the attractiveness of a country for investors, either due to the financial facilities or because of strategic geographical position, low cost or high qualification of workforce.
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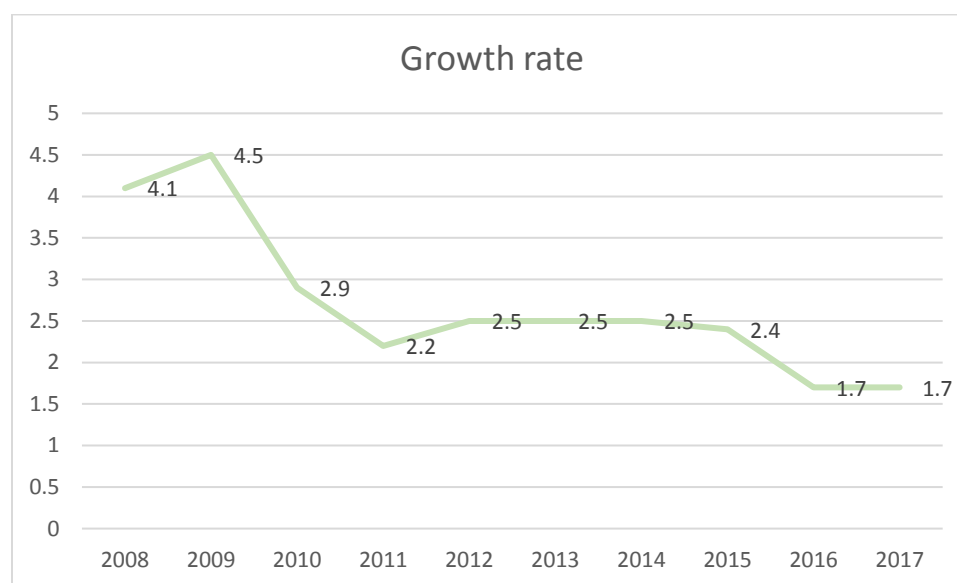
2.17. Population growth rate

Description

Respective 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.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2016
Data source for indicator	MONSTAT
Key statistical data used	Resident population by age group and ages, sex, urban/ rural area, macro-regions, development regions and counties
Spatial level	National Level
Data completeness	Dataset complete for 2008-2016

Policy/goals	Population growth rate is a measure of change of population of a certain area. Rapid population growth can impose limitations on a country's capacity for handling a wide range of economic, social, and environmental issues, particularly when rapid population growth occurs in connection with poverty and lack of access to natural resources.
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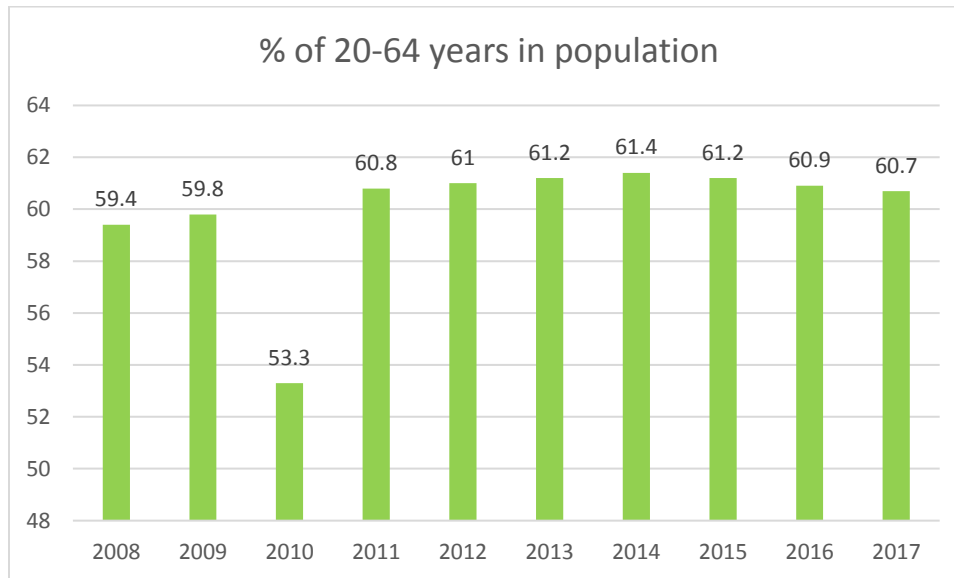
2.18. % of population in age 20-64 years

