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Faculty of Mechanical Engineering
Institute of Industrial Engineering, Environmental Management and Engineering
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Interreg
Slovakia – Austria
Co-funded by the European Union

Report on the Environmental Impact Assessment of the Strategy Paper

„Cross-border cooperation Programme Interreg VI-A Slovakia-Austria 2021-2027"

pursuant to Act No. 24/2006 Coll. on Environmental Impact Assessment and on amendments to certain acts as amended

Contracting Authority: *Ministry of Investment, Regional Development and Informatization of the Slovak Republic*
Publishing Date: *30.06.2022*
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Content

1 (I.) Basic information about the contracting authority

1.1 Label

Managing authority: Ministry of Investment, Regional Development and Informatization of the Slovak Republic
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2 (II.) Basic data on the strategy paper

2.1 Title

Interreg VI-A cross-border cooperation programme, Slovakia - Austria, 2021-2027 (hereinafter referred to as the „Programme").

2.2 Territory

Slovak Republic (SR, regions, municipalities),
Austria (A, counties, municipalities).

2.3 Municipalities concerned

Towns and villages of the Slovak Republic in 2 self-governing regions:

- *Bratislava Self-Governing Region,*
- *Trnava Self-Governing Region.*

Towns and villages in Austria in 3 Self-Governing Regions:

- *Burgerland (Nordburgerland),*
- *Lower Austria (Nieder osterreich-Sud, Sankt Polten, Waldviertel, Weinviertel, Wiener Umland/Nordteil, Wiener Umland/Sudteil),*
- *Vienna.*

2.4 Authorities concerned

Central government bodies:

- *Office of the Government of the Slovak Republic,*
- *Ministry of Investments, Regional Development and Informatization of the Slovak Republic,*
- *Ministry of Finance of the Slovak Republic,*
- *Ministry of Environment of the Slovak Republic,*
- *Ministry of Economy of the Slovak Republic,*
- *Ministry of Health of the Slovak Republic,*
- *Ministry of Education, Science, Research and Sport of the Slovak Republic,*
- *Ministry of Interior of the Slovak Republic,*
- *The Federal Ministry for European and International Affairs of Austria,*
- *The Federal Ministry of Social Affairs, Health and Consumer Protection of Austria,*
- *Federal Ministry of Agriculture, Regions and Tourism of Austria,*
- *The Federal Ministry of Climate Protection, Environment, Energy, Mobility, Innovation and Technology of Austria,*
- *The Federal Ministry of Education, Science and Research of Austria,*
- *The Federal Ministry of Arts, Culture of Public Services and Sport of Austria,*
- *Federal Ministry for Digitalisation and Economy of Austria,*
- *Federal Ministry of Finance of Austria.*

Regional self-governing bodies:

- *Trnava Self-Governing Region, its district offices and municipalities.*
- *Bratislava Self-Governing Region, its district offices and municipalities.*
- *Cross-border administrative authorities concerned in Austria: Burgenland, Lower Austria and Vienna.*

2.5 Authorising authority

Office of the Government of the Slovak Republic, Freedom Square 1, 813 70 Bratislava.

2.6 Content and main objectives of the strategy paper and its relationship to other strategy papers

The design of the Interreg VI-A Slovakia-Austria 2021-2027 cross-border cooperation programme is a medium-term strategy document setting out the framework bases and priority areas for supporting cross-border activities between the Slovak Republic and Austria in the 2021-2027 programming period. The material was created on the basis of socio-economic analysis of the programme area (hereinafter referred to as "PÚ") in connection with the financing of activities from the state budget and the European Regional Development Fund. The program shall define the eligible border regions, eligible applicants and the activities that can be financed by the programme in question.

The Interreg VI-A 2021-2027 cross-border cooperation programme between the Slovak Republic and Austria is one of the European territorial cooperation programmes implemented in the period 2021-2027. Through the implementation of joint cross-border projects, the Programme will implement the policy objectives set out in the relevant EU regulations on the European Regional Development Fund. The Working Group selected four key areas of support for the 2021-2027 programme: more innovative borders, greener borders, more social borders and cooperation between institutions and border residents.

The Inerreg VI-A Slovakia-Austria cross-border cooperation programme 2021-2027 is based on the following strategy papers:

Documents of a general nature

- *REGULATION (EU) 2021/1060 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down common provisions for the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and the financial rules for those funds, as well as for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy.*
- *REGULATION (EU) 2021/1058 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL about the European Regional Development Fund and the Cohesion Fund.*
- *REGULATION (EU) No 2021/1057 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 June 2021 establishing the European Social Fund Plus (ESF+) and repealing Regulation (EU) No. 1296/2013.*

- *REGULATION 2021/1059 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL about specific provisions relating to the European Territorial Cooperation (Interreg) objective supported by the European Regional Development Fund and external financial instruments.*
- *(Proposal) REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL about a mechanism for addressing legal and administrative obstacles in a cross-border context, COM (2018) 373.*
- *REGULATION (EU) 2021/1056 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 June 2021 establishing a Just Transition Fund.*

European Union strategy papers

- *Interreg CENTRAL EUROPE 2021-2027 (on 24.06.2021).*
- *Europe 2020: A strategy for smart, sustainable and inclusive growth.*
- *Border Orientation Paper Slovakia- Czech Republic.*
- *Agenda 2030 for sustainable development - resolution adopted by the UN General Assembly on 25 September 2015.*
- *White Paper on the future of Europe and further developments. Reflections and scenarios for the EU-27 by 2025, COM (2017) 2025, 1st March 2017.*
- *European Green Deal, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, Brussels, 11th December 2019, COM (2019) 640 conclusion.*
- *The energy and climate package (including the 2030 Climate and Energy Framework).*
- *2030 Agenda for Sustainable Development (June 2021).*

Slovak Strategic Documents

- *Prerequisites for the Partnership Agreement.*
- *National Reform Programme of the Slovak Republic 2020.*
- *Vision and strategy for the development of Slovakia up to 2030.*
- *The starting points for the implementation of the 2030 Agenda for Sustainable Development (Government of the Slovak Republic, 2016).*
- *A low-carbon strategy for 2030, with a view to 2050 and its update (MoE, 2018).*
- *Economic policy strategy for the Slovak Republic up to 2030.*
- *National Regional Development Strategy of the Slovak Republic.*
- *National Strategy for Sustainable Development of the Slovak Republic.*
- *Greener Slovakia - Environmental Policy Strategy of the Slovak Republic up to 2030 (Envirostratégia 2030).*
- *Research and innovation strategy for intelligent specialization of the Slovak Republic.*
- *Action Plan for smart industry of the Slovak Republic (with the National Investment Plan for 2018-2030).*

- *Strategic Plan for Road Transport Development of the Slovak Republic up to 2030 - Phase II.*
- *National Programme for the Development of Education and Training.*

Austrian strategy papers

- *Master Territorial Plan for Rural Areas (2017).*
- *Regional Development Plan (Burgenland, 2011-2012).*
- *Smart City Framework Strategy (Smart City) 2019 - 2050 (Vienna).*

3 (III.) Basic Data about the Present State of the Environment of the Concerned Territory

3.1 Information about the state of the environment, including health, and its likely development if the strategy paper will be not realised

Information on the document was obtained mainly from national databases and comprehensive materials of the Ministry of the Environment of the Slovak Republic (MŽP) and its professional organizations: Environmental Regionalization of the Slovak Republic - 2016 (MŽP, 2016) and report on the evaluation of the strategy document "Vision and Strategy for the Development of Slovakia into the year 2030 and supplementary materials of the Institute of Environmental Policy of the Ministry of Environment of the Slovak Republic and other professional organizations of the Ministry of Environment of the Slovak Republic (in particular SAŽP, SHMÚ, VÚVH, ŠGÚDŠ) and related strategic documents plans and programmes. In addition, we are also based on materials from OECD, European Commission and European Environment Agency, which are concerning the Slovak Republic, mainly Interreg Central Europe 2021 - 2027 on: 24.06.2021.

In the map outputs, an information on the quality of individual components and environmental factors of the territory concerned are clearly processed, Fig. 1.

Fig. 1 Map of affected regions of the Programme (Source: own processing)

The total length of the common border between the Slovak Republic and Austria is 106.7 km. For the most part, it takes place on the Morava River from a smaller part on the Danube River and on the Earth. The regions and municipalities whose cadastral territory extends across the

Slovakia-Austria border are: Trnava Region (district of Senica) and Bratislava Region (Malacky District, Bratislava) on the Slovak side and on the Austrian side it is: Lower Austria (district of Gänserndorf and district of Bruck an der Leitha) and Burgenland (Neusiedl am Se edistrict) . From the South side, the programme territory borders Hungary and to the north with the Czech Republic.

State of the environment, including health, broken down by region:

Information on the current state of the environment of the territory concerned is summarized for each region in points:

- ***Territorial and administrative division of the region,***
- ***Components of environment (air, water, soil, fauna and flora),***
- ***Technical infrastructure of the region,***
- ***Demographic data + health data.***

3.1.1 State of the environment of the Bratislava Region

The Bratislava region is located in the western and southwestern parts of the Slovak Republic, occupies an area of 2,053 km^2 and its area is the smallest region of the Slovak Republic.
From the north and east side it borders Trnava region, borders the Republic of Hungary in the south and Austria to the west. The border with Austria is made up of the Morava River and, with a length of 37 km, Europe's second largest river Danube. Near the borders of the region there are borders of the Czech Republic. The seat of the Bratislava Region is the capital of the Slovak Republic Bratislava with important political, economic and social functions. The territory of the region is characterized by its location and natural characteristics from the point of view of the landscape structure. From a geomorphologic point of view, it is an area in which several dominant geomorphologic events of European importance meet – Karpatský masív (Carpathian Massif), Panónská nížina (Pannonian Lowland) and Dunaj (Danube) River, which historically predetermined the North-South and East-West roads and connections between the other countries of Europe. The western part of the territory is made up of the Záhorská nížina (Záhorská Lowland), from the South-West to the North-East there is a mountain range of Malé Karpaty (the Little Carpathians), and the eastern and southeastern part is occupied by Poddunajská nížina (the Danube Lowland).
From a geographical point of view, the location of the region is very convenient, since it lies at the historical crossroads of commercial roads – Poddunajská cesta (the Danube road) and North-South, the so-called amber road. The current central location of the region in the Central European area, good transport accessibility and fulfilment of the function of the international and the achieved level of indicators in the economic and social spheres are among the significant development factors of the Bratislava region.

Data on BSK districts are given in Tab. 1 and their geographical location in Fig. 2.

Tab. 1 District data

Structure	Acreage in km²		Number of municipalities		Of which with city status		Population as at 31.12.2019		Number of inhabitants per km²
	Abs.	%	Abs.	%	Abs.	%	Abs.	%	
Bratislava region	**2052,62**	**100**	**89**	**100**	**7**	**100**	**669 592**	**100**	**326**
Bratislava	367,62	17,91	1	1,12	1	14,3	437 726	65,37	1 190
District Bratislava I	9,59	0,47	1	1,12	-	-	41 893	6,25	4 368
District Bratislava II	92,49	4,51	3	3,37	-	-	116	17,35	1 256
District Bratislava III	74,68	3,64	3	3,37	-	-	69 479	10,37	930
District Bratislava IV	96,67	4,71	6	6,74	-	-	97 792	14,60	1 011
District Bratislava V	94,20	4,59	4	4,49	-	-	112 339	16,77	1 192
Malacky District	949,56	46,26	26	29,21	2	28,6	74 661	11,15	78
Pezinok District	375,54	18,30	17	19,10	3	42,9	65 593	9,79	174
District Senec	359,88	17,53	29	32,58	1	14,3	91 612	13,68	254

Source: DATAcube 2020 (https://slovak.statistics.sk/).

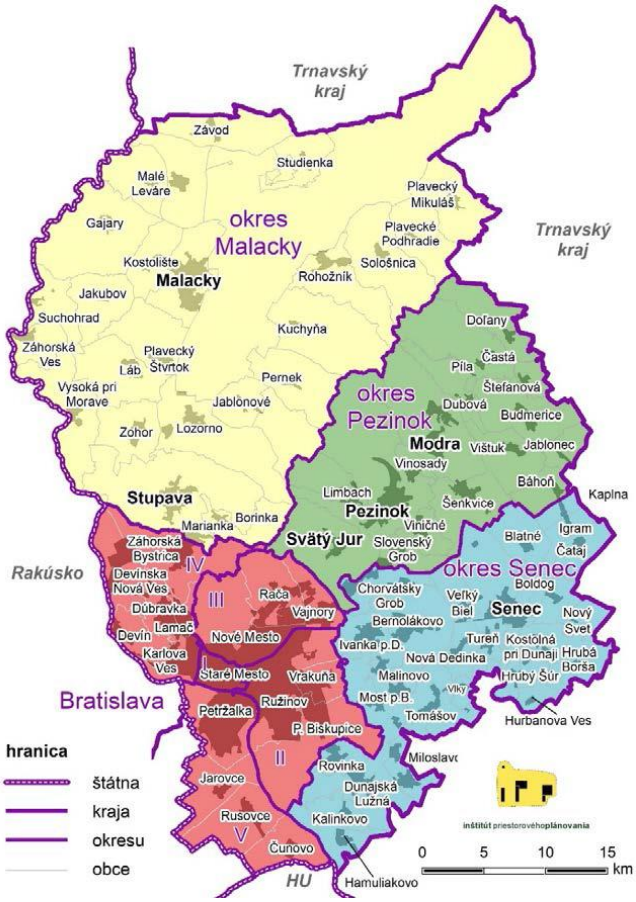


Fig. 2 Geographical location of the districts concerned (Source: https://www.geoportal.sk/sk/geoportal.html, 2020)

Education, science and research of the Bratislava Region

For the development of education, science and research, the Partnership Council for Integrated Territorial Development of the Bratislava Region was established in the Bratislava region for 2021 -2027, where the project intentions in the structure are updated:

- *education at 284 kindergartens,*
- *166 primary schools,*
- *44 grammar schools,*
- *53 secondary vocational schools.*

In the capital, in the school year 2020/2021, the rectorate also had a faculty of 11 higher education institutions:

- *Comenius University,*
- *Slovak University of Technology,*
- *University of Economics,*
- *Academy of Performing Arts,*
- *Academy of Fine Arts and Design,*
- *University of Economics and Management of Public Administration,*
- *St. Peter's College of Health and Social Work. Elizabeth*
- *Bratislava International School of Liberal Studies,*

- *Pan-European University,*
- *Slovak Medical University,*
- *Police Academy.*

Trnava University has a Theological Faculty in the Bratislava Region. Most students in the region were enrolled at Comenius University, Slovak University of Technology and University of Economics. An increase in the level of education of the inhabitants of the region is also foreseen to increase their environmental awareness.

Scientific and Research Institutions - Bratislava Region:

- *Academies of Sciences (64),*
- *Science and Technology (5),*
- *Scientific and technical associations and associations (132),*
- *Research institutes (113),*
- *All Malacky Locations (1)*
- *Pezinok (2).*

Significant R&D institutions of the region:

- *Kantar Slovakia s.r.o.,*
- *Statistical Office of the Slovak Republic,*
- *Nuclear Regulatory Authority of the Slovak Republic,*
- *The Office for Standardisation, Metrology and Testing of the Slovak Republic,*
- *Geological Institute of the Slovak Academy of Sciences,*
- *Glaston s.r.o.,*
- *Research Institute of Judicial Optics, s.r.o.,*
- *AB archeo, s.r.o.,*
- *WaterTim s.r.o.,*
- *Synkola s.r.o.,*
- *University of Mezinánovních and Veřejné vztahů Prague - Educational and Consulting Institute in Bratislava,*
- *Institute of Experimental Psychology SAS,*
- *Biogen Slovakia s.r.o.,*
- *Institute of Informatics of the Slovak Academy of Sciences,*
- *BioScience Slovakia s.r.o.,*
- *Gedeon Richter Slovakia, s.r.o..*

Components of Environment (air, water, soil, fauna and flora)

Air

The air pollution in the solution is significantly involved in factors, which are located directly in its territory, but also operating around this territory. The main sources of air pollution come

from point sources of industrial operation (Slovnaft,a.s., VOLKSWAGEN SLOVAKIA, a.s., CRH (Slovensko),a.s. and others), but also from mobile sources - automotive transport. Based on the Air Quality Report prepared in 2019 by the Slovenský hydrometeorologický ústav-SHMÚ, transport is one of the dominant sources of air pollution within the territory of the capital town of the Slovak Republic (SR) Bratislava.

In terms of sources of pollution, the energy sources of production undertakings, central heaters, block boiler rooms, domestic heating and transport contributed to air pollution.

Pollutants in the air can also be considered as a source of pollution of surface water and groundwater from a water economic point of view. Water is one of the media of transport and accumulation of air pollutants. Gaseous exhalations of an acidic nature, such as sulphur oxides, nitrogen oxides, hydrogen chloride, etc., have the most harmful influence on the soil because they neutralize the alkaline components of the soil and cause its acidification. Soil acidification has a negative impact not only on vegetation, but also on other factors such as nutrient deficiency, reduction of biological activity, poor decomposition of organic matter. Another risk is the accumulation of heavy metals in the soil, which is reflected in the ability of the soil to provide hygienically harmless crops.

In the field of air protection, air pollution sources must comply with the conditions of the Act no. 137/2010 Coll. on air pollution. The categorization of stationary sources of air pollution is determined by the Decree of the Ministry of Environment of the Slovak Republic No. 410/2012 Coll., which implements certain provisions of the Act on Air. The Decree of the Ministry of Environment of the Slovak Republic No. 231/2013 Coll., lays down requirements for keeping operational records and the scope of other data on stationary sources of air pollution. The Decree of the Ministry of Environment of the Slovak Republic, No. 411/2012 Coll. provides for monitoring of emissions from stationary sources and air quality in the vicinity (surrounding of a particular places), method and requirements for detecting and demonstrating the amount of pollutants discharged and data on compliance with specified technical requirements and general conditions of operation.

In the Bratislava region, the air is most polluted on the territory of the city of Bratislava. This condition is mitigated by wind conditions influenced by the slopes of the Little Carpathians. The atmosphere is most polluted with transport and exhalations from the chemical industry and energy industry (heating plants, power plants). An important secondary source of pollution is secondary dustiness, the level of which depends on meteorological factors, earth and agricultural works and the nature of the surface.

Water

From a hydrogeological point of view, the territory is one of the most important areas, both in terms of quantity and quality of a groundwater, especially the area of the lowland part along the Danube stream. Hydrogeological conditions are tied to the geological and geomorphological construction of the territory. In the Záhorská Lowland, groundwater reserves are less abundant, tied to Artesian waters and waters of quaternary gravel and sandy rocks.

In Malé Karpaty (the Little Carpathians), stocks are insignificant, with only small springs and fluctuating yields. In the Poddunajská nížina (Danube Lowland) there is a large source of groundwater – Žitný ostrov (Rye Island), which is an important reservoir of water in not only the solved area. It is the largest river island in Europe and also represents the largest drinking water reservoir in Central Europe.

