

# REGIONAL MAPPING

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Regional mapping for the circular economy  
transition: Košice

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# **D.T1.1.1: Regional mapping for the circular economy transition: KOŠICE**

## **A.T1.1 Mapping local ecosystem/performing stakeholder analysis**

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## Summary

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## 1. Introduction

The deliverable aims at mapping stakeholders, policies, and activities for the transition towards a circular economy in the target regions in relation with regional S3. The mapping activity is intended as starting point for next project activities such as the hub development and the regional circular economy strategy creation.

For each project region the deliverable comes with an Annex in which relevant stakeholders, policies and activities are listed that are linked with circular economy patterns.

The data and the information contained in this deliverable are strictly confidential, their circulation is restricted to Project Partners and it cannot be disclosed outside the partnership.

## 2. Regional description

### 2.1. Demographics

The city of Košice is the capital of eastern Slovakia. It is the political, economic cultural and social centre of eastern Slovakia. As the seat of the regional government and parliament, various district offices and state institutions, including the Constitutional Court, Košice is the focal point for regional governance. It is the second biggest city in Slovak Republic with 239.095 inhabitants. The Košice region, surrounding the city of Košice is the second largest region in the Slovak Republic with 799.217 inhabitants, 14,6 % of the national population. The average density of the population is 118,42 people per km<sup>2</sup>, while the rate is exceeding the average density in Slovakia.

Basic facts about the demographic status of the City of Košice and Košice region are shown in the following tables.

Indicator	Košice City	Košice Region
Population	239.095	799.217
Average age	41,83	39,53
Population density	1.172,97 persons/km <sup>2</sup>	118,42 persons/km <sup>2</sup>
Share of persons in pre-productive age	14,42 %	17,21 %
Share of persons in productive age	68,28 %	67,97 %
Share of persons in post-productive age	17,3 %	14,82 %
Natural increase rate	181	1.658
Net migration	-519	-461

**Basic facts about Demography of the City of Košice and region (2018)**

Source: Monitoring Platform of Regional Development (available at: <http://tamp.gis.si/slovakia>)

## 2.2. Geography and Morphologic Characteristics

The Košice Region, with an area of 6.754 km<sup>2</sup>, is situated in the southeast of the Slovak Republic and occupies 13,8% of its territory. In the south it borders with Hungary, in the east with Ukraine.

An area of 2.040 km<sup>2</sup> is covered by agricultural arable land, corresponding to app. 30% of the total regional area. Half of this area is covered by agricultural grass land. Forest land accounts for a little higher share, with 2.693 km<sup>2</sup> it covers a little less than two fifths of the area. In the most forested district of Slovakia - Gelnica, up to three quarters. Forests are mainly located in mountain and foothill areas in the north and south-western part of the county. In the southeast, there are floodplain forests, the eastern and southern parts have a lowland-hilly character.



The territory belongs to the northern temperate zone with average annual temperatures at selected meteorological stations around 10 °C. The northern parts are colder whereas in the southeast temperatures can reach up to the levels of inland subtropics. The highest point of the region is 1.476 m high, the lowest point is the area at the mouth of the river Bodrog, 94 m above sea level.

Watercourses belong to the type of lowland, highland and mid-mountain rivers. Water reservoirs are important in terms of water management and recreational use. The water reservoirs Zemplínska šírava, Bukovec, Ružín and Dobšiná have economic and recreational significance.

The Košice Basin is one of the most promising areas in terms of geothermal energy use. Water with a temperature of 150 degrees Celsius is captured at 3.000 m.

There are energy sources (oil and natural gas) and ore and non-metallic raw materials (magnesite, salt rock, talc, gypsum, building stones, brick clay, limestone, caolin, gravel) located in the region.

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## 2.3. Economy

The region is one of the leading regions of the Slovak Republic in terms of its share in gross domestic product and the existing economic base. In 2018, the population of the Košice Region produced gross domestic product at current prices of 10.359,88 €. More than 22.000 enterprises and 33.000 entrepreneurs (individuals) are settled in the region. The registered unemployment rate is at 8,17%.