Description

Respective indicator refers to the share of persons aged 20-64 to total population.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2017
Data source for indicator	MONSTAT
Key statistical data used	Resident population by age group and ages, sex, urban/ rural area, and is collected by retrieving data from statistical surveys
Spatial level	National Level
Data completeness	Dataset complete for 2008/2017
Policy/goals	Indicator measures working age persons out of total population. Together with the indicator for employment rate, it is the most accurate measure of labor market conditions.

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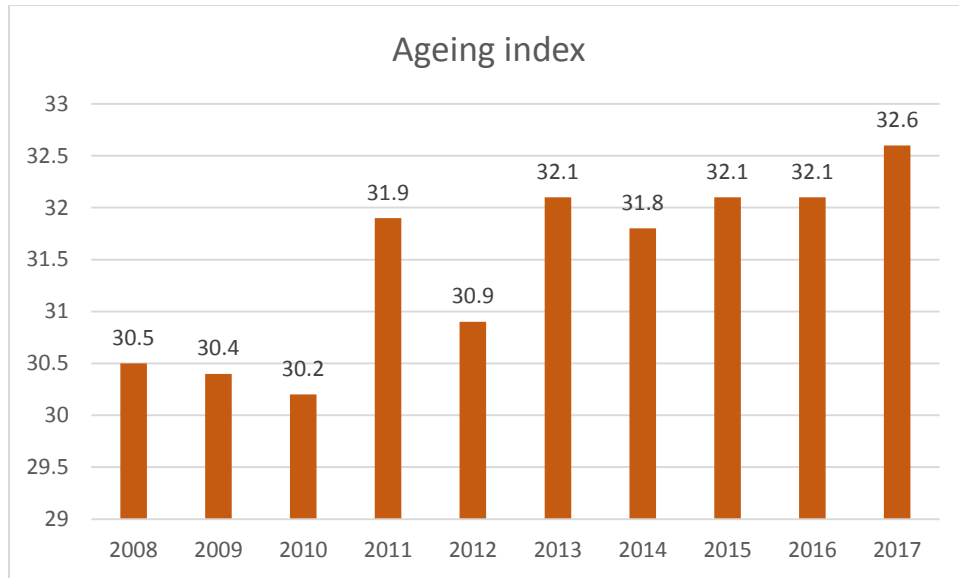


2.19. Ageing index

Description

Respective indicator presents the ratio between the number of the population aged 65 years and above, and the number of population aged 15 years and below.

Type of indicator	Transnational (CO-TAMP), collection at national level
Annual range	2008/2017
Data source for indicator	MONSTAT
Key statistical data used	Respective indicator presents the ratio between the number of the population aged 65 years and above, and the number of population aged 15 years and below.
Spatial level	National Level
Data completeness	Dataset complete for 2008/2017
Policy/goals	Indicator illustrates the rate of aging of the population and as such is useful for the development of a number of policies with strong impact on the population and economy; among these the Active Aging and Healthy Aging policies. It also represents an instrument to monitor and assess several social policies, capacity and priorities to sustain the pension system, etc.
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2.20. Number of foreign students

Description

The indicator should refer to the percentage of foreign students enrolled in tertiary education in Montenegro (as share of the total students enrolled in tertiary education). Foreign students represent students who have crossed a national or territorial border for the purpose of education and are now enrolled outside their country of origin.

Currently no data are available for Montenegro. The key issues are: (i) relatively unknown country with recent history burden; (ii) relatively present language barrier; (iii) lack of offered courses and programs by Montenegrin universities where only one university (University of Donja Gorica) offers bachelor, master and PhD studies in English.