The following main hydrogeological regions may be allocated in the area according to the determinant type of permeability in the area:

- ***Intergrain permeability/throughput:***
  - *Quaternar Moravia from Brodské to Vysoká pri Morave (near Moravia),*
  - *neogene of the central part of the Borská nížina (Borska Lowland),*
  - *quaterr and neogen of the North-Eastern part of the Borská nížina (Borská Lowland),*
  - *quaterre and neogen in the Southern and South-Eastern parts of the Borská nížina (Borská Lowland),*
  - *neogén Trnavská pahorkatina (Trnava Uplands),*
  - *quaterr of the western edge of the Poddunajská rovina (Danube Plane),*
  - *quartet of Trnavská pahorkatina (Trnava hills),*
  - *quaterr of the Southwest Part of the Poddunajská rovina(Danube Plain).*

- ***Fissure permeability:***
  - *crystallinic and mesozoicum of the South-Western part of the Malé Karpaty (the Little Carpathians),*
  - *crystallinic and mesozoicum of the South-Western part of the Pezinské Karpaty (Pezinok Carpathians).*

- ***Karst and karst crack permeability:***
  - *mesozoicum of the northern part of the Pezinské Karpaty (Pezinok Carpathians) and Brezovské Karpaty (Brezov Carpathians),*
  - *mesozoicum of mantle of the Křížňany of Malé Karpaty (the Little Carpathians).*

Terrain

Terrainl is an important landscape element with an irreplaceable energy and bioproduction function. It is the result of mutual penetration and action of the atmosphere, hydrosphere, lithosphere and biosphere. It is closely linked to them and therefore reflects in detail the current and partly past structure of the country. The quality of the soil cover is a significant factor conditioning the existence of certain types of vegetation and animal welfare in the country. At the same time, it is also an important natural resource with an irreplaceable production function, which is one of the most important existential factors of human society.

Soil maps and soil granularity (Atlas of the Land of the Slovak Republic, 2002 and soil portal - http://www.podnemapy.sk/default.aspx) were used as the starting basis for the analysis of soil characteristics and spatial distribution within the area. Soil cover has been assessed on the basis of the occurrence of soil types at subtype and soil species level (based on granularity). The difference in physical and geographical conditions of the basic types of solved territory - mountain part Malé Karpaty (Malé Carpathians) and lowland part Podunajská nížina and Záhorská nížina (Danube Lowland and Záhorská Lowland) is also manifested from the point of view of the pedo-geographical characteristics of the territory. Within the Malé Karpaty (the Little Carpathians), important pedo-genetic factors are substrate, relief and climate. On the territory of the lowlands, the main pedo-genetic factors are asonal factors and asonal factors. The most important factor is the erosion and accumulation activity of watercourses, which causes repeated disruption of the soil by flooding. The largest area of soils in the Záhorská nížina (Záhorská Lowland) consists of blacks and regozema. The Podunajská nížina (Danube Lowland) has a more varied pedological composition - there are kambizema, fluvizeme, blackness, blackberries and brown-earths. The spatial arrangement of soil types and soil species is shown in the following diagram.

From the point of view of phytogeographical - vegetation breakdown, the solved area belongs to the oak zone. Within the zone it is possible to allocate several districts with their sub-areas in the area under solution.

Oak zone

Flat Area:

- *District of niva of Morava and Myjava (1),*
- *District of Záhorské pláňavy (Záhorske plains)(plateau) - subsurface north (2a),*
- *District of Záhorské pláňavy (Záhorske plains)(plateau) - subsurface southern (2b),*
- *District of Lakšárská pahorkatina (Lakšárská upland) (3),*
- *District of Bor (4),*
- *District fo Podmalokarpatská zníženina (Podmalokarpatská reduction),*
- *District of non-rodent – subsurface of Šury (6a),*
- *District non-refractory - floodplain subsection (6b),*
- *District of non-rodent - food subsection of upper Žitný ostrov (Rye Island) (6c).*

Area of the Highlands:

- *Trnavská pahorkatina (Trnava Upland) District – sub-district Podmalokarpatská pahorkatina (Podmalokarpatská upland) (7a),*
- *Trnavská pahorkatina (Trnava Upland) District - sub-district Trnavská tabuľa (Trnava board) (7b),*
- *Crystalline-secondary area,*
- *District of Malé Karpaty (the Little Carpathians) - sub-district Devínske Karpaty (the Devínske Carpathians) (8a),*

- *District of Malé Karpaty (the Little Carpathians - sub-district Pezinské Karpaty (the Pezinske Carpathians) (8b).*

Source: adapted according to: Atlas of the Country of the Slovak Republic, 2002.

Potential vegetation

Potential natural vegetation is vegetation that, given climatic, soil and hydrological conditions, would have evolved at a certain location (habitat) if the impact of human activity had ceased immediately. It is a presented vegetation reconstructed to contemporary climatic and natural conditions (Michalko et al., 1980, 1986). Knowledge of natural potential vegetation (both forest and non-forest) is given with the aim of getting closer to it or returning it completely to its natural state in order to ensure the ecological stability of the territory.

Fauna

The solved territory is located on the territory of two lowlands (Podunajská and Borská) and mountain massif of the Malé Karpaty (the Little Carpathians), which also affects the diversity of fauna.

From the point of view of zoogeographic breakdown (Atlas of the Country of the Slovak Republic, 2002), the solved territory according to the terrestrial biocycle can be incorporated into:

- *provinces of steppes - pannonian section,*
- *provinces of deciduous forests - subcarpathian section.*

In terms of zoogeographical breakdown for limnical biocycle, we include the solved territory in the Pontocascas province, the Danube district and the Western Slovak part.

The fauna of the solved territory is varied, which is determined by the variety of habitats, the vastness of the territory and its relatively large ruggedness. The territory contains several protected and important species of animals.

Protected and significant mammals and birds:

- *Lutra lutra, (vydra riečna/river otter),*
- *isolated nesting of the bird (Lanius minor), strakoš kolesár, /wheel boy*
- *Luscinia svecika, (slávik modrák/blue mussel),*
- *Merops apiaster,(včelárik zlatý/Golden beekeeper).*

Protected and significant species of terrestrial invertebrates:

- *Mantis religiosa, (modlivka zelená/green prayer),*
- *Saga pedo,(sága stepná/steppe saga),*
- *Tibicina haematodes, (cikáda viničná/vine cicada),*
- *Osmodrema eremita, (pižmovec hnedý/muscovy brown),*
- *Rosalia alpina, (fúzač alpský/Alpine beard),*
- *Stethophyma grossum, (koník žltopásy/yellow-breasted horse),*
- *Cicadetta montana,cikáda/cicada,*

- *Lucanus cervus,(roháč obyčajný /stag beetle).*

Protected and significant aquatic invertebrate species:

- *Leucorrhinia pectoralis, (vážka/dragonfly),*
- *Ophiogomphus cecilia, (klinovka hadia/snake clove),*
- *Ephoron virgo, (podenka nížinná / Ephoron virgin lowland),*
- *Heptagenia coreulans, (podenka/ Horseshoe),*
- *Stylurus flavipes, (klinovka žltonohá /yellowish-eyed carnation),*
- *Isoperla obscura, (pošvatka/ posvatka).*

Zoogeographically and phunistically important species of reptiles and amphibians:

- *Elaphe longissima, (užovka stromová/tree shenanigans),*
- *Coronella austriaca, (užovka hladká /smooth snake),*
- *Rana arvalis, (skokan ostropyský/ostropy jumper),*
- *Rana dalmatina, (skokan štíhly/slender jumper),*
- *Rana temporaria, (skokan hnedý /brown jumper),*
- *Rana sp., (skokan zelený/jumper green),*
- *Hyla arborea,(rosnička zelená/green dewdrops),*
- *Podarcis muralis, (jašterica múrová/ wall lizard),*
- *Salamandra salamandra, (salamandra škvrnitá/ spotted salamandra).*

Zoogeographically and phunistically important fish species:

- *Umbra krameri, (blatniak tmavý /dark mudguard),*
- *wild form of Cyprinus carpio, (kapor sazan / sazan carp),*
- *Proterorhinus marmoratu, (býčko rúrkonosý/tubular bull),*
- *Barbus peloponnesius, (mrena škvrnitá/mottled lattice),*
- *Misgurnus fossilis, (čík európsky/European chic),*
- *Rhodeus amarus, (lopatka dúhová/rainbow blade).*

Several ecological corridors of European and national importance pass through the area, which serve the migration of several species of animals.

Zoogeographically and phunistically important fish species:
(Umbra krameri), blatniak tmavý /mudguard,
(wild form of Cyprinus carpio, kapor sazan /sazan carp

Flora

Real vegetation
Urban greenery

It represents areas of artificial vegetation mainly in settlements and parts thereof. These are tree vegetation of parks and cemeteries, lawns, flower beds, botanical and zoos, shrubbery and tree elements within housing estates and protective, often lined greenery around industrial agricultural and technical areas. Within this category, these are also larger areas of urban greenery, smaller settlement green areas, etc.

Arable land

It represents areas under cereals, legumes, industrial crops, perennial crops, spices and fodder crops. The soil can be seasonally irrigated. Furthermore, we include gardens, foil trees and greenhouses for growing flowers, medicinal plants, seedlings of fruit trees and shrubs, vegetables. They may contain a smaller proportion of meadows, limits, separate agricultural buildings or dispersed farms.

Vineyards

They represent large-scale areas of vineyards, with a typical structure of strips of retaining structures (concrete columns and wire rods), less concentrated areas of small-scale vineyards with cottages with strips of cultivated soil between the vines. Complemented by access roads, terraced slopes with stone walls, with grass or shrub or tree vegetation, scattered woody vegetation and agricultural and forest landscapes.

Vine growing and wine production has a long tradition in both wine-growing areas in the region – Malé Karpaty (the Little Carpathians) and South Slovakia. A large part of the region is part of the Malokarpatská vinná cesta /Little Carpathian Wine Road, which connects its most remarkable points.

Near the built-up area, in a flat part of the country, vineyards are planted in large blocks with a lower eco-stabilization function. Small-block vineyards and vineyards on terraces are planted on the slopes of the Malé Karpaty (the Little Carpathians), divided by lines of non-forest woody vegetation, creating a specific and unique landscape structure, typical of the Malé Karpaty (the Little Carpathians) wine region. A characteristic feature of the Malokarpatská vinná oblasť (the Little Carpathians Wine Region) are the wine-growing stones, which represent long elongated stone rows in peripheral forest areas. They are a remnant of the long-term activity of the winegrowers who exported stones to the walls serving as the boundary (boundary) between the individual vineyards. The stones partially prevented the erosion of the slopes on which the vineyards were planted. The scale of the stonemasons, which exceeds the size of today's vineyards several times, witnesses the ancient glory of viticulture in the Malokarpatský región/(the Little Carpathians Region). This structure is characterized by a high eco-stabilization, but also soil protection function, prevents the drainage of soil and is a suitable environment for many animals and plants.

As a result of concessions in the legislation (under the new law, vineyards are not protected), the areas of vineyards are reduced. Large areas of vineyards are grubbed up or abandoned. Uncultivated areas are abundantly overgrown with hawthorn (Crataegus sp.), rose arrow (Rosa canina).

Orchards and plantations

They represent strips of fruit trees (apple trees, pears, cherries, cherries, peaches, apricots, plums and others), shrubs (currants, raspberries, gooseberries, partridges and others) and permanent plants (hops), possibly strips of support structures and strips of often cultivated soil between them. Complemented by access roads, strips of terraced slopes with stone walls, with grass or shrub or tree dispersed vegetation, technical buildings and warehouses, high retaining structures for hops.

Orchards are artificially produced plantations of fruit plants.

Meadows and pastures

The class includes grassy areas, scattered lined woody vegetation, in particular within and along watercourses, solitaires and groups of different tree formations and shrubs. They are supplemented by scattered settlements, farm buildings or water surfaces. The primary function on the agricultural lands, representing these areas, is mowing and grazing.

Meadows and pastures are grass-herbaceous communities without continuous plantations of trees, in sites, where they were not primarily present in this form. They were created and are maintained by the economic activity of man. With suitable management, permanent grasslands provide a suitable environment for many plants and animals and increase the wealth of flora and fauna. They are an important additional element of recreational areas.

Deciduous forests

The dominant feature is deciduous plants in natural or man-made development. On the nives of rivers are represented willows, poplars, elms, ash tree/janets, alders. In the lowlands, in addition to oak trees, introduced acacias are represented, and gradually at higher altitudes, these are rakes, beech trees, lime, ash, birch and maples. The areas are complemented by grasslands of forest fields, shrubs, transitional forest-shrubs, forest roads, or recreational facility buildings, scattered settlements and agricultural cultures.

The forest massif of the Malé Karpaty (the Little Carpathians)consists mainly of beech forests. On the territory of the Dunaj a Záhorská nížina (the Danube and Záhorská lowlands), there are mainly floodplain forests near watercourses. A specific type of deciduous forest is the alder slatin forest on the territory of the national nature reserve Šúr.

Coniferous forests

They represent natural or man-planted plantations of coniferous plants - pine trees, larches, fir trees and larch trees. Monocultures of individual trees or groups of several conifers are represented in the tree growth/ stands. They are complemented with woody deciduous plants, grasslands of forest field, shrubs, transitional forest-scrubs, forest roads or recreational facilities, scattered settlements and agricultural cultures.

Coniferous forests are located on the territory of the Záhorská nížina (Záhorská lowlands). These are mainly acidic pine forests on the windblown sands.

Mixed forests

They are represented by both natural and man-made formations of the forest. Mixed forests are formed by individual trees or groups of trees of coniferous and deciduous trees, which are intermittent by tree growths of forest field, shrubs, transient forest-shrubs, forest roads, recreational facility buildings, scattered settlements and agricultural cultures.
Small fragments of these forests are scattered on the Záhorská nížina (the Záhorská lowland) - they are mainly oak pine trees on the windblown sands.

Technical infrastructure of the region

Waste management
Since 1993, waste management programmes (WMP) of the Slovak Republic (POH SR) have been developed in the Slovak Republic (SR) in accordance with the state environmental policy with the purpose of defining the tasks of strategic and conceptual development of waste management from the state level.
WMP of the Slovak Republic, which was prepared for the years 2016 – 2020, was the sixth program, the task of which was to provide a comprehensive view of the further development of waste management in the Slovak Republic until 2015 year. It followed up on the results achieved in the previous programming period and was taking into account all changes passed the Slovak Republic in the process of building waste management. The document "Waste Prevention Program of the Slovak Republic for the years 2019 - 2025" places emphasis on waste prevention.
In solving the problem of waste management, it is possible to start from the Waste Management Programme of the Slovak Republic for the years 2016 – 2020, which was approved by the Government of the Slovak Republic on 14.10.2015, by Resolution No. 562/2015 Coll. and which is followed by the Waste Management Programme of the Bratislava Region for the years 2016 – 2020.
The waste management legislation is implemented by act No. 79/2015 Coll. on waste and on amendments to certain acts. The waste catalogue is established by Decree of the Ministry of Environment of the Slovak Republic No. 365/2015 Coll. as amended by Decree No. 320/2017 Coll.
From the available data, it can be concluded that the amount of municipal waste produced is constantly increasing. In 2019, almost 340,000 tons of municipal waste was produced in the region, representing 506 kg per inhabitant of the region, which is higher than the national average (435 kg/inhabitant). This can be assumed to be due to a higher concentration of the population in the territory of the region than the statistics on the number of inhabitants in the region indicate.

Industry
The industry in the capital town Bratislava covers all sectors. Almost 70 percent of all industry workers of the Bratislava Self-Governing Region are employed in Bratislava. At present, the focus of economic activities in Bratislava is clearly shifting to industry and especially services. The most important industry is the automotive industry (Bratislava automobile factories-

VOLKSWAGEN SLOVAKIA, a.s.), further chemical (SLOVNAFT,a.s. - production of fuel and oils, Istrochem - production of acids and fertilizers, Matador, Cosmetics), electrotechnical (Bratislava Energy Plants - Kablo, Tesla) and food industry.

Bratislava is the only region in Slovakia, where the trade and services sector contributes more to HDP generation than the industrial sector. The biggest contributors to HDP are: hotels, trade, transport and telecommunications - 27% financial and insurance companies - 23% industry - 22%. Agriculture accounts for only 1 percent of the total volume of HDP in the Bratislava region. More than 22,000 legal entities and 43,000 natural persons are economically active in Bratislava.

The largest employers are: VOLKSWAGEN SLOVAKIA, a.s., SLOVNAFT,a.s., SPP,a.s.(Slovak Gas Industry), Slovenské elektrárne,a.s., Slovak Telecom,a.s., HENKEL SLOVAKIA, spol.s.r.o., Railways of the Slovak Republic, IBM Slovakia, financial and insurance companies. Some information about these large companies:

Food industry

Food factories provide food not only for the inhabitants of Bratislava, but also supply them to other areas of Slovakia and for export abroad. Figaro Bratislava, a.s. produces confectionery and chocolate products. The largest dairy in Slovakia is RAJO, s. r. o. . One of the largest bakeries is in Petržalka. Private bakeries in different parts of the city compete with it in the quality of products. A large meat combination was created in Rača. The Stein Brewery has a long tradition in beer production. Palma-Thumys,a.s. produces oils. There are many other food and other plants in Bratislava.

Agriculture

The agri-food complex on the territory of the Bratislava Region is currently one of the complex sectors in terms of its production as well as the territorial layout. In fact, this sector has managed to stabilise and agricultural production is adapting to the real demand for agricultural products. The loss rate in business on agricultural land has fallen significantly. On the other hand, in the event of insufficient investment, the wear and tear of basic means of production and, in particular, of construction funds, is increasing. On the territory of the Bratislava region, agricultural land accounts for 46.8 % of the total area of the territory, i.e. 96 062 ha. Its acreage has been stabilized in recent years.

It is used for the cultivation of vines, wheat, and maize. The positive fact for agriculture in the region is that, thanks to favourable soil-climatic conditions, less traditional crops can also be grown. A negative trend of the present day is the fact that there is a loss of orchards and vineyards, or so they are in a neglected state and there is a significant pressure on their recategorization to the building plots.

Traffic

Bratislava is a central European crossroads. It lies in a triangle where the common borders of Slovakia, Austria and Hungary meet. It is less than 100 km from the eastern border with the Czech Republic.

Road transport

The individual main road routes from the above mentioned transport skeleton have a very important radial character with regard to Bratislava, except for the "2nd class road" from Šamorín through Pezinok and Malacky to Záhorská Ves, which creates the so-called” External regional circuit of Bratislava”. The main road routes and facilities include:

- *highway D1 – Bratislava (Petržalka) – Senec – direction Trnava – Košice (Ukraine),*
- *highway D2 – from the direction (Czech Republic) Kúty – Malacky – Bratislava (Rusovce) – direction (Hungary),*
- *motorway D4 – from the direction (Austria) – Bratislava (Jarovce) – junction with D2 in Bratislava,*
- *road I/2 – from the direction Kúty – Malacky – Bratislava (Rusovce) – direction (Hungary),*
- *road I/61 – from the direction (Austria) – Bratislava (Petržalka) – Senec – direction Trnava – Žilina,*
- *road I/62 – Senec – direction Sládkovičovo – Sereď,*
- *road I/63 – Bratislava – direction Šamorín – Dunajská Streda,*
- *road II/502 – Bratislava – Pezinok – direction Trstín – Vrbové,*
- *road II/503 – Záhorská Ves – Malacky – Pezinok – Senec – direction Šamorín.*

The road communication network without local roads represents a length of 1676 km, of which 795 km of the road network belongs to the territory of Bratislava. Of the total length of the road network, motorway sections account for 92 km.