The raw material base of the region lies within the area of the Slovak Ore Mountains, which in the past led to the emergence of mining, metallurgy of coloured metals and engineering. These industries, in the dominant position of modern metallurgical plants and chemical enterprises, are a critical component of the regional industrial sector. The main economic sectors are industry (metallurgical, engineering, food, electrical, mining, building materials, fuels and energy), construction and agriculture. The presence of U.S. Steel Košice makes the region the largest steel producer in Central Europe. Significant is also the production of food processing products from primary agricultural production. The city has been going through a significant transformation process over the past years. The path went from heavy industrial orientation towards higher added value industries, innovation and creative economy should bring higher competitiveness and attractiveness to the city. The city has established an IT cluster to support investment in high-tech services - in particular information technology and software solutions.

Higher education is concentrated in Košice, where there are 4 universities (University of P. J. Šafárik, Technical University, University of Veterinary Medicine and Private College of Security Management).



The total length of the road network in the region is 2.381 km, of which motorways of the 1st class 339 km and roads II class 583 km. Significant is the land port - transshipment in Čierna nad Tisou. There is an airport of international importance in the City of Košice.

Tourism has very favourable conditions for development in all districts of the region. The natural beauty of the Slovak Paradise is unique.

Indicator	Košice Region
Regional GDP in current prices (in 2017)	10.359,884 €
Regional GDP per capita in current prices (in 2017)	12.974,263 €
Regional GDP in PPP (in 2017)	15.179,073 PPP
Registered rate of unemployment (in 2018)	8,17 %
Average nominal monthly wage (in 2017)	1.025 €
Number of enterprises (in 2018)	22.242
Number of natural persons - entrepreneurs (in 2018)	33.232

**Basic facts about Economy of Košice Region**

Source: Monitoring Platform of Regional Development (available at: <http://tamp.gis.si/slovakia>),  
 Statistical Office of the Slovak Republic, DATAcube database (available at: <http://datacube.statistics.sk/>)

## 3. Regional mapping

### 3.1. Stakeholders

Regional stakeholders already involved, or potentially interested, in circular economy activities are listed within the Annex to this deliverable entitled **D.T1.1.1 Regional mapping for CE transition - Kosice\_Annex**. The stakeholders will be further involved in the hub development and the creation of the circular economy regional strategy. Stakeholders represent all the categories defined by the quadruple helix model: government, industry, academia, and civil participants and they belong to different fields of competence, such as energy, mobility, waste, design, environment protection, food, health services, etc.

According to each project region's Smart Specialization Strategy (S3), in the Annex it is indicated whether and which of the identified S3 strategies are actually addressed by the listed stakeholders.

The circular economy strategies adopted are categorized as follows:

- Collaboration - Agreements or relationships between two or more firms that increase their efficiency and/or reduce their environmental/social impact (e.g. industrial synergy, internal collaboration, give-back programme, sharing platforms).
- Design - Design processes that create physical objects with a minimized social, economic, and environmental impact (e.g. design for minimal waste, for resource efficiency, for repair, for modularity, for recycling, for physical durability).



- Maximise lifetime of products - Adoption of policies and actions about maintenance, repair and upgrade in order to extend the lifetime utility of a product (e.g. product upgrade, product repair, second-hand sale, remanufacturing).
- Prioritize regenerative sources - Changes in the supply chain or in the production processes that substitutes the use of non-sustainable inputs with renewable, reusable, non-toxic ones and/or increase the efficiency of the overall process (e.g. bio-based materials, recyclable materials, regenerative water, regenerative energy).
- New business models - Developing new ways of doing business that are intrinsically sustainable with minimized impact on the society and on the environment (e.g. leasing, pay per use, refillable products, subscription-based products and services)
- Waste as resource - The utilization of what today we consider waste to dispose of as a resource to create new products and energy (e.g. heat recovery from waste, recycling, upcycling, fuel and energy power).

### 3.2. Policies

All relevant local, regional and national policies are listed within the Annex to this deliverable entitled ***D.T1.1.1 Regional mapping for CE transition - Kosice\_Annex*** which also highlights related quadruple helix categories involved and S3 strategies addressed.

### 3.3. Activities

Any relevant regional and local event, project, seminar, course or initiative, passed, recurrent or future is filled in the activity section of the Annex to this deliverable entitled ***D.T1.1.1 Regional mapping for CE transition - Kosice\_Annex***.

## 4. Annexes

The .xls sheet ***D.T1.1.1 Regional mapping for CE transition - Kosice\_Annex*** filled with the information related to the target region is attached.