Rail transport

The skeleton of the railway network of the Bratislava Region consists of international railway lines and a regional line in the direction of Komárno. The network of railway lines coming out of the Bratislava transport hub in the direction of radial is also of great importance for suburban transport over longer distances when operating the territory. The most important railway lines facing the territory of the Bratislava Region and railway facilities include:

- *International railway lines:*
  - *line No. 110 Bratislava – Malacky – direction Kúty (Czech Republic),*
  - *line No. 120 Bratislava – Pezinok – Trnava – direction Žilina,*
  - *line No. 130 Bratislava – Senec – Galanta – direction Štúrovo (Hungary),*
  - *line No. 132 Bratislava Petržalka – Kittsee (Austria),*
  - *line No. 132 Bratislava Petržalka – Rusovce – Rajka (Hungary),*
  - *line No. 111 Devínska Nová Ves – Marchegg (Austria).*
  - *Regional line: line No. 131 Bratislava Nové Mesto – Dunajská Streda – direction Komárno.*
  - *In the district of Malacky, it is necessary to mention the railway line of local importance - Zohor – Záhorská Ves and Zohor – Plavecký Mikuláš – Jablonica.*

The length of the railway network currently stands at about 196 km, of which 79 km falls on the Bratislava railway node. Rail transport provides about 25 % of transported persons from the suburban villages and catchment area of the Bratislava Region to Bratislava.

Water transport

Water transport is operated on the international route of the Danube waterway (Rhine - Main - Danube) from the Black Sea to the North Sea. On the territory of the city of Bratislava, it uses facilities: public transshipment port Bratislava (for freight transport) and passenger port Bratislava (for recreational transport). The public transshipment port Bratislava is the largest strategic facility for freight water transport on the Danube. There is a transshipment of all types of goods. In passenger transport, the passenger port Bratislava is used mainly for cruises and recreational cruises in the direction of Vodné dielo – VD Gabčíkovo (Dam Gabčíkovo) and to neighbouring countries. The Danube waterway and the ports of Bratislava still have large capacity reserves in terms of operation.

Air transport

Air transport is provided through M. R. Štefánik International Airport, Bratislava - Vajnory Regional Airport and the Kuchyňa Military Airport (Malacky District).

M. R. Štefánik Airport is one of the most important strategic public international airports with two perpendicular runways. After 1990, from the point of view of the operation of the airport, there was a sharp decrease in the performance of passenger transport as well as in the transport of goods. The international airport has large reserves in capacity and can be used within the international transport network.

Bratislava - Vajnory Airport is one of the airports of regional importance and is mainly used for sports purposes. The military airport in Kuchyňa serves for a military air base.

Occurrence of mineral resources

The most significant is the extraction of natural gas, oil and lignite. Oil extraction is carried out by Nafta Gbely, a. s., natural gas is extracted at Vysoká na Morave (the High in Moravia) and lignite mining near Gbely is provided by Baňa Záhorie, a. s. in Holíč. Windblown sands and river gravel are used in construction and for the production of building materials in Šaštín-Stráže and Veľké Leváre.

Demographics + health data

The territory of the Bratislava Self-Governing Region consists of 5 districts of the city of Bratislava (Bratislava I - V) and three districts surrounding the town in the direction North (Malacky District), North-East (Pezinok district) and Eastern (Senec district). The population in the region as at 31. 12. 2001 was 298 781 and the population density was 292 inhabitants per km^2.

Thus, the Bratislava Self-Governing Region accounted for 11.14% of the total population of the Slovak Republic. Bratislava lies near the national borders of four countries - Slovakia, Austria, Hungary and the Czech Republic. This fact, together with the lively commercial tourism, has also conditioned the national composition of the inhabitants of the city in the past. Not so long ago, every native Bratislavan spoke three languages - German, Slovak and Hungarian. There was also a large Jewish religious community in the city, many Italians and members of the Balkan peoples lived here. Bratislava has always been a multicultural city, which was also characterised by religious tolerance.

The capital town of Bratislava has the highest proportion of the university-educated population in Slovakia. Education is provided by a system of 115 secondary schools, of which 41 are secondary grammar schools, 48 secondary vocational schools and 26 apprenticeship centres. More than 40 percent of all university students in Slovakia study in Bratislava at three main universities: Comenius University, Slovak University of Technology, University of Economics.

Environmental quality is one of the decisive factors influencing health and the average age of the population. Its favourable development is an essential prerequisite for achieving positive trends in the basic indicators of the health of the population.

Health is defined as a state of complete physical, mental and social well-being, not only the absence of illness is the result of relationships between the human body and socio-economic, physical, chemical and biological factors of the environment, the working environment and the way of life.

The quality of selected environmental components in the Bratislava region is described in the various sections of the evaluation report in chapter: "III.1. Information on the current state of the environment, including health, and its likely development if the strategy document is not implemented", where their condition or, in some cases, the degree of pollution is characterized from the regional level through long-evaluated indicators and indicators monitored for the individual monitored components of the environment (monitoring of components of environment).

Within Slovakia, according to established criteria (selected environmental characteristics/indicators) and procedures evaluating the environment and its impacts, regions (territorial/spatial units) with a certain quality and environmental risk are allocated. In the Bratislava region it is possible to allocate regions of the following quality:

- *a) regions with undisturbed environments:*
  1. *Pajštúnský,*
  2. *Plavecký.*
- *b) regions with slightly disturbed environments, precincts with disturbed environments and precincts with a significantly disturbed environment:*
  1. *Záhorský,*
  2. *Lamačský,*
  3. *Senecký.*
- *c) regions with severely disturbed environments:*
  1. *Bratislava.*

Tab. 2 Indicator monitoring overview for the priority "Quality and sustainable environment"

Pointer Name	Method of monitoring	Monitoring time points	Territorial detail of monitoring	Responsibility for monitoring
CO2 production$_2$ (target value is reduction)	SHMÚ, Towns and Villages, Specific projects	Continuously (as of 31.12.)	Country	BSK (IRPBK)
Pollutant emissions (a decrease of 10 % compared to 2019)	Pollutant emissions reflect the amount of basic and some selected pollutants into the air - SO_2, NO_X, CO, SHMÚ	Continuously (as of 31.12.)	Country	BSK (IRPBK)
Mapping groundwater flow directions	MŽP SR	Continuously (as of 31.12.)	Country	BSK (IRPBK)
Share of the population connected to the public sewerage network (target value is 80 %)	BVS ŠÚ SR	Continuously (as of 31.12.)	Malacky County, Pezinok District, Senec District	BSK (IRPBK)
Share of population connected to the public water network (target value is 80 %)	BVS ŠÚ SR	Continuously (as of 31.12.)	Malacky County, Pezinok District, Senec District	BSK (IRPBK)
Number of revitalised public spaces (target value is 12)	Surveys	Continuously (as of 31.12.)	Country	BSK (IRPBK)
Increasing the share of renewable energy sources (target value is increase)	SIEA, ŠÚ SR	Continuously (as of 31.12.)	Country	BSK (IRPBK)
Disposal of environmental burdens (at least 4 loads compared to 2019)	MoE SR, List of environmental burdens	Continuously (as of 31.12.)	City of Bratislava Malacky District Pezinok District Senec District	BSK (IRPBK)
Municipal waste generation (the aim is to reduce municipal waste production per inhabitant in the region by 10 %) compared to 2019)	MŽP SR, ŠÚ SR	Continuously (as of 31.12.)	Country	BSK (IRPBK)
Share of waste separation in the region (the aim is to increase the share to 50 %)	MŽP SR, ŠÚ SR	Continuously (as of 31.12.)	Country	BSK (IRPBK)
Construction of environmental education centres (the aim is to build 3 centres)	BSK, Municipalities and cities, Surveys	Continuously (as of 31.12.)	Country	BSK (IRPBK)
Establishment of new monitoring stations (independent monitoring stations around major sources of environmental pollution) and better pollution detection (the aim is to set up at least 4 stations)	BSK, Municipalities and cities, Surveys	Continuously (as of 31.12.)	City of Bratislava Malacky District Pezinok District Senec District	BSK (IRPBK)

Share of employees in the agricultural, forestry and fisheries sectors (target value is 5%, current value is 3%)	ŠÚ SR	Continuously (as of 31.12.)	Country	BSK (IRPBK)
New certified products or services within the regional label (an increase of at least 5 products, with a baseline of 19 products and services in 2019)	Surveys LAG (Podhoran), regional certified product database	Continuously (as of 31.12.)	Country	BSK (IRPBK)

Source: https://portal.egov.region-bsk.sk/-/informovanie-o-zivotnom-prostredi

Given the nature of the strategy document under consideration, we must state that most of the planned activities contained therein are indicative in nature and cannot be translated into a specific well-known specified area (territory or location) that we should specify and evaluate.

3.1.2 State of the environment of Trnava Region

Territorial-administrative division of the region

Trnava Region consists of districts (Tab. 3) Trnava, Dunajská Streda, Galanta, Hlohovec, Piešťany, Skalica and Senica. It has an area of 4,148 km^2, the total population is about 551 thousand, the total number of municipalities is 249 (of which urban settlements 14). The regional town of Trnava has about 71 thousand inhabitants (SOBB 2019).

Tab. 3 Territorial and administrative division of Trnava Region

Territory	Area [m^2]	Residents. per km^2 in 2001	Number of municipalities
Dunajská Streda	1 075 003 564	105	66
Galanta	641 791 381	148	35
Hlohovec	267 165 029	171	24
Piešťany	381 147 816	168	27
Senica	683 680 777	89	31
Skalica	357 392 942	132	21
Trnava	741 321 298	170	45
Trnava Region	4 147 502 807	133	249

Source: SOBB 2019

It borders the Czech Republic to the North, Hungary to the South, the Nitra region to the South-East, the North-Eastern border with the Trenčín region and borders Austria and Bratislava region to the West.

The regional town of Trnava has been one of the most important commercial and cultural and historical urban centres in Slovakia since the Middle Ages. In 1238 it was the first to receive

city privileges in the territory of present-day Slovakia. The city was created at the intersection of roads that were of strategic and commercial importance in the distant past, their routes have not changed even today, the current main road network copies them.
Trnava region is distinguished from the point of view of geomorphology 5 areas. The southern and almost the entire central part of the territory is occupied by the Poddunajská rovina (Danube Lowlands) with units Poddunajská pahorkatina (Podunajská hills) and Podunajská rovina (Danube plain), Fatra-Tatra Region forming in the central part of Malé Karpaty (the Little Carpathians) and in the East Považský Inovec, Slovensko-moravské Karpaty (Slovak-Moravian Carpathians) in the North are formed by the Biele Karpaty(the White Carpathians) and Myjavská pahorkatina (Myjava hills). In the North- Western part of the territory lies the Záhorská nížina (Záhorská lowland) with the units Borská nížina (Borská lowland) and Chvojnická pahorkatina (Chvojnicka hills), along the border with the Czech Republic stretches the Juhomoravská panva (South Moravian Basin) with quite Dolnomoravský úval.
The districts of Senica and Skalica are located in the Northern part of the region in the Záhorská nížina (Záhorská lowlands), the districts of Trnava, Piešťany and Hlohovec are located on the sprašová pahorkatina/spraša hills and Dolnovážska niva (Dolnovážská nive), the Southern part of the region on the Poddunajská rovina (Danube Plain) is occupied by the districts of Galanta and Dunajská Streda.

Education, science and research of Trnava Region
In Trnava Self-Governing Region, emphasis is placed on education, from kindergartens to colleges, we list them in a clear list:

Kindergartens - Trnava Region:

- *Bilingual kindergartens (21),*
- *Ecclesiastical kindergartens (42),*
- *Language kindergartens (88),*
- *Private kindergartens (169),*
- *Special kindergartens (38),*
- *State kindergartens (249),*
- *Primary schools with kindergarten (471).*

All locations:

- *Dunajská Streda (4),*
- *Galanta (22),*
- *Hlohovec (17),*
- *Piešťany (13),*
- *Senica (7),*
- *Skalica (9),*
- *Trnava (43).*

Primary schools - Trnava Region:

- *Bilingual primary schools (3),*
- *Ecclesiastical primary schools (92),*
- *Eight-year gymnasiums (48),*
- *Pages of secondary classes (17),*
- *Private primary schools (88),*
- *Special primary schools (153),*
- *State primary schools (799),*
- *Primary schools with grammar schools (22),*
- *Primary schools with kindergarten (471),*
- *Primary schools with extended teaching (152),*
- *Secondary schools of art (212).*

All locations:

- *Dunajská Streda (28),*
- *Galanta (32),*
- *Hlohovec (14),*
- *Piešťany (19),*
- *Senica (6),*
- *Skalica (7),*
- *Trnava (41).*

Secondary schools - Trnava Region:

- *Church secondary schools (44),*
- *Grammar schools (227),*
- *Dormitories (13),*
- *Conservatories (18),*
- *Lyceá (35),*
- *Graduation questions (10),*
- *SOU - secondary vocational schools (98),*
- *Secondary integrated schools (0),*
- *Secondary vocational schools (330),*
- *Industrial secondary schools (35),*
- *Private secondary schools (77),*
- *Special secondary schools (16),*
- *Associated and joined schools (110).*

Higher education institutions - Trnava Region:

- *Trnava (2),*
- *Skalica (2),*
- *Piešťany (2),*
- *Sládkovičovo (2),*

- *Senica (1),*
- *Trnava (2).*

Trnava University in Trnava, part of this school is:

- *Faculty of Health Care and Social Work,*
- *Faculty of Philosophy,*
- *Faculty of Education,*
- *Faculty of Law,*
- *Faculty of Theology, Bratislava.*

Major regional universities:

- *University of Economics in Bratislava,*
- *Central European University in Skalica,*
- *Constantine the Philosopher University in Nitra,*
- *St. Patrick's University has been a vocal cri Cyril and Methodius in Trnava,*
- *University of Economics and Management of Public Administration in Bratislava,*
- *University in Sládkovičovo,*
- *St. Peter's College of Health and Social Work. Elizabeths in Bratislava.*

In Trnava Self-Governing Region there are research and development organizations whose activities are focused on natural, humanities and technical sciences. Organisations operate in both the private and public sectors, owned internationally and foreignly. Higher education institutions are an integral part of the fields of science and research, the main task of which is to raise the level of the educational process so as to achieve compatibility with the European Union. In the state sector, they represent a substantial part of the science and research of the Institute of Slovak Accademy of Science (SAV) - SAS.

Important scientific research organizations of the region:

- *Research Institute of Air Conditioning - Ing. Jozef Lőffler, Piešťany,*
- *Javorová 34, 92101 Piešťany, Research, development and innovation of products in the field of air conditioning, air conditioning and environmental engineering,*
- *Ekamyl, spol. s r. o., Trnava, Sladovnícka 24, 91701 Trnava, Research, development and production in the field of food industry, application of starches and starch derivatives,*
- *MEDIREX GROU ACADEMY n.o., Trnava, Scientific Research and Educational Organization working in the field of biomedical and education in it.*

Components of environment (air, water, soil, fauna and flora)

Air

Trnava Region belongs to the least burdened areas in terms of air pollution within the Slovak Republic. Due to favourable orographic and climatic conditions, the territory is ventilated,

resulting in the dispersion of the pollutants emitted. In addition to the long-range transmission of pollutants, the air quality of Trnava region is influenced mainly by emissions from large industrial sources located on the territory of the region. The industry is characterised by high energy intensity, which also results in high emission leakage. Therefore, an increased concentration of pollutants can be observed, especially around large settlement formations.

The main sources of air pollution in the Trnava region include local heating and road transport. Natural gas is mainly used for heating. The share of solid fuels is among the lowest compared to other regions, but slightly higher there is the consumption of firewood in the mountainous area of the Malé Karpaty (the Little Carpathians). Road transport, which has a significant impact on air pollution, has the most critical section of the D1 motorway in Trnava Region before Trnava from Bratislava and the R1 Trnava-Sereď expressway. Outside motorways and expressways, the greatest intensity of road transport in the region is on the Trnava bypass (road No. 61), on the section of road No. 51 connecting Trnava with Senica, on road No. 426 Holíč-Skalica, on road No. 499 from Piešťany to Vrbové, on the section of road No. 63 to Šamorín and on road No. Industrial sources of air pollution are less significant here in terms of contributing to local air pollution by essential pollutants. In the territory of trnava region there are currently no defined areas of air quality management (ORKO), i.e. areas with demonstrably impaired air quality. In the past, the territory of Trnava was defined as ORKO. The largest emitters of particulate matter (TZL) in Trnava Region are stationary sources, largely small ZZO. So_2 emissions in the region are most produced by stationary sources, large and small ZZO. The most important source of NO_x and CO emissions in the region is road transport.

In 2003, 671 large and medium sources of air pollution were located in Trnava Region. Of this amount, 132 resource operators are territorially integrated into Trnava district (of which 23 large resources), 167 in the Dunajská Streda district (6 large sources), 128 in Piešťany district (6 large resources), 65 in the district of Senica (2 large resources), 59 in the district of Hlohovec (5 large resources), 41 to the district of Skalica (1 large sources). However, these enterprises are not among the biggest polluters in Slovakia.

In the swearing-in (Tab. 4) are listed the 10 largest air polluters in the region, broken down by individual pollutants.

Tab. 4 Ranking of the main polluters within the region by the amount of emissions

Eastern Sugar Slovensko, a.s.,	*Dunajská Streda*
SKLOPLAST, a.s., Trnava	*Trnava*
PD Jaslovské Bohunice	*Trnava*
Foundry Trnava, s.r.o.	*Trnava*
AMYLUM SLOVAKIA, s.r.o.	*Trnava*
Distillery Krystal Sedín,s.r.o.	*Galanta*
BELAR-DUNAJ, a.s., Dunajská	*Dunajská Streda*
Slovak Silk, a.s., Senica	*Senica*
Kodreta Štefanov	*Senica*
Technical services of Galanta	*Galanta*

Source: SHMÚ

Regional air pollution is pollution of the boundary layer of the atmosphere of a rural country at a sufficient distance from local industrial and urban sources. The boundary layer of the atmosphere is a layer of mixing, extending from the surface to a height of about 1,000 m.
On a regional scale, pollutants from combustion processes, sulphur dioxide, nitrogen oxides, hydrocarbons, heavy metals apply. The period of staying of these substances in the air is several days, therefore they can be transferred in the atmosphere up to several thousand kilometers from the source.
Since 2002, an automatic monitoring station of the Slovak Hydrometeorological Institute for monitoring air quality near a busy intersection near the railway station has been located in Trnava. The results from the monitoring of pollutant concentrations to date are in the process of being processed.
Ground-level ozone threshold concentration for population warning IH_{1h} = 240 gμ.m^{-3}, population information threshold concentration IH_{1h} = 180 gμ.m^{-3}. The target value of ground-level ozone concentration for the protection of human health is according to Slovak air protection legislation, in accordance with EU legislation, IH_{1h} = 120 gμ.m^{-3} (average in 8 hours). This concentration must not be exceeded on more than 25 days a year, on average over three years.

Water

Water is a great asset in Trnava Region and has the potential to be applied in the Interreg Programme, so we are looking at it in more detail.

<u>Precipitation and drainage ratios</u>

Precipitation-drain ratios are the most important factors in the formation of surface waters. The above indicator therefore forms the basis for the assessment of water resources and is one of the input data for assessing the balance sheet situation on flows within the State Water Balance (ŠVHB). The distribution of precipitation to the different river basins concerned is documented byTab.

Tab. 5 Run-off area in the river basins concerned

Basin	Area concerned	River basin area [km^2]
Danube	Morava	2282
	Danube	1138
Váh/Weights	Váh/Weights	14268
	Nitra	4501
SR	Together	49014

Source: Hydrological yearbook - surface waters

<u>Sub-basin lower Moravia</u>

The possibilities of improving the flow of the water reservoir in the Myjava basin are among the below average in terms of nationwide hydrological conditions. The current usable potential

of the Morava border river (without unknown influences on the territory of the Czech Republic and Austria) can be estimated at about 19%, of which our share is half.

Sub-basin Danube

The long-term average flow rate of the Danube in Bratislava is 2,044 $m^3.s^{-1}$. Compared to the long-term average monthly flow rate, there are above average water months on the Danube: March, April, May, June (maximum), July, August; on the Black Water it is the months: December, February, March, April (maximum), May. The hydrological regime of the Danube in our territory is practically unaffected. Likewise, other flows in the Danube sub-basin area are unaffected.

Sub-basin Váh

The long-term average flow rate of the scale at the mouth to the Danube is 195.8 $m^3.s^{-1}$ (including Nitra and Malý Dunaj (Little Danube). Compared to the long-term average monthly flow rate, the water months on the Váh River are above average: March, April (maximum), May June, July; in Nitra: December, January, February, March (maximum), April, May. The minimum water month in the Váh River is January and September in Nitra. Types of outflow mode occur from temporarily snow in the alpine region to rain-snow in the highland-lowland area.

The possibilities of improving the flow of water reservoirs are among the best in Slovakia in the Váh River basin in terms of hydrological.

Surface water quality

Surface water quality is assessed on the basis of a summary of the classification results in accordance with STN 75 7221 "Water quality. Surface water quality classification", which evaluates water quality in 8 groups of indicators the Observation Network of monitoring surface water quality is based on the principle of river basins. The quality of surface water in the Váh basin is described in the following Tab.

Tab. 6 Surface water quality in the Váh basin

Flow - sampling point	River Miles	Count Measurements	Surface water quality class and determining indicators of individual groups						
			And	B	C	D	E	F	H
Váh - Hlohovec	100,70	24	III	II	II	III	IV		
Upper Dudváh - Velky Kostoľany	18,80	13	II	III					II
Manivier - Zlkovce (EBO)	0,50	23	I	IV					II
Upper Dudváh - Trakovice	11,00	13	I	III					II
Váh - Nad Sereďou	81,00	24	III	II	II	III	IV	II	
Trnávka - Modranka	8,10	24	In	IV	In	IV	In	IV	
Dolny Dudváh - Sládkovičo	11,30	24	In	III	In	In	IV	IV	II

The water quality class in the Váh River over the waterworks of Kráľová (in the section between the confluence of the Váh River with the Biskupský kanál (Bishopric Canal) and the waterworks

of Kráľová) is determined by a group of microbiological indicators, the decisive indicator being the content of coliform bacteria.

Moravia basin

In Morava (Moravia) basin, the quality of surface water (Tab.) at 6 basic sampling points was monitored. The unfavourable state of water quality in the monitored Morava (Moravia) basin continues mainly on the tributaries of Myjava and Teplica due to the discharge of pollution from point and surface sources, the most important of which is the company Slovenský hodváb Senica (company Slovak Silk Senica) on the tributary of the Teplica influent. In terms of the amount of wastewater discharged, towns and villages such as Skalica, Holíč and Senica have a significant share of the resulting water quality in the Moravia basin.

Tab. 7 Surface water quality in the Moravia basin

Flow - sampling point	River Miles	Count Measurements	Surface water quality class and determining indicators of individual groups						
			And	B	C	D	E	F	H
Morava - Brodské	79,00	24	III	III	IV	III	IV	IV	
Brezovský brook - Osuské	1,70	13	III	III	IV	III	IV	III	
Teplica - Pod Senica	0,80	24	In	In	In	In	In	In	
Myjava - Infant	23,90	24	III	IV	In	IV	IV	IV	
Myjava - Corners	3,00	24	III	IV	IV	III	IV	III	
Morava - Moravský Ján	67,10	24	III	II	IV	IV	IV	III	

In the overall classification, the water quality of the Moravia basins in the Trnava Region is classified in the IV. - V. quality class, while the monitored sites on the influents Myjava (Myjava - Dojč) and Teplica (Teplica - Pod Senicou) were evaluated in the V. class. In the group of oxygen mode indicators in the period 2000-2001, extreme biological oxygen consumption - BSK_5 (max. value 30 mg/l) persist on the tributary of Teplica and, compared to the moving two-year period 1999-2000, a deterioration in the soluble oxygen value from IV to V. quality class (min. value 1,2 mg/l) was observed. In the group of basic physico-chemical indicators, the quality of water in the profile of Teplica - Pod Senicou, which involved dissolved substances, specific conductivity and sulphates, was again included in the V. class.

Danube basin

Water quality in the Danube (Tab.) did not change significantly in the 2000-2001 assessment period compared to previous years. The Danube is influenced by industrial and wastewater from point sources of pollution, diffuse sources, mainly agricultural production, but also by pollution, which is burdened with its tributaries, in the upper part of the tributary of Morava (Moravia), in the lower section of tributaries Váh, Hron and Ipeľ.

Tab. 8 Surface water quality in the Danube basin

Flow - sampling point	River Miles	Count Measurements	Surface water quality class and determining indicators of individual groups						
			And	B	C	D	E	F	H

Danube - Gabčíkovo	1819,60	24	I	II	III	III	IV	III	
Danube - Bears	1806,00	24	II	III	II	III	III	IV	I
Waste channel - SAP (Palkovičovo)	0,50	24	II	III	II	III	III	IV	I

Water quality *(Tab.) in the monitored river basin corresponds to the IV. class due to high microbiological pollution by coliforms and thermotolerant coliforms at the sampling point Dunaj - Gabčíkovo and the increased concentration of chlorobenzene in the profiles Odpadový kanál – SAP (Waste Channel – SAP) and Dunaj – Medveďov (Danube – Bears). All other endpoints are classified in the I-III water quality class. In the followingTab. data on the quality of surface water in Malý Dunaj (the Little Danube) basin are described.*

Tab. 9 Surface water quality in the Little Danube basin

Flow - sampling point	River Miles	Count Measurements	Surface water quality class and determining indicators of individual groups						
			And	B	C	D	E	F	H
Little Danube - Jelka	81,50	24	II	II	III	III	IV	IV	
Black Water - Black Water	4,80	24	III	III	In	III	IV	III	
Gabčíkovo Canal - Topoľníky - Kútniky	10,40	17	IV	II	IV	IV	In	III	
Chotal Canal - Jánošíkovo on the island	11,00	17	II	II	III	III	III		

Bathing water

The most important natural water recreational sites were the subject of the solved issue. The selection of sites takes into account their importance in terms of recreational use, the size of the sites, the type of site and the possibility of pollution.

Water quality limits in recreational areas were considered to be grade values of III. class of quality according to STN 75 7221 "Water quality. Classification of surface water quality".

Tab. 10 Water purity classes of selected sources

Site	Water purity classes according to STN in 2001		
	Ch.	MB.	B.
King's n/V. 3 beach. Area	In	IV	IV
Kunov	II	III	III
Sastin Stráže-Gazarka	II	IV	III
Beech-Lumps	IV	In	II
Dry n/Steamnou	In	IV	III
Cerenec	III	III	II

Groundwater

The volume of groundwater quantities taken in relation to the quantities, temporal-spatial distribution and hydrological characteristics of usable quantities of groundwater is an important indicator in terms of the protection of water resources, their rational use and the sustainable development of society.

Wastewater

In 2019, the affected basins experienced a decrease in the amount of waste water discharged. A decrease in the total discharged amount was observed in almost all indicators (Tab. 11). Nitrogen and phosphorus from agriculture and forestry account for a large proportion of pollution in the monitored Váh basin. The non-fetalised population represents only 17 % in biological oxygen consumption - BSK_5 indicator and 15 % for $CHSK_{Cr}$.

Tab. 31 Load on balanced sources of pollution discharged into surface waters

Basin	The amount of waste. Waters [000.m 3.r $^{-1}$]	BSK_5	$CHSK_{cr}$
		mg/l	mg/l
Danube	39 239,3	3 424,4	8 456,3
Moravia	15 648,2	424,8	1 065,8
Small Danube	137 356,7	788,5	2 685,9
2001	192 244	4637,7	12 208
1998	254 333,3	4 906,7	11 375,1
Weights	212 331,3	4 311,9	15 515,0
Nitra	56 323,4	3 014,8	6 193,6
2001	268 654,7	7 326,7	21 654,6
1998	293 007,3	8 127,1	25 657,5

Source: SHMÚ

Terrain

Within Trnava Region, geological layers from the first mountains to the youngest fourth-mountains are represented*. Such geological diversity is also reflected in the diversity of the natural landscape. The nature of the rocks determines what the resulting relief, soil cover and, last but not least, biota will be.*

The physico-chemical properties of rocks also affect the nature, quality and richness of groundwater.

The first-upper rocks participate in the construction of the crystalline core of the Malé Karpaty (the Little Carpathians) and Považský Inovec. Of the older - proterosoic ones, these are biotitic granodiorites, to which phylites are added in paleozoics (area of the Pezinské Karpaty nad Orešanmi (Pezinske Carpathians above Orešany). Within Trnava region, the Eastern part of the Biele Karpaty (the White Carpathians), situated in the Eastern to North -Eastern part of Skalica and Senica districts, is potentially the most threatened. There is some risk of landslide processes on the slopes of Považský Inovec in the eastern part of Piešťany district. Wind erosion manifests itself in a free, open landscape without natural obstacles. According to the derived radon risk maps of Slovakia, the most compact occurrence of areas with high radon risk is located in the line of villages: Nižná - Kátlovce - Horné Dubové - Horná Krupá - Bíňovce. Lines of smaller areas pass through the villages of Chtelnica - Dolný Lopašov - Kočín-Lančár - Šterusy, Košariská - Prašník and tectonic fault along the Váh River near Piešťany.

Basic properties of soils

Soil forming processes are conditioned by various endogenous and exogenous factors such as mother rock, climate, biological factors, terrain geography. The impact of these factors reflects the basic properties of the soil, namely chemical, physical and biological.
The set of basic characteristics of soils also conditiones the production potential of soils. The chemical properties of soils are the result of the chemical composition of soils forming in the long-term process of transformation of the mother rock, dead plant and animal residues and the interaction between mineral and organic substances. The basic chemical properties of soils include soil reaction, nutrient content, quantity and quality of humus, carbonate content, properties of the sorption complex, and others. The soil reaction, nutrient content as well as the quality and quantity of humus were also observed within the Soil Sub-Monitoring System (Čiastkového monitorovacieho systému – Pôda: ČMS-P) (Linkeš et al., 1997). The following tables of basic chemical properties of soils reflect the comparison of the endpoints within the I. (1993) and II. (1998) cycles.

Impact of mineral extraction on the Environment
The extraction of mineral resources represents a significant interference with the natural environment, thus creating a necessary conflict with the interests of nature and landscape protection. This influence is most significant in the CHKO Malé Karpaty (the Little Carpathians), where quarry mining of limestones and dolomites takes place. From the sites you can mention already destroyed quarries in Smolenice, Dechtice and Vrbov Prášnik, Plavecký Peter, Hradište pod Vrátnom. These are mainly fine-grained materials of tailings ponds of various nature. In Trnava region, tailings ponds were created in addition to mining activities in Záhorie in Gbely and Brodské. The material in them settled the so-called wet path - floating with a high proportion of transport water exceeding several times the proportion of solid phase, with gradual dehydration and the passage of sedimented sludge into soils of solid to solid consistency, thereby changing the properties of these sludges over time.

Flora
In terms of phytogeographic division (Futák, 1980), the territory of Trnava region belongs to two areas: the Pannonian flora area (Pannonicum) and the West Carpathian flora area (Carpaticum occidentale). A more detailed phytogeographic division is provided inTab. 4

Tab. 42 Phytogeographic breakdown of Trnava Region

Phytogeographical area	Phytogeographical circumference	Phytogeographic District	District (territorial-administrative division)
Pannonian flora (Pannonicum)	Eupanonic xerothermal flora (Eupannonicum)	4. Záhorská lowland &	SE, SI
		6. Danube Lowland	DS, GA, HC, PN, TT
West Carpathian flora (Carpaticum occidentale)	pre-Carpathian flora (Praecarpaticum)	White Carpathians (Southern Part)	SE (marginally SZ part of the district), SI (marginally SV part of the district)
		10. Little Carpathians	SE, TT

The different phytogeographic districts differ from one another:

- *The area of Pannonian flora (Pannonicum) - the territory of the lowlands and hills of Southern Slovakia, thermophilic plant species are attached to this area.*
- *Záhorská nížina (Záhorská lowland) - Záhorie is characterized by acidic sands, which most cover pine forests, meadows mostly moist to wet, slats and peatlands. The original forests were mostly destroyed and replaced by pine trees.*
  Peculiar is plantation on unforested sands. Very varied composition have damp to wet meadows. Peatlands occur in the Moravia and Rudava basins, in the hilly Northern part, the species composition of plants approaches the flowers of the Biele Karpaty (the White Carpathians).
- *Poddunajská nížina (Danube lowlands) - most of the territory has been converted into fields, in more humid places they have been preserved by places of meadows, forests have been preserved little - in the river basin they are different types of floodplain forests, the plantation of waters and marshes approaches. Peculiar is the plantation of sands.*
- *The area of (zakarpatská flóra) transcarpathian flora (Carpaticum occidentale) - the territory of the mountains, the nature of the plantation depends mainly on the altitude, but thermophilic species of the Pannonian region also penetrate here.*
- *The circumference of the (predkarpatska flóra) pre-Carpathian flora (Praecarpaticum - flora forms the transition between thermophilic Pannonian vegetation and the vegetation of the high Karpaty (Carpathians). Within it, districts intervene:*
  - *Biele Karpaty (the White Carpathians) (Southern part) - the geological basis consists mainly of flys, from forests in lower positions predominate oaks, in higher positions of the bush, plantation is not very varied (mountain species is few due to the altitude of the hills). Some thermophilic species reach the Northern boundary of enlargement in the Považská part of the Biele Karpaty (the White Carpathians).*
  - *Malé Karpaty (the Little Carpathians) (a varied geological bedrock is also reflected in the variety of vegetation).*
  - *Považský Inovec (lies between the valleys of Váh and Nitra, extends into the Pannonian region, so there are also thermophilic plant species).*

Fauna

Animals form an irreplaceable component of all types of biosphere communities within complex food chains contribute decisively to ecological balance in the circulation of substances and energy. The greater the species diversity, the better the conditions for the further development of the territory, even if we understand them in terms of the ecological strategy of human society.

Today's expansion and composition of fauna is the result of long-term development. Accordingly, the following main components can be distinguished from the point of view of zoogeographic in fauna: cosmopolitan, holarctic, paleoarctic, Euro-Siberian, Carpathian, but also endemic and relict.

Species protection is provided in accordance with the Act of the National Council of the Slovak Republic No. 543/2002 Coll. on nature and landscape protection, decree of the Ministry of Health of the Slovak Republic No. 24/2003 to the Act on Nature and Landscape Protection, as well as, in accordance with other legal standards of the Slovak Republic concerning the protection of natural components and ratified international conventions (CITES, Bonn, Bern, Ramsar, ...).

Basic characteristics of fauna in the territory of the region:
The spread of animals in the country is conditional on their demands on food and a suitable environment and therefore knows no borders. Since inventory research and monitoring of populations are mainly related to legislative protected areas, i.e. areas of high ecological value, we characterize fauna mainly from the point of view of its expansion precisely in large-scale protected areas located or interfering with Trnava Region CHKO Malé Karpaty(the Little Carpatians), CHKO Záhorie, CHKO Dunajské luhy and CHKO Biele Karpaty (the White Carpathians).

<u>Significant protected and endangered animals of the region:</u>
To the environment of floodplain forests are tied from gastropods e.g. pásikavec krovinný Tachea hortensis (pásikavec krovinný), from insects it is e.g. Aphrophora salicina (peniarka vŕbová), from butterflies drobník topoľový (Stigmella trimaculella), červotoč obyčajný /wormhole (Cossus cossus), bábôčka osiková /aspen puppet (Nymphalis antiopa), dúhovec väčší (Apatura iris). From the chobos there is a widespread Lamia textor (fúzač vŕbový /willow beard), Xylotrechus rusticus (fúzač pestrý/ varied beard), Carabus coriaceus (bystuška kožovitá). Of amphibians, most often there is Bombina bombina (kunka obyčajná/ common kunka), rosnička zelená /green dewyfish (Hyla arborea), Natrix natrix (užovka obojková /collared shenanigans). From birds we can consider, for example, the Remiz pendulinus (kúdeľnička lužná /tow of the floodplain) and Luscinia luscinia (slávika veľkého /nightingale of the great). Most bird species use both aquatic and forest environments e.g. Phalocrocorax carbo (kormorán veľký /cormorant). Mammals use this environment mainly for food and protection, e.g. Sus scrofa (sviňa divá /wild swine), Capreolus capreolus (srnec hôrny/ hornet). From small mammals, there are e.g. Neomysfodiens (dulovnica vodná) and Microtus oeconomus (hraboš severský/ Nordic vole).
THE OAK FORESTS OF THE LOWLANDS ARE BOUND, FOR EXAMPLE, LUCANUS CERVUS (ROHÁČ OBYČAJNÝ /THE HORN), *plagionotus arcuatus (fúzač dubový /the oak beard), from butterflies it is e.g. Lymantria dispar (mníška veľkohlavá /a large-headed nun), Totrix viridana Totrix viridana (obaľovač zelený /a green wrapper) and T. loeflingiana (obaľovač dubový /an oak wrapper), from the blanclocolliders e.g. hrčiarka listová /(Cynips = Diplolepis quercus – folii. From a large group of birds bound to this habitat there are, for example, woodpeckers, scarecrows, Streptopelia turtur (hrdlička poľná/ wild throat), Turdus pilaris (drozd čvíkotavý /whirlpool thrush) and others. The introduced species of Phasianus colchicus (bažant obyčajný /pheasant common) or Dama dama (daniel škvrnitý /spotted daniel) is known.*

Pine lowland forests represent a special world for most animals. The largest animal group searching for this environment is insects, from butterflies e.g. Dendrolimus pini (priadkovec borovicový /pine silkworm), Blasthesia turionella (obaľovač borovicový /pine ceilinger), Panolis flammea (mora borovicová/ sea pine). From beetles e.g. Chalcophora mariana (krasoň borovicový /pine easter), Myelophilluspiniperda (lykokaz borovicový /pine lycokaz), Anatis ocellata (lienka veľká /ladybug).

In the forests of the hills, butterflies occur e.g. Aleimma loeflingiana (obaľovač dubový/oak wrapper), Lymantria dispar (obaľovač dubový /large-headed nun), from beetles e.g. Calosoa inquisitor (húseničiar hnedý /brown caterpillar), Ocypus tenebricosus (drobčík čierny /black crumb), from gastropods of Monachoides incarnata (slimák červenkastý /reddis), From reptiles, rare species live here, e.g. Lacerta viridis (jašterica zelená /the green lizard), Elaphe longissima (užovka stromová /the already treey one). Of the birds, the most abundant are e.g. žlna zelená/ green whiting (Picus viridis), Luscinia megarhynchos (slávik obyčajný/ common mussel), Parus caeruelus (sýkorka belasá /white granary) and mammals e.g. Glis glis (plch sivý /grey plch), Sciurus vulgaris (veverica stromová /tree squirrel), Vulpes vulpes (líška hrdzavá/ red fox), Sus scrofa (sviňa divá /wild swine), srnec hôrny (Capreolus capreolus).

In the foothill forests, a large group of insects are, from beetles e.g. Hylocoetus dermestoides (drvinár hnedý /brown crusher), Carabus (bystrušky /torrents - Cychrus caraboides (bystruška nosatá /torrents worn), Carabus auronitens (bystruška zlatá /golden torrent), Cerambyx scopolii (fúzač bukový /beech beard (Cerambyx scopolii), Rosalia alpina (fúzač alpínksy/ alpines beard). Of the amphibians, there are, for example, Triturus cristatus (mlok veľký /large milk), Bufo bufo (ropucha obyčajná/ frogs of toad), Bufo viridis (ropucha zelená /green toad), Rana temporaria (skokan hnedý /brown jumper). From the reptiles, Lacerta muralis (jašterica múrová /the lizard), Vipera berus (vretenica obyčajná /the spindle) is occured.

From the group of birds, the species of lowland, upland and foothill forests intersect here. More stable in the foothill forests there are e.g. Columba palumbus (holub hrivnák /pigeo), Scolopax rusticola (sluka hôrna/ slugs of the mountain), from predator it is Accipiter gentilis jastrab veľký /a large hawk), Buteo buteo (myšiak hôrny /a mouse mountain), Aquila pomarina (orol krikľavý /a crooked eagle), Strix aluco (sova obyčajná /an owl). Of the singers (Passeriformes) there are known granaries - Parus cristatus (sýkorka chochlatá /chochlatá syrian), Parus ater (sýkorka uhliarka /granary charcoal) and others. From bats, netopier veľkouchý/ a big-eared bat (Myotis bechsteini) and Nyctalus noctula (rajniak hrdzavý /a rusty tomato) can occur in this environment. Of the mammals, there is a Martes martes (kuna lesná /forest kuna), Felis silvestris (mačka divá/ a wild cat), Meles meles (jazvec obyčajný /a badger), in the upper boundary of the forests of Cervus elaphus (jeleň obyčajný /a deer).

Characteristic types of fields and meadows are e.g. Coturnix, coturnix (prepelica poľná /field quail), Perdixperdix (jarabica poľná/ field partridge), zajac poľný /field hare, Citellus citellus (syseľ obyčajný /common sysel), chrček poľný /field wheeze, Asio flammeus (kaňa močiarna /swamp pond), škovránok poľný /field scorpion, strnádka lúčna /meadow strudel, pipíška chochlatá /chochlatá pinata. Bestavovce are species poorer, but more numerous within one species. From pests it is, for example, Zabrus gibbus (hrbáč obilný/ a grain humpback), Heterodera schachtii (háďatko repné /beet nematode), Silpha obscura (zdochlinár obyčajný /a

common carcass) and others. In the meadows, spiders and brightly colored butterflies (puppets, eyelets and blueberries) have good conditions.

Technical infrastructure of the region

Industry

The area of the region was dominated by the engineering and food industry. At present, its structure is varied. Energy for industry is supplied by the Nuclear Power Plant in Jaslovské Bohunice in the districts of Trnava, Hlohovec and Piešťany and the hydroelectric power plant in Gabčíkovo, which are of nationwide importance. The industry is dominated by the production of passenger cars and electrotechnical production, represented by the largest plants Groupe PSA Slovakia (Peugeot-Citroen) and Samsung Electronics Czech and Slovak, s.r.o., the most profitable companies in Trnava Region Slovakofarma, a. s. in Hlohovec, Nafta, a. s. in Gbely and Skloplast, a. s. Trnava. Companies that employed more than 1,000 employees also included ŽOS, a. s. in Trnava, Slovenský hodváb,a.s.(Slovak Silk, a. s.) in Senica, Drôtovňa, a. s. (Wireworks) in Hlohovec or Trikota, a. s. in Vrbov.

The structure of the industry changed during the early years of the 21-st century with the disappearance of many traditional, especially textile companies, and the arrival of a new automotive industry, which was linked to several subcontractors. Slovakofarma Hlohovec has been transformed into Zentiva, a. s.. The largest employer in the region is the engineering company producing components for cars, Schaeffler Skalica, spol. s r.o. (INA Skalica to the year 1997), which employed 4,770 people. The second largest employer in Trnava Region was the carmaker Groupe PSA Slovakia, which employed 2,718 employees, in third place with 2,130 employees was another automotive company, ZF Slovakia a.s.. Among the largest companies from the 1990s and 2000s, Drôtovňa Hlohovec remained to operate as BEKAERT Hlohovec (1,506 employees), the electronics industry represented by Samsung Electronics Slovakia,s.r.o. in Galanta.

Electricity supply

The territory of Trnava Region has a dominant and exclusive position in the Slovak Republic from the point of view of energy supply. On the territory of the region are concentrated the largest sources for electricity production in the area of the Jaslovské Bohunice Nuclear Power Plant - 4 x 440.0 MW, hydroelectric power plants - Gabčíkovo hydroelectric power plant 720.0 MW, Kráľová – hydroelectric power plant 45.0 MW and Madunice hydroelectric power plant MW.

The current configuration of the transmission system in a given area of the network of 220,0 and 400,0 kV allows the performance to be performed for all the variants under consideration of the evolution of electricity demand. Further use of the hydropower potential can be considered using the sections between Sereď and Hlohovec with the possibility of obtaining an additional 62.9 MW of installed power.

According to “ Aktualizácia energetickej koncepcie pre SR“(the Energy Concept Update for the Slovak Republic) until 2005 as well as the Act on Energy Management, in the construction of

new block and precinct boiler rooms, relatively great importance must be attached to the realization of cogeneration resources. Despite intensive gasification, further growth in electricity consumption can be expected, especially from small consumers.

Gas supply

The following routes of the main pipelines pass through the territory of Trnava region: transit gas pipeline DN 1 x 1400 + 3 x 1200mm, PN 75; interstate gas pipeline DN 700mm, AM 75; Spačince - Piešťany DN 500, PN 64; Šaľa - Bratislava Bernolákovo - DN 500, PN 40; Bratislava - Piešťany DN 30, Am. 25; Bratislava - Dunajská Streda DN 300, PN 25.

Transit gas pipelines near Plavecký Peter are divided in Brodské (Czech Republic) - DN 1400, 2 x DN 900; DN 800 PN 64; DN 1200 PN 75; near Vysoká pri Morave (the High near Moravia) (direction to Austria) 2 x DN 700; DN 900. Near Lakšanska Nová Ves, the VVTL gas pipeline DN 1200, PN 64 towards Vysoká pri Morave (the High Near Moravia) is removed from the system of transit gas pipelines. From a comprehensive point of view in Trnava Region, there is sufficient capacity of natural diesel gas for the possibility of developing business activities.

Heat supply

In the district towns of Trnava Region, the heat supply is solved from central heat sources, which are currently reconstructed (or these modifications have already been realized). Solid or liquid fuels are replaced by natural diesel gas, which will hold a dominant position and will continue to be the basic thermal medium within the region.

The heating system in Holíč is specific in that it receives heat from the Hodonín power plant (hot water duct/pipeline 150/70 ^{o}C).

Currently, the hot water duct from the Jaslovské Bohunice nuclear power plant to Leopoldov and Hlohovec is completed (with DN 2 x 600 and with a continuation of DN 2 x 400/ DN 2 x 300) to Drôtovňa Hlohovec, where a replacement heat source with an installed capacity of 24 is built in the event of a failure of the hot water supply.

Rail transport

Trnava Region is covered by the main railway transport routes:

- *line No. H 110 – the Czech Republic - Kúty - Bratislava - Štúrovo – the Hungary Republic line No. H 120 - Bratislava - Žilina,*
- *line No. 116 Kúty - Trnava,*
- *line No. H 130 - Bratislava - Galanta - Nové Zámky - Štúrovo line No. H 116 - Galanta - Trnava - Jablonica - Kúty – Břeclav, line No. H 131 - Bratislava - Dunajská Streda - Komárno,*
- *line No. H 133 - Trnava - Sereď - Galanta (in the Leopoldov - Sereď section is a diverted track outside the Trnava node),*
- *line No. H 114 - Kúty - Holíč (Hodonín), Skalica - Veselí nad Moravou. and national transport routes line No.C 141 - Leopoldov - Lužanky - Kozárovce line No.C 134 - Šaľa - Neded track No. 120 is part of international corridor No. IV and line No. 110 is part of*

international corridor No.V - Bratislava - Košice - Čierna nad Tisov – Ukrajina, in rail freight transport, line No. 120, which is included in the AGTC lines.

Car transport

The centre of gravity of the transport system in Trnava Region is road and rail transport. Roads of international importance E 65, E 75, E 571, E 575 pass through the territory of the region. The main transport system is the municipality's traffic routes:

- *D2 motorway (E 65) the Hungarian Republic - Bratislava - Kúty - Brno,*
- *highway D1 Bratislava - Trnava - Žilina,*
- *R1 Nitra - Trnava expressway,*
- *road 1st class No. 51 in the section Trnava - Senica - Holíč - Hodonín (the Czech Republic),*
- *road I. class I/63 (E 575) - Bratislava - Dunajská Streda - Komárno,*
- *road I. class I/62 (E 571) - Senec - Sereď with connection to I/51,*
- *road I. class I/75 - Sládkovičovo - Galanta - Nové Zámky,*
- *That road network in the main traffic directions shall be complemented by Class II roads.*

Highways with a total length of 67.426 km pass through the territory of the region, representing 22.8% of the total length of motorways in the Slovak Republic.

Water transport

The greatest prerequisite for the development of water transport is assumed on the River Dunaj(Danube), which is part of the trans-European waterway E 80 (Rýn-Mohan-Dunaj(Rhine-Mohan - Danube). The length of the waterway in Trnava Region is 48.35 km, representing 28% of the total length of 172.06 km.

Air transport

The most important airport of the region is Piešťany Airport, with a concrete runway, with a length of 2,000 m, which has the status of an international airport and is used for irregular operation in connection with the Spa Piešťany. It is used for civilian and military operations. There are 3 other airports in the region used for sports purposes and agriculture.

Tourism and tourism

Tourism, as an economic activity sector, does not have high demands on water consumption, while the overall level of water consumption in tourism is not very different from the level of water consumption achieved in households. Tourism does not produce high quantities of waste and waste water compared to other sectors of economic activity, but often significant seasonal differences in the attendance of recreation and tourism centres place considerable demands on the provision of the necessary infrastructure and level of management.

Tourist visitors from abroad make a significant economic contribution at local and regional level, but the dominant part of them uses environmentally unsuitable individual car transport.

The negative impacts of air pollution due to tourist traffic are most pronounced in the most visited tourist areas in the territory of national parks, but these are not methodically monitored and evaluated in data.

As a rule, tourism does not bring a large range of environmental degradation on a global scale. Several of the negative effects of tourism are mainly due to seasonal time and local concentration of spatial activities in valuable natural areas.

Spa tourism, sightseeing tourism and recreational tourism have a dominant position in terms of localization assumptions, degree of attractiveness for domestic and foreign tourist visitors, and in terms of the degree of significance of potential negative impacts on the natural environment.

***Spa tourism** is characterized by certain specific features compared to recreational, mountain or sightseeing tourism. A significantly predominant motivation of the participant of spa tourism is therapeutic reasons aimed at improving the health condition requiring the just-preserved natural environment, which is an important supporting factor of the treatment performed and significantly increases the attractiveness and prestige of the respective spa place. For this reason, this area is generally protected by declaring, for example, a spa forest park (special purpose forests) indicating the hiking trails and dragging natural elements into the inner area of the spa site through a high level of park treatment of the green areas there.*

An important spa place from an international point of view is mainly Piešťany focused on the treatment of the locomotive system, nationwide the Smrdáky Spa focused on the treatment of skin diseases.

Cognitive tourism, brings several beneficial economic impacts for the tourism sector in the form of the use of accommodation, catering and other additional services (purchase of souvenirs, etc.) The positive impact in terms of the burden on the natural environment lies in the fact that these visitors are predominantly concentrated in the concentration of cultural and historical monuments, which are predominantly larger settlements and thus do not burden the natural environment.

The most important elements of cultural and historical heritage include historical landscape structures - MPR Trnava, PRĽA Plavecký Peter and monument zones Piešťany and Hlohovec.

Recreational tourism also has an important position on the territory of Trnava Region. The most frequently performed activities in the framework of recreational tourism are recreational stays in thermal swimming pools with appropriate equipment in Dunajská Streda and Veľký Meder.

On the contrary, natural recreation in water surfaces in the summer period with a lack of environmental infrastructure and hygienic equipment has a significantly more negative impact. Recreational use of new water bodies (water reservoirs, dredgers) is characterized by considerable conceptuality and "makeshift" of construction with the consequent negative impact of intensive recreation on the environment.

Other activities carried out within the framework of recreational tourism are walks and exploration of nature, which do not significantly burden the natural environment. In terms of the area of the projection and localization of its activities and activities, the dominant regions of recreational tourism are mainly the central part of Malé Karpaty (the Little Carpathians) in

the area of Zaruba and partly the territory of Biele Karpaty (the White Carpathians) with scattered copanic settlement.

Demographics + health data

The health of the population is the result of the action of several factors - economic and social situation, nutritional habits, lifestyle, level of health care, as well as the environment. The impact of the polluted environment on human health has so far been little studied, but is mainly reflected in the following indicators of the health of the population:

Although life expectancy in Slovakia increased from 1970 to 20 19 from 1970 to 2019 for men from 66.7 to 69.54 and for women from 72.9 to 77.60 years, this is below the European average and lags far behind the most advanced countries. Within the districts of Trnava Region, the highest life expectancy for men and women reaches the district of Piešťany (71.15 years and 77 89 years respectively).

Conversely, the lowest values were recorded for men in the districts of Dunajská Streda (68.19) and Galanta (68.53), for women also in the districts of Dunajská Streda (76.12) and Senica (76.01).

On average, Trnava Region achieves a slightly higher life expectancy for women compared to the Slovak Republic, but lower for men in any of the districts in the whole monitored period the birth rate did not reach the national average - only the district of Piešťany reaches its value.

3.1.3 State of the environment in Lower Austria

Territorial and Administrative Division of the Region

Lower Austria is the largest (19,179.56 km^2) federal state by area and the second largest federal state in Austria in terms of population (population in 2021: 1,690,879 inhabitants) and surrounds the Austrian capital Vienna with a border of length of 134.9 km.

The border is divided into the following parts:

- *the Northern border with the Czech Republic (South Bohemia and South Moravia) (33,6 km),*
- *to the North-East with the Slovak Republic (with the Trnava and Bratislava Self-Governing Regions) (80,7 km), and inland:*
- *in the South-East with the state of Burgenland (207,9 km),*
- *in the South with the state of Steiermark (187,4 km),*
- *in the West with the state of Upper Austria (215,3 km).*

The state of Lower Austria is a separate region at the NUTS-2 level (Niederösterreich), which is further subdivided into seven NUTS-3 regions as follows:

- *Mostviertel,*
- *Niederösterreich-Süd (Lower Austria-South),*
- *Sankt Pölten,*
- *Waldviertel,*
- *Weinviertel,*

- *Wiener Umland/Nordteil (Surroundings of Vienna/North),*
- *Wiener Umland/Südteil (Surroundings of Vienna/South).*

The designations Wald (Forest), Wein (Wine), Most (Cider) in these names were given to illustrate the main activities in the area and date back to the monarchy.

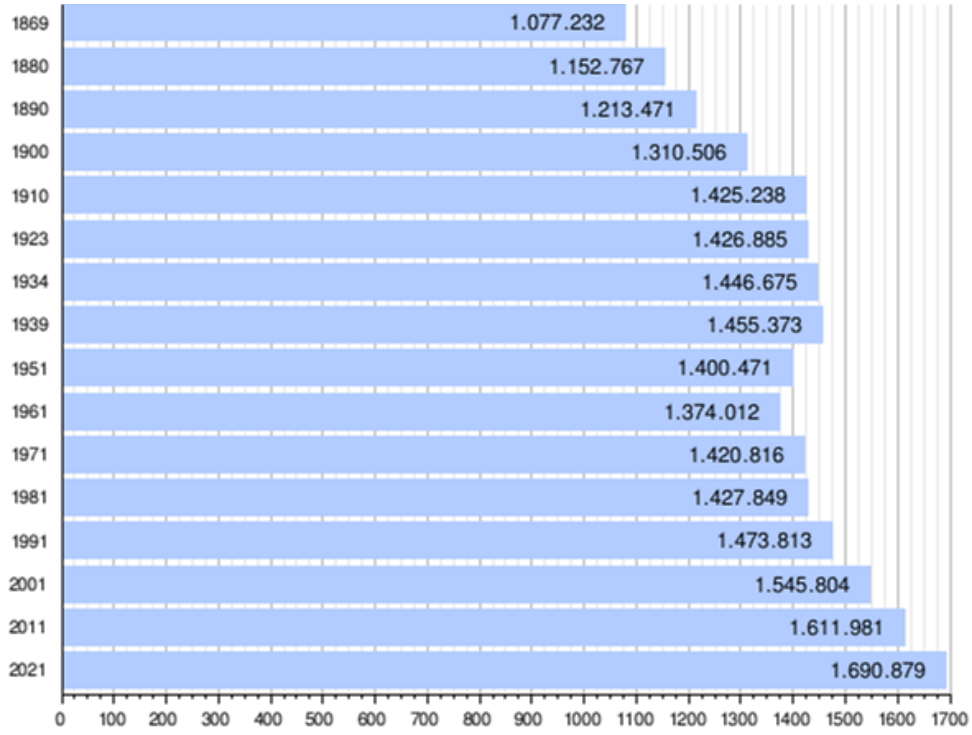
Lower Austria has four statutory cities which are not subject to any district and their municipal authorities (magistrates) administer all agendas belonging to the city:

- *Sankt Pölten (55,878 inhabitants) is the largest city and, since 1986, the capital of the state of Lower Austria,*
- *Wiener Neustadt (44,456 inhabitants),*
- *Krems an der Donau (24,837 inhabitants),*
- *Waidhofen an der Ybbs (11,1349 inhabitants),*
- *The federal state of Lower Austria has 20 districts and 573 politically independent municipalities.*

Fig. 3 NUTS-3 Regions of Lower Austria (Source: own illustration based on data from the Austrian statistical office, Statistik Austria)

Demographic data

The number of inhabitants has been increasing continuously over the last 60 years (see Fig. 4), mainly due to the immigration of foreigners and the relocation from Vienna and the peripheral areas of Lower Austria (see Tab. 13). The share of foreigners in the total population of Lower Austria at the beginning of 2019 was 10.1 %.



Note: in thousands of inhabitants

Fig. 4 Population growth (Source: Statistik Austria (2022))

As shown in Tab. 13, the population density and therefore the number of inhabitants of the capital Sankt Pölten and the surroundings of Vienna is increasing and the number of inhabitants in the Waldviertel region is decreasing.

Tab. 5 Population density in Lower Austria by region

Population/km²	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Lower Austria	**85,0**	**85,2**	**85,5**	**85,7**	**86,2**	**87,0**	**87,7**	**88,2**	**88,5**	**88,9**
Mostviertel	73,0	72,9	73,0	73,1	73,3	73,7	74,2	74,4	74,6	74,8
Niederösterreich-Süd	75,3	75,4	75,5	75,6	76,0	76,6	77,2	77,4	77,7	77,9
Sankt Pölten	121,8	122,0	122,3	122,7	123,4	124,7	126,1	127,0	127,8	128,4
Waldviertel	48,3	48,2	48,1	48,0	47,9	48,0	48,2	48,1	47,8	47,7
Weinviertel	51,7	51,7	51,6	51,5	51,6	51,8	52,1	52,3	52,3	52,3
Wiener Umland/Nordteil	114,6	115,4	116,2	117,1	118,3	119,7	121,1	122,4	123,7	124,8
Wiener Umland/Südteil	220,1	221,4	223,1	224,8	227,0	230,1	232,9	234,7	236,3	237,9
Austria	**101,5**	**101,8**	**102,3**	**102,9**	**103,7**	**104,9**	**106,0**	**106,8**	**107,1**	**107,6**

Source: Eurostat - UNIDEMO(2022).

As a result of the increase in life expectancy and the low birth rate, the age structure of the population is - as in other European countries - changing significantly. One of the indicators is the share of the population over 65 years of age. Tab. 14 shows that this share was higher in Lower Austria in 2021 (20.5 %) than the average for the whole of Austria (19.2 %). Over a period of only 5 years, this indicator in Lower Austria increased from 19.7% in 2016 to 20.5 % in 2021 (which corresponds to the rate of increase of this indicator for the whole of Austria, i.e., by 0.8 %), with higher increases in the Waldviertel (+1.4 %), Weinviertel (+1.2 %) and Mostviertel (+1 %) regions. Thus, Lower Austria has on average a slightly older population than the whole of Austria, while the ageing rate as measured by this indicator shows the same trend for the whole federal state.

Tab. 6 Age structure of the population in Lower Austria by region

	2016	2017	2018	2019	2020	2021
Lower Austria	**19,7**	**19,8**	**19,9**	**20,1**	**20,3**	**20,5**
Mostviertel	18,0	18,1	18,3	18,5	18,7	19,0
Niederösterreich-Süd	20,0	20,1	20,3	20,4	20,6	20,7
Sankt Pölten	19,0	19,1	19,2	19,4	19,6	19,8
Waldviertel	21,7	21,8	22,1	22,4	22,7	23,1
Weinviertel	21,3	21,4	21,7	22,0	22,2	22,5
Wiener Umland/Nordteil	19,1	19,1	19,2	19,3	19,5	19,7
Wiener Umland/Südteil	19,7	19,7	19,8	19,9	20,1	20,2
Austria	**18,4**	**18,5**	**18,7**	**18,8**	**19,0**	**19,2**

Source: Eurostat - UNIDEMO(2022)

Technical infrastructure

Transport sector

The most important transport routes

The most important motorways are the Westautobahn (Western motorway) A1 and the Südautobahn (Southern motorway) A2, which connect Vienna with much of Austria. The motorways are connected by the Wiener Außenring A21 (Vienna Outer Ring), which is part of the planned ring road around Vienna. After the opening of the Eastern border, the Eastern A4 motorway was built to link Vienna with Bratislava and Budapest and later the Northern A5 motorway, with links to Brno and South Moravia in the Czech Republic, which are incorporated into the motorway ring around Vienna via the S1 outer ring.

From the Südautobahn, the Südostautobahn (southeast motorway) A3 branches off into Northern Burgenland and the Semmeringschnellstraße S6 into the Mürztal valley in Styria. For regional traffic, the A22 Danube motorway is important, followed by the S5 Stockerau motorway, which connects Vienna with Krems (Wachau region).

Since the fall of the Iron Curtain in 1989, the network of higher order roads has seen a steady increase in transit traffic, especially in the West-East direction. Therefore the Western A1 motorway was widened to three lanes in each direction. This extensive road network is important and is also used by commuters to larger towns and industrial centres.

Railway transport

The important railway lines, the so-called main lines, are the Northern Railway, the first steam railway of the monarchy, the Southern Railway, the Eastern Railway and the Western Railway, in order of their opening date. They constitute the core network and provide international long-distance transport, which is why they are also double-tracked. The Franz-Josefs-Bahn was also operated as a main line until the 1990s, but nowadays long-distance services to Prague are operated on the Northern line. In 2012, the Westbahn was supplemented as a new high-speed

line through the Wienerwald Tunnel; since 2015, its terminus in Vienna is no longer located at the historic Westbahnhof in Vienna, but at the newly built Hauptbahnhof.

The Vienna-Bratislava express trains via Marchegg, which only pass through Lower Austria, also leave from this station. This line is currently in the process of electrification and modernisation with the extension to double-track transport, which will result in a significant reduction in travel time between Bratislava and Vienna. The new main station in Vienna has a direct and very fast train connection with the international airport in Schwechat, which is important for travellers from Slovakia using the airport in Vienna. In addition to this connection and Vienna-Bratislava via Marchegg, it is also possible to use the connection via Bruck an der Leitha and Kittsee, which passes through Lower Austria and the state of Burgenland.

The TEN-T (Trans-European Transport Network) comprises a total of 9 core network corridors, 3 of which run through Lower Austria: Baltic-Adriatic, Rhine-Danube and Baltic-Eastern Mediterranean . The TEN-T network includes railway infrastructure (conventional and high-speed), road, waterway and airport infrastructure, Fig.5.

Fig. 5 TEN-T Railway corridors of Lower Austria (Source: TENtec Interactive Map Viewer, 2022)

Shipping traffic on the Danube

Freight shipping on the international Danube waterway is highly important to Krems, the largest Danube port in Lower Austria. The main goods transported to Lower Austria via the

Danube include Agricultural and forestry products, Crude and manufactured minerals, building materials and Petroleum products. Concerning passenger shipping, apart from the local traffic in the Wachau, cruise ships from all over Europe sailing on the Danube or on the Rhine-Main-Danube route deserve special attention. Numerous ferries, some carrying motor vehicles, across the Danube and in recent years fast ferries linking Vienna and Bratislava have made a significant contribution to increasing tourism in both cities. Recreational traffic comes from smaller ports and is reflected in the boat show in Tulln.

Air traffic

The largest Austrian airport, Vienna International Airport, is located in the Lower Austrian town of Schwechat, which thanks to the EU expansion has become an important hub for international air transport, very intensively used by travellers from Slovakia. The Federal State of Lower Austria is a 20 % shareholder of the company operating the airport.

The most important regional airports in Lower Austria are Wr. Neustadt, Stockerau, Vöslau, Krems/Langenlois and Spitzerberg, where more than 90 % of all flights take place. The number of aircraft movements at these airports has fallen significantly in recent years in the commercial sector and has remained more or less constant in the non-commercial sector (12 airports in total).

Energy supply

Electricity generation in Lower Austria is provided by three sources: hydro and thermal power plants and renewable energy sources. As shown in Tab. 15, the highest share is made up by hydroelectric power plants; since 2019 the share of electricity produced from renewable sources exceeds that of thermal power plants.

Tab. 7 Source of electricity generation in Lower Austria 2017-2019 (in GWh)

Energy source	2017		2018		2019	
	overall	in %	overall	in %	overall	in %
Hydropower	**7 305**	**45,6**	**6 512**	**44,6**	**7 346**	**46,3**
Power plants(>10 MW)	6 823	42,6	6 110	41,8	6 875	43,4
Power plants(>1 MW <10MW)	222	1,4	175	1,2	340	2,1
Power plants(<1 MW)	260	1,6	227	1,6	131	0,8
Thermal power	**4 653**	**29,0**	**4 270**	**29,1**	**3 743**	**23,6**
Natural gas	2 065	12,9	1 524	10,4	1 242	7,8
Fuel oil	662	4,1	701	4,8	682	4,3
Coal	683	4,3	803	5,5	592	3,7
Other	1 243	7,7	1 241	8,4	1 227	7,7
Wind, Photovoltaics, Geothermal	4 068	25,4	3 845	26,3	4 767	30,1
Total	**16 026**	**100,0**	**14 627**	**100,0**	**15 856**	**100,0**

Since 2010, the number of wind farms and -to an even greater extent- the amount of electricity generated by them has been steadily increasing (as can be seen in Fig. 6 below), which is a favorable development in terms of environmental impact.

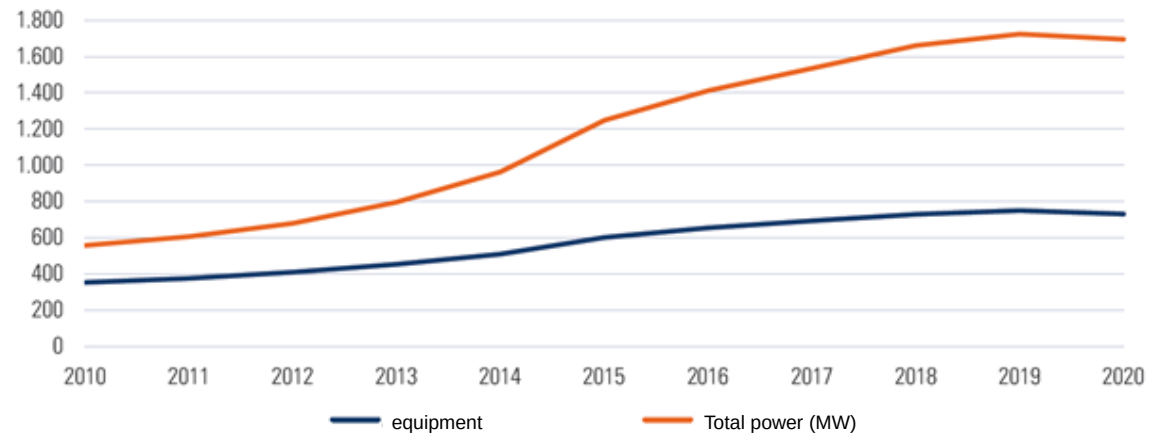


Fig. 6 Wind turbines Lower Austria 2010-2020 (Source: Statistisches Handbuch des Landes Niederösterreich (2021)

Economy

Lower Austria is not only a large federal state in terms of area and population, but also an important part of the Austrian economy. The share of Lower Austria in Gross Domestic Product (GDP) of Austria was 15.7 % in 2020. Looking at its individual regions, the highest share is concentrated around Vienna, especially in the south, because of its industrial focus, also referred to as Industrieviertel (industrial area).

Tab. 8 Share of the regions of Lower Austria in Austria's gross domestic product

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Lower Austria	**15,6 %**	**15,6 %**	**15,6 %**	**15,6 %**	**15,7 %**	**15,5 %**	**15,8 %**	**15,7 %**	**15,8 %**	**(-)**
Mostviertel	2,2 %	2,2 %	2,2 %	2,2 %	2,2 %	2,2 %	2,3 %	2,2 %	2,2 %	(-)
Niederösterreich-Süd	2,2 %	2,2 %	2,2 %	2,2 %	2,2 %	2,1 %	2,2 %	2,2 %	2,2 %	(-)
Sankt Pölten	1,8 %	1,8 %	1,8 %	1,8 %	1,8 %	1,8 %	1,8 %	1,8 %	1,8 %	(-)
Waldviertel	1,8 %	1,8 %	1,8 %	1,18 %	1,7 %	1,8 %	1,8 %	1,7 %	1,8 %	(-)
Weinviertel	0,8 %	0,7 %	0,8 %	0,8 %	0,8 %	0,8 %	0,8 %	0,8 %	0,8 %	(-)
Wiener Umland/Nordteil	2,6 %	2,6 %	2,7 %	2,6 %	2,5 %	2,5 %	2,5 %	2,5 %	2,5 %	(-)
Wiener Umland/Südteil	4,3 %	4,3 %	4,2 %	4,3 %	4,4 %	4,4 %	4,5 %	4,6 %	4,6 %	(-)
Austria (million EUR)	**310 129**	**318 653**	**323 910**	**333 146**	**344 269**	**357 608**	**369 362**	**385 424**	**397 519**	**379 321**

Source: Eurostat – Regional Specification of National Accounts Main Aggregates (2022)

When comparing HDP per capita, Lower Austria with 37,400 Euros is below the indicator for Austria (44,000 Euros per capita). This also shows the economic importance and economic background of the southern surroundings of Vienna, which show a significantly higher HDP per capita (53.7009) than the Austrian average. On the other hand, the Weinviertel on the border to South Moravia (EUR 24,900 per capita) remains below the average for Austria as well as Lower Austria itself.

Tab. 9 Share of the regions of Lower Austria in Austria's gross domestic product

v EUR	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Dolné Rakúsko	**30 100**	**30 800**	**31 100**	**31 900**	**32 800**	**33 500**	**34 900**	**36 100**	**37 400**	**(-)**
Mostviertel	27 900	29 000	29 200	29 800	30 800	31 700	33 900	34 400	35 700	(-)
Niederösterreich-Süd	26 500	27 400	27 800	28 900	29 300	29 500	30 800	32 100	33 100	(-)
Sankt Pölten	37 800	38 600	39 200	39 400	41 700	42 500	43 700	43 800	45 200	(-)
Waldviertel	24 900	25 500	26 100	26 900	27 500	28 600	29 600	30 900	32 100	(-)
Weinviertel	19 400	19 100	20 000	20 400	21 300	22 400	23 100	23 700	24 900	(-)
Wiener Umland/Nordteil	26 500	27 300	27 700	27 700	27 100	27 300	27 900	28 900	29 800	(-)
Wiener Umland/Südteil	42 100	42 800	42 400	44 000	46 100	46 900	49 300	51 800	53 700	(-)
Rakúsko (milión EUR)	**37 000**	**37 800**	**38 200**	**39 000**	**39 900**	**40 900**	**42 000**	**43 600**	**44 800**	**42 500**

Source: Eurostat – Regional Specification of National Accounts Main Aggregates (2022)

For comparison of the regions of Lower Austria with other countries and regions of the European Union we use the index 100 to denote the EU average. The data in Tab. 18 shows an above-average HDP per capita for both Austria and Lower Austria, with significant differences between the individual regions. The Southern surroundings of Vienna are not only significantly above the average for Austria and the EU, but also the development of this indicator shows an upward trend. Even in this respect, the regions of Lower Austria lagging behind the EU and Lower Austria average in the last 5 years are the Weinviertel and the Northern surroundings of Vienna, which also show a downward trend in this indicator.

Tab. 10 Share of the regions of Lower Austria in Austria's gross domestic product

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Lower Austria	**117**	**120**	**120**	**120**	**119**	**119**	**119**	**119**	**120**	**(-)**
Mostviertel	109	112	112	112	112	112	115	114	114	(-)
Niederösterreich-Süd	103	106	107	109	107	104	105	106	106	(-)
Sankt Pölten	147	150	150	148	151	151	149	145	144	(-)
Waldviertel	97	99	100	101	100	101	101	102	103	(-)
Weinviertel	76	74	77	77	77	79	79	78	80	(-)
Wiener Umland/Nordteil	104	106	107	104	98	97	95	95	95	(-)
Wiener Umland/Südteil	164	166	163	166	168	166	168	171	172	(-)
Austria	**144**	**147**	**147**	**147**	**145**	**145**	**143**	**144**	**143**	**142**

Source: Eurostat – Regional Specification of National Accounts Main Aggregates (2022)

For the performance of the economy as well as the impact on the environment, its structure and the interrelationships between the individual sectors are important. The main economic sectors are the production of iron and metal products, the chemical industry and oil refining. Lower Austria's only oil refinery is located in Schwechat, which in 2019 emitted approximately 16% of Lower Austria's greenhouse gases. Other important economic sectors are mechanical engineering, agriculture and the food industry.

42 % of the total area of the state is cropland. 40% is designated as forest land. Livestock, agriculture and forestry are strong economic sectors. (However, the number of people employed in these industries has declined over the past 50 years to less than ten percent of the total workforce).
Another important sector of the economy is viticulture, which is located mainly in the Weinviertel, the Wachau and the Thermenregion. Of the six DACs (“Districtus Austriae Controllatus”; this term refers to quality wines typical to a given region) throughout Austria that produce high-quality wine, four are located in Lower Austria.

Overnight tourism from the Vienna metropolitan area is of particular economic importance for Lower Austria. The state presents itself as a natural recreational area for all seasons. The year-round “Niederösterreich Card”
supports this business sector, as do the numerous cultural festivals during the summer in all parts of the state.

In the area of day tourism, Lower Austria has benefited significantly from the influx of visitors from Central and Eastern European countries after 1989. For example, the Waldviertel,

bordering on the Czech Republic and adversely affected by its geographic location until the fall of the Iron Curtain, has seen the most significant increase in the number of overnight stays. In particular, the southern surroundings of Vienna (Schwechat, Vösendorf) benefitted from urban tourism thanks to existing transport links. Since the end of the 20-th century, the number of visitors has also increased in the countryside around Wachau, a UNESCO World Heritage Site.

The economically strongest regions of Lower Austria are located along the thermal line. The district with the highest tax revenues is the district of Mödling, directly on the southern edge of Vienna. The further the areas are from Vienna, the weaker their economy, as shown in Tab. 17 and Tab. 18.

Science and research

Science, research and innovation are the key factors for the economic and social development of the state and its regions and are needed for coping with the challenges of the coming years referred to as 3D: decarbonisation, digitalisation and demography. Therefore, one of the objectives of the state location policy is to create high-level scientific institutions capable of attracting top scientists and researchers from all over the world. These include:

- *Seibersdorf Laboratories in Seibersdorf,*
- *University for Continuing Education Krems (Donau Universität, Danube University),*
- *Institute of Science and Technology Austria (IST) in Klosterneuburg-Maria Gugging,*
- *International Institute for Applied System Analysis (IIASA), based in Laxenburg, near Vienna, since 1972 and celebrating its 50th anniversary this year.*

In the first decade of the 21-st century, several research centres were established in Lower Austria:

- *University and Research Centre Tulln (UFT) in Tulln an der Donau,*
- *Technology and Research Centre Wiener Neustadt (TFZ) in Wiener Neustadt,*
- *Bio Science Park Krems in Krems an der Donau,*
- *Technology Centre Wieselburg-Land (TZWL) in Wieselburg-Land,*
- *WasserCluster Lunz (WCL) in Lunz am See.*

Environmental factors (air, water, flora and fauna)

The environmental quality is determined in the long run by economic development, the structure of the national economy, technological progress and the level and structure of household consumption. Data on the quality of the components of the living environment are regularly compiled by Statistik Austria, Umweltbundesamt as well as the offices of the governments of the federal states. These sources are the basis for our study.

Atmosphere

In 2019, 19 % of Austria's population lived in Lower Austria. Lower Austria's share of total greenhouse gas emissions in that year was 22 % (17.6 million tonnes of CO_2 equivalent). Greenhouse gas emissions outside the emissions trading sector under the KSG

("Klimaschutzgesetz" - Climate Protection Act) amounted to 11.4 million tonnes of CO_2 equivalent, which corresponds to 23 % of Austria's greenhouse gas emissions (excluding the emissions trading sector under the KSG).

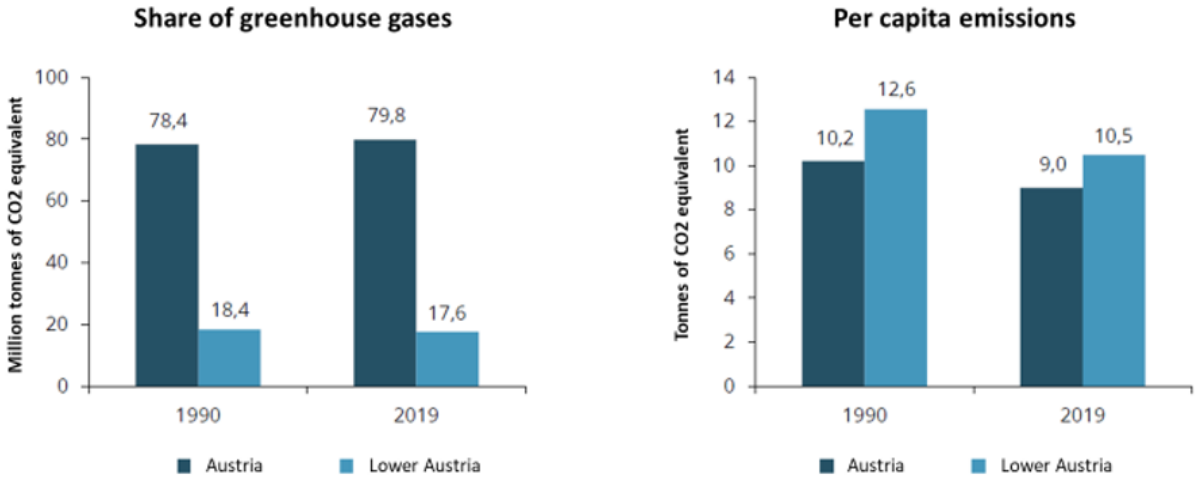


Fig. 7 Lower Austria's share of Austria's greenhouse gas emissions and emissions per capita, 1990 and 2019 (Source: Umweltbundesamt, 2022)

Lower Austria's per capita emissions in 2019 of 10.5 tonnes of CO_2 equivalent were higher than the Austrian average of 9.0 tonnes. If only emissions outside the emissions trading under the KSG are taken into account, the per capita emissions of 6.8 tonnes of CO_2 equivalent were also above the Austrian average of 5.7 tonnes.

In 2019, transport accounted for approximately 30 % of greenhouse gas emissions in Lower Austria. Approximately 25 % stemmed from the energy sector. In addition to public power plants for electricity and heat generation, refineries as well as oil and gas production facilities are also prominent. Industry accounted for 18 % of greenhouse gas emissions, agriculture 12 %, the buildings sector 9.9 %, waste management 3.5 % and the fluorinated gases sector 2.0 %.

Emission trends

Between 1990 and 2019, emissions peaked around the mid-2000s with slight increases and decreases. In recent years, emissions have returned to approximately 1990 levels. In 2019, 17.6 million tonnes of CO_2 equivalent were emitted in Lower Austria, which was 4.1 % less than in 1990. Between 2018 and 2019, there was a decrease in emissions of 1.5 %. 35% of greenhouse gas emissions in 2019 were generated in the sector with emissions trading systems, equivalent to approximately 6.2 million tonnes of CO_2 equivalent. In the non-emissions trading sector emissions have decreased by 12% since 2005 and accounted for 11.4 million tonnes of CO_2 equivalent or 65 % of total greenhouse gas emissions in 2019. An increase of 0.8 % was recorded compared to the previous year, Fig. 8.

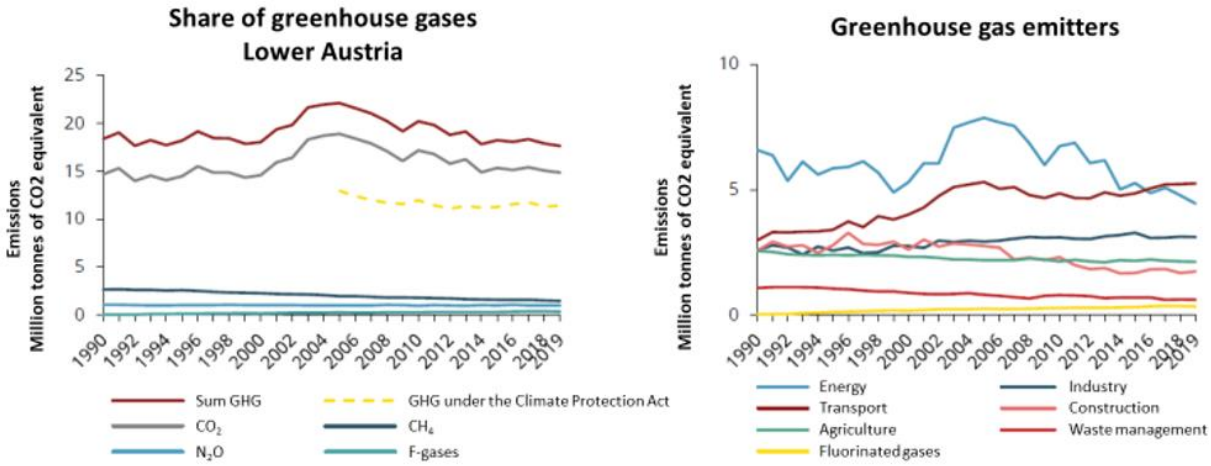


Fig. 8 Total greenhouse gas emssions in Lower Austria, by component and sector, 1990-2019 (Source: Umweltbundesamt, 2022)

From 1990 to 2019, the gross regional product of Lower Austria increased by 71 %. In the same period, gross domestic energy consumption increased by 47 %, while the share of renewable energy increased by 138 %. Lower Austria's CO_2 emissions increased by 1.3 % to 14.9 million tonnes in this period, a significantly lower rate than the increase in Lower Austria's gross regional product, Fig. 9.

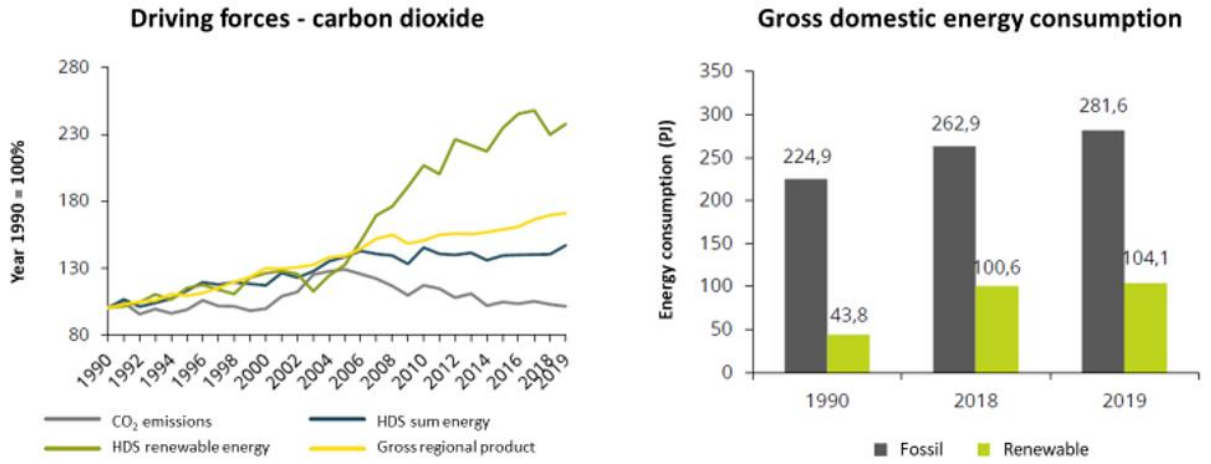


Fig. 9 CO_2 emissions, gross domestic energy consumption and gross regional product of Lower Austria, 1990-2019 (Source: Umweltbundesamt, 2022)

The following graph shows the locations and number of days when the contamination with particulate pollutants exceeded the threshold. A comparison between 2018 and 2020 shows a decreasing number of days of non-compliance, Fig. 10.

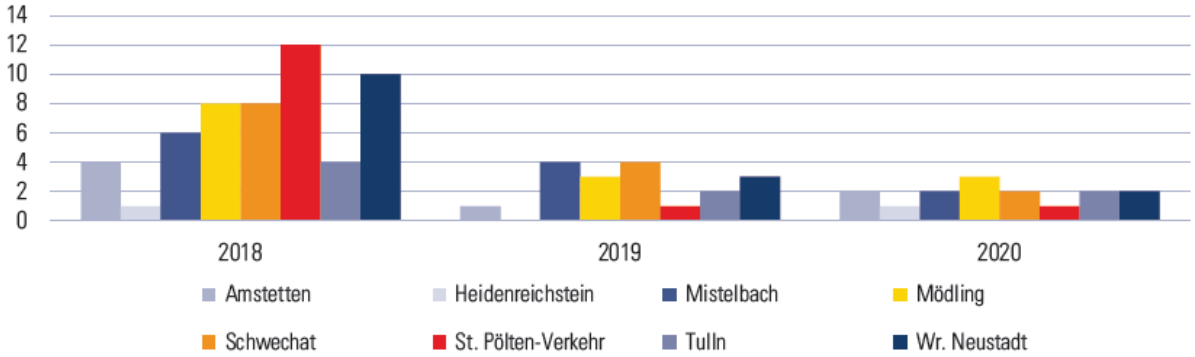


Fig. 10 Particulate pollution 2018-2020 by number of exceedances (Source: Statistisches Handbuch des Landes Niederösterreich, 2021)

Private households

For a deeper insight into the development of emissions and to derive the necessary measures to reduce them, it is important to identify the impact of the different factors involved in their volume. For this purpose, a methodology for breaking down the emissions development of private households according to the individual components was presented in the study of the Austrian Environmental Office (Umweltbundesamt): "Bundesländer Luftschadstoff-Inventur", Reports, Band 0787, Wien, 2021, from which the results presented above are also derived, Fig.11.

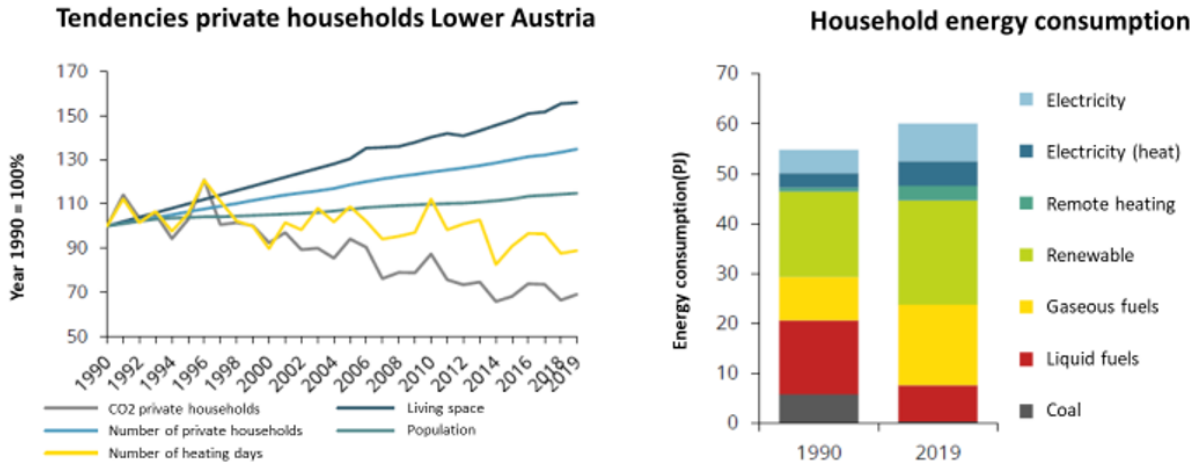


Fig. 11 Energy consumption and CO_2 emissions of private households in Lower Austria and their main factors, 1990-2019 (Source: Umweltbundesamt, 2021, Statistik Austria, 2021)

Private households - decomposition by component

For a deeper look at the development of emissions and the derivation of the necessary measures to reduce them, it is important to identify the impact of the individual factors involved in their level. To this end, in a study by the Austrian Office for the Environment (Umweltbundesamt): "Bundesländer Luftschadstoff-Inventur", Reports, Band 0787, Wien, 2021, from which the results presented above also come from the presented methodology for

decomposing the development of the emission of private households by individual components, the results that we are now attaching to, Fig.12.

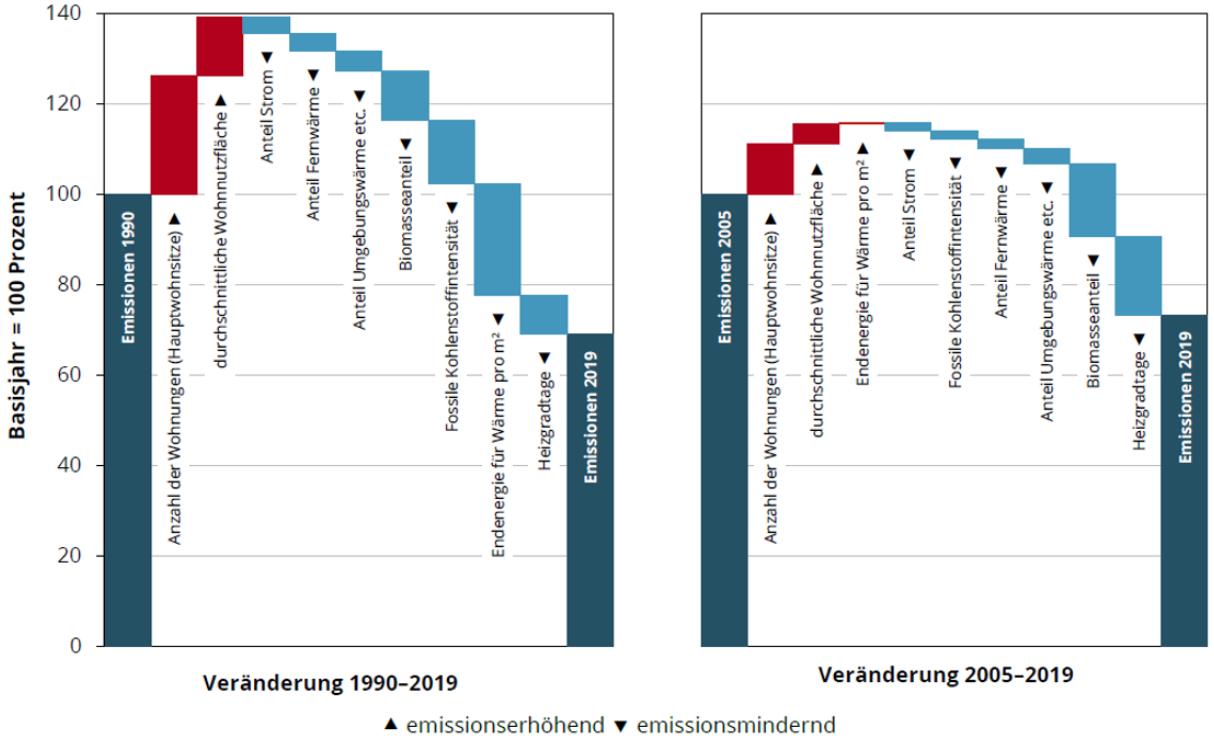


Fig. 12 Evolution of CO_2 emissions of households in Lower Austria from heat supply by individual component (Source: Umweltbundesamt, 2021, Statistik Austria, 2021)

Fig.12 shows that CO_2 emissions *decreased by 31 % between 1990 and 2019 (graph left) and by 27 % between 2005 and 2019 (graph right). In both periods considered, the number of households and the average size of apartments increased. Final energy consumption per square metre decreased significantly between 1990 and 2019, but experienced little change between 2005 and 2019. Ambient heat, etc., expansion of district heating, increasing biomass and the use of low-carbon (fossil) fuels contributed to the reduction of emissions. Increased use of electricity to ensure heat is also having a positive impact on households. The lower number of heating days in 2019 compared to 1990 and 2005 also had an impact on emission reductions.*

Water

Rivers

Lower Austria is almost entirely drained by the Danube. The Lainsitz in the Northern part of the Waldviertel and its tributaries such as the Braunaubach, the Reißbach or the Neumühlbach flow via the Vltava into the Elbe river system, which flows into the North Sea. The Dyje (Thaya) River flows on or North of the Northern border of Lower Austria and joins the March (Morava) directly at the border between the Czech Republic and Austria.

The most important tributaries of the Danube are:

- *North of the Danube / on the left bank of the Danube*
  - *Ysper,*
  - *Kamp,*
  - *Krems,*
  - *March.*
- *South of the Danube / on the right bank of the Danube*
  - *Enns,*
  - *Ybbs,*
  - *Erlauf,*
  - *Melk,*
  - *Pielach,*
  - *Traisen,*
  - *Schwechat,*
  - *Fischa,*
  - *Schwarza,*
  - *Triesting,*
  - *Pitten,*
  - *Leitha,*
  - *Piesting.*

There are only a few natural lakes in Lower Austria, which is why lakes are also referred to as reservoirs as well as many man-made ponds. The largest lake is the Ottenstein Reservoir (4.3 km²), which is part of a chain of power stations with the Dobra Reservoir (1.55 km²) and the Thurnberg Reservoir (0.55 km²) on the Kamp, Tab. 19 .

Tab. 11 Swimming water quality 2014-2020 (Sourcej: Statistisches Handbuch des Landes Niederösterreich, 2021)

Administrative district	Swimming locations	2014	2015	2016	2017	2018	2019	2020
Baden	EHZ Oberwaltersdorf	▲	▲	▲	▲	▲	▲	▲
Gänserndorf	Badeteich Hohenau/March	▲	●	▲	▲	▲	●	▲
Gmünd	Herrenteich Litschau	●	▲	▲	▲	▲	▲	▲
Horn	Bergwerkseen Langau	▲	●	▲	▲	▲	▲	▲
	Badeteich Horn	●	▲	▲	▲	▲	▲	▲
	Edlerseeteich Geras	▲	▲	▲	▲	●	▲	▲
Korneuburg	Badeteich Seeschlacht Langenzersdorf	▲	●	▲	▲	▲	▲	▲
	Badeteich Gerasdorf	▲	●	▲	▲	▲	▲	▲
Krems (Land)	Thurnberger Stausee	▲	▲	▲	●	▲	▲	▲
Melk	Ausee 1 Blindenmarkt	▲	▲	▲	▲	▲	▲	▲
	Ausee 2 Blindenmarkt	▲	▲	▲	▲	▲	▲	▲
	Ausee 3 Blindenmarkt	▲	▲	▲	▲	▲	▲	▲
	Donau Altarm Weitenegg	▲	▲	▲	▲	▲	▲	▲
Mistelbach	Badeteich Poysdorf	●	●	▲	▲	▲	▲	▲
Mödling	Windradlteich Guntramsdorf	▲	▲	▲	▲	▲	▲	▲
	Kahrteich Wiener Neudorf	▲	▲	▲	▲	▲	▲	▲
	Ozeanteich Guntramsdorf	●	▲	▲	▲	▲	▲	▲
St. Pölten	Ratzersdorfer See	●	▲	▲	▲	▲	▲	▲
St. Pölten (Land)	Badesee Traismauer	▲	▲	▲	▲	▲	▲	▲
	Ebersdorfer See Obergrafendorf	●	▲	▲	●	●	▲	▲
Scheibbs	Lunzer See	●	▲	▲	▲	▲	▲	▲
Tulln	Aubad Tulln	▲	▲	▲	▲	▲	▲	▲
	Donau Altarm Greifenstein	●	●	▲	▲	▲	▲	▲
Zwettl	Stausee Ottenstein	▲	●	▲	▲	▲	▲	▲
	Dobrastausee Pölla	▲	▲	▲	▲	▲	▲	▲
	Badeteich Allentsteig	▲	●	▲	▲	▲	▲	▲
	Frauenwieserteich Langschlag	●	▲	▲	▲	▲	▲	▲
	Waldbad Rappottenstein	▲	▲	▲	▲	▲	▲	▲

Note : ▲ excellent swimming quality
● good swimming quality
■ sufficient swimming quality

Terrain

Bohemian Massif (Český masív)

Lower Austria is part of the Gneiss and Granite Plateau of the Bohemian Massif (also known as the „Granite and Gneiss Highland“), which can be divided into the Zwettler Land, Ottenschlager Hochland, Kamp-Kremser Hochland and Gföhler Hochfläche. On the Northern border are the Gmünd valley, which extends into the Czech Republic, the Litschauer Ländchen, the Thayahochland and the Oberes Thayatal (upper Thaya valley). On the Western border are the extensive Horner Becken and Manhartsberg mountain ranges and, South of the Danube, the Neustädter Platte and the Dunkelsteiner Wald.

Alps

The Alps start in the East near Vienna (Bisamberg on the left bank of the Danube). The first mountain ranges that can be classified as part of the Alps are the Lower Austrian Voralps, which consist of flysch and stretch as a narrow line as far as Steyr. To the South of this is the Lower Austrian part of the Styrian-Lower Austrian Limestone Alps, with altitudes of around 2 000 m above sea level, particularly in the limestone mountains of Rax and Schneeberg. According to the Alpine Association, the Ybbstaler Alps (with the Göstlinger Alps as a sub-unit), the Türnitzer Alps and the Gutenstein Alps are associated with the Eastern Alps; the Wienerwald adjoins the Gutenstein Alps in the North, the Rax-Schneeberg group in the South and part of the Mürzsteger Alps also extend into Lower Austria.

Vienna Basin

The Vienna Basin and the transitions into the Pannonian Plain are the Eastern end of the Alps, which form a boundary with the Vienna Woods in a distinct North-South thermal line. The basin is a key factor of production for agricultural production, which is an important economic sector in Lower Austria. The structure of its use is shown in the following Tab.20:

Tab. 12 Distribution of the agricultural area

Type of use	Area in km^2	Percentage
Forest	6 711	35 %
Cropland	7 000	36 %
Meadows	1 750	9 %
Pasture and meadows	300	2 %
Vineyards	315	2 %

The region is characterised by a Pannonian climate with moderately cold winters and hot summers. The prevailing climate makes Marchfeld (Morava Field) particularly suitable for vegetable growing and makes it the most important vegetable-growing area in Lower Austria. Marchfeld, with its high-quality cropland, is an important supplier of vegetables to Vienna. The most important crops in terms of area are onions (Allium cepa), peas (Pisum sativum), carrots (Daucus carota ssp. sativus), asparagus (Asparagus officinalis L), spinach (Spinacia oleracae), French beans (Phaseolus vulgaris) and cabbage. Strawberry cultivation is also important in terms of financial return. Marchfeld is also traditionally known as the 'breadbasket of Austria' because cereal growing was the predominant crop until the 19-th century. Growing cereals is still important.

Despite its position as the traditional "breadbasket of Austria", Marchfeld is the driest region in Austria with an average annual rainfall of less than 550 millimetres. The falling water table due to overexploitation of the aquifer was prevented by the construction of the Marchfeld Canal, which was put into operation in 1992.

Flora and fauna

The border between two floral regions belonging to the Holarctic flora runs through Lower Austria. The Western part of the country, nearly the whole of Austria, belongs to the Central European Floras, while the Weinviertel, the Eastern edge of the Waldviertel, the Southern slopes of the Wachau, the hills between St. Pölten and the Tullner Basin, the Vienna Basin, the Hainburg and the edge of the Leithagebirge belong to the Pannonian Floras, which in turn represent the western most part of the South Siberian-Pontic-Pannonian floral region.

Apart from Lower Austria, only Burgenland and Vienna in Austria are part of the South Siberian-Pontic-Pannonian floral region, which extends from Southern Siberia through Ukraine, Transylvania, Vojvodina and the Hungarian Lowlands to the Eastern edge of the Alps. For this reason, the flora in the Eastern part of the country differs significantly from that in the

West; in the Eastern part, there are many species that are unique in Austria and deserve protection. Several species reach the Western limit of their distribution in Lower Austria, such as the Tartarian sea kale and the woodland pondweed.

Lower Austria, also due to its share of two floristic areas, is the most species-rich federal state: 2,369 full species of vascular plants and 2,498 elementary taxa of vascular plants are known. 96 full species and 110 elementary taxa occur only in Lower Austria, but not in the other parts of Austria.

3.1.4 State of the Environment - Burgenland

Territorial and administrative division of the region

Burgenland is the easternmost federal state of Austria and the smallest one in terms of population (297,583, as of 1 January 2022). It covers an area of 3,965.20 km² and its 397 km long state border (until 21 December 2007 the EU Schegen border) is mainly shared with Hungary (Komitate Győr-Moson-Sopron und Vas) and only to a lesser extent with Slovakia (with the Bratislava Self-Governing Region) and in the South only a few kilometres with Slovenia (the municipalities of Kuzma und Rogasovci). Until 1920 this area (Deutsch-Westungarn) belonged to the Kingdom of Hungary, when it was annexed by the Treaty of Trianon to the newly formed Austrian Republic.

The name "Burgenland" is a reminder that the federal state consists of parts of three former Hungarian counties, which had the word "Burg" (castle) in their name. Interestingly, none of the three castles that bear this name are in today's Burgenland. All of them are in Hungarian territory:

- *Wieselburg (Moson),*
- *Ödenburg (Sopron),*
- *Eisenburg (Vas).*

At the beginning of 1919 Austria claimed parts of the Prešpork County (Bratislava in Slovak, Pozsony in Hungarian) for Burgenland. Therefore the name "Vierburgenland" was proposed in June 1919. In mid-August 1919, however, it became clear at the peace negotiations in Saint-Germain that Bratislava would belong to Czechoslovakia. Karl Renner therefore recommended a name change to "Dreiburgenland". The designation "Burgenland" was given by the federal law of 25 January 1921.

In the West, Burgenland borders the provinces of Lower Austria and Styria. In 2021, the border between Burgenland and Steiermark was modified in order to increase flood protection and the associated regulation of the Lafnitz River. The territory of the Province of Burgenland was thus enlarged by 6 000 m^2 at the expense of Styria. Almost 40,000 hectares of this land belong to the Esterhazy Foundation, which is the largest landowner in Burgenland and one of the largest in Austria.

The capital - and largest city with 15,240 inhabitants - is Eisenstadt, and the second largest city is Neusiedl am See with 8,657 inhabitants (both figures are as of Jan. 1, 2022). Burgenland is divided into 7 districts and there are 171 cities and towns, of which only 12 have more than 3,500 inhabitants. Of all federal states in Austria, Burgenland has the lowest average number of inhabitants per municipality: 1,716, while the average number of inhabitants per municipality in Austria was 4,227 in 2019, Fig. 13.

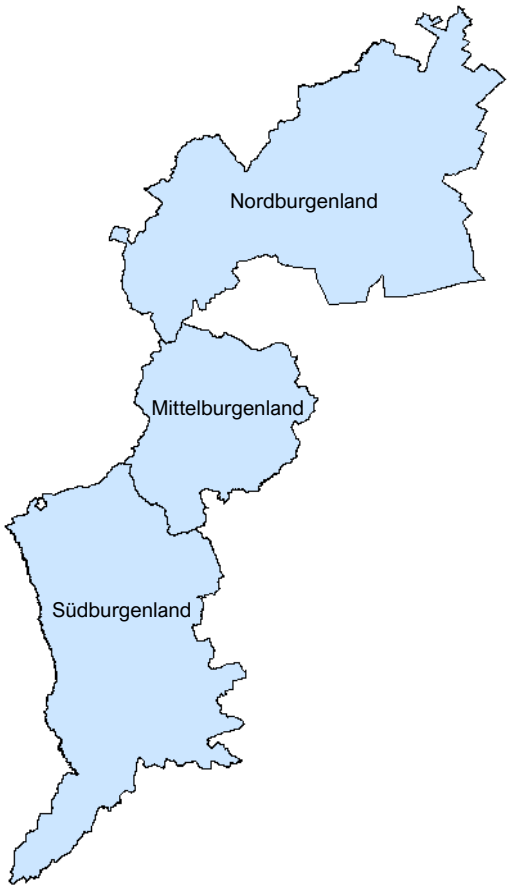


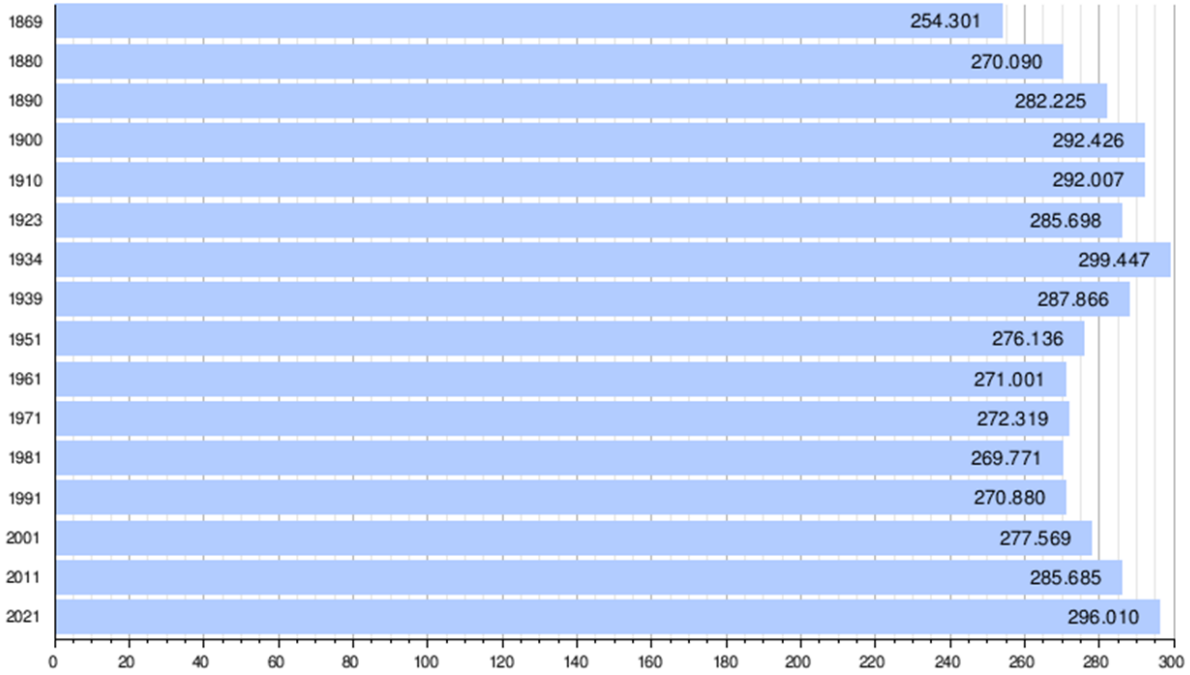
Fig. 13 NUTS-3 Regions of Burgenland (Source: own illustration based on data from the Austrian statistical office (Statistik Austria))

Burgenland is divided into three regions:
Nord(north)burgenland, which is the area north of the Ödenburger Gebirge and includes the statutory cities of Eisenstadt and Rust and the districts of Eisenstadt-Umgebung, Mattersburg and Neusiedl am See. Here lies the famous Lake Neusiedl (Neusiedler See), the largest (or second largest if Lake Constance is taken into account) lake in Austria.

Mittel(mid)burgenland, consisting of the district of Oberpullendorf. In contrast to northern Burgenland, this part of the federal state has a hilly character and is separated from the equally hilly southern Burgenland (Süd(south)Burgenland), which includes the districts of Güssing, Jennersdorf and Oberwart, by the Günser Gebirge, where the 884-metre-high Geschriebenstein, the highest point in Burgenland, is located.

Demographic Data

The population of Burgenland has been growing continuously for the last 40 years (see Graph 14), mainly due to the influx of foreigners. Between 2002 and 2022 their number increased by 148 % and their share increased from 4.3 % to 10 % (which is on a par with neighbouring Lower Austria), while the total population increased by 7 % in the same period. The largest increase in immigrants is from Slovakia, with the number of immigrants rising from 304 in 2002 to 4,298 in 2022. They live mostly in villages close to the Slovak border (Kittsee is a typical example).



Note: in thousands of inhabitants

Fig. 14 Population growth (Source: Statistik Austria (2022))

In contrast to the development of population density in the whole of Austria (between 2010 and 2022 it increased from 101.5 inhabitants/km2 to 107.6 inhabitants/km2), the population density in Burgenland has hardly changed in the last 12 years, only Südburgenland has experienced a certain decrease (see Tab. 21).

Tab. 21 Population density in Burgenland by region

Population/km²	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Burgenland	77,4	77,7	78,0	78,2	78,5	79,0	79,4	79,7	77,5	77,8
Mittelburgenland	54,1	54,1	54,1	54,1	54,1	54,3	54,4	54,3	54,2	54,0
Nordburgenland	97,6	98,3	99,0	99,7	100,3	101,4	102,4	103,1	96,9	97,6
Südburgenland	67,3	67,4	67,4	67,2	67,1	67,2	67,3	67,2	66,9	66,8
Austria	101,5	101,8	102,3	102,9	103,7	104,9	106,0	106,8	107,1	107,6

Source: Eurostat – UNIDEMO (2022)

The population ageing process in Burgenland shows a similar trend as in the whole of Austria (see Tab. 22). The share of the population over 65 years of age has increased from 20.9% in 2016 to 22.6 % in 2022 and is higher than for the whole of Austria (19.2 %). Of the three regions

of Burgenland, Nordburgenland, neighbouring Slovakia, has the lowest proportion (and from this perspective the least elderly population).

Tab. 13 Age structure of the population in Burgenland by region

	2016	2017	2018	2019	2020	2021
Burgenland	20,9	21,2	21,5	21,9	22,2	22,6
Mittelburgenland	22,6	22,8	23,3	23,7	24,2	24,6
Nordburgenland	19,9	20,2	20,4	20,7	21,0	21,3
Südburgenland	21,8	22,2	22,6	23,0	23,5	23,9
Austria	18,4	18,5	18,7	18,8	19,0	19,2

Source: Eurostat - UNIDEMO, 2022

Technical infrastructure

Transport sector

The most important transport routes

According to the data of the Federal Ministry of Transport, Innovation and Technology of the Republic of Austria presented in the "Jahrbuch 2019, Statistik Burgenland", the road network in Burgenland in 2019 measured 10,291.5 km, of which 79.9 km were motorways and 493.4 km were expressways. The A2, A3, A4 and A6 motorways run through Burgenland, as do the Burgenland-Straße (B50) and Burgenland-Schnellstraße (S31) expressways.

The A4 motorway connecting Vienna, Burgenland and part of Lower Austria with Bratislava and Budapest is particularly important from the point of view of the report. The well-established transport network is used to a large extent by daily commuters, mainly to Vienna (around 23,000 people).

Railway transport

Burgenland, with its easternmost location and an area of 3,965.20 km^2, is the third smallest state in Austria. This is also reflected in the rail network, which has key connections to Vienna, Bratislava and Budapest (Fig. 15). The route from Vienna to Budapest and further to the Balkans and the fast train connection from Vienna via Bruck an der Leitha and Kittsee to Bratislava - Petrzalka run through Burgenland.

There are also train connections running through Burgenland provided by the railway companies Raaberbahn (also involved in the train connection of Burgenland with Vienna and Bratislava on the route Deutschkreuz - Wien Hbf. - Kittsee - Bratislava - Petrzalka), Pannoniabahn and Neusiedler Seebahn.

The TEN-T (Trans-European Transport Network) comprises a total of 9 core network corridors, 3 of which cross Burgenland: Baltic-Adriatic, Rhine-Danube and Baltic-Eastern Mediterranean. The TEN-T network includes rail infrastructure (conventional and high-speed), road infrastructure, waterway infrastructure and airports.

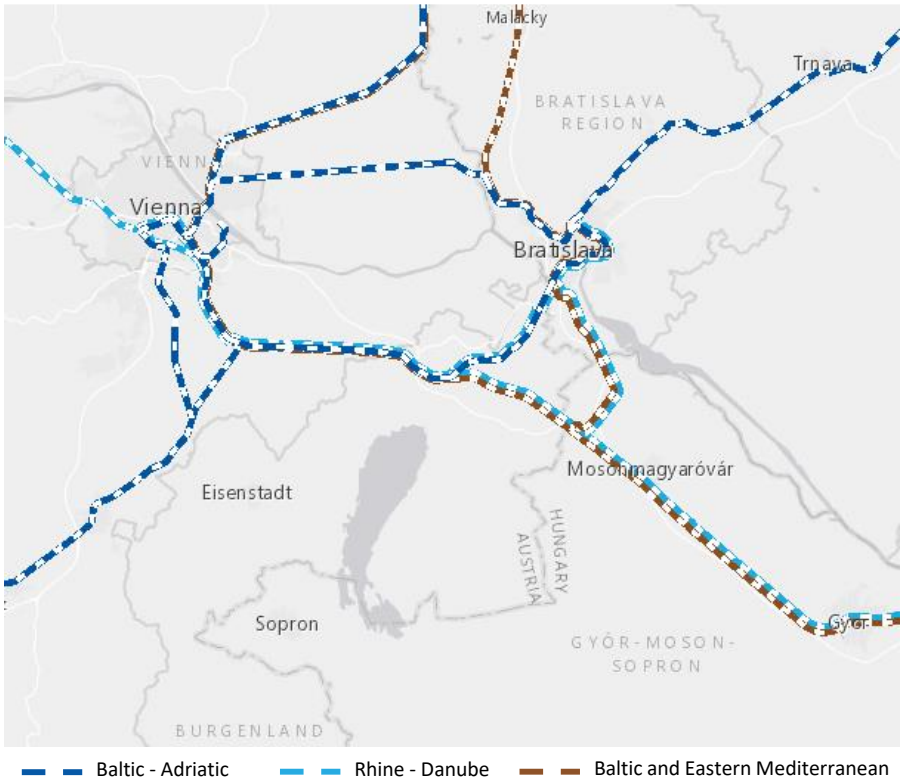


Fig.15 TEN-T Railway corridors of Burgenland (Source: TENtec Interactive Map Viewer (2022))

Energy supply

97 % of the electricity generated in Burgenland comes from sustainable sources (Fig.16). From 2018 to 2019, electricity generation in Burgenland increased by 18 %, mainly due to a significant increase in wind power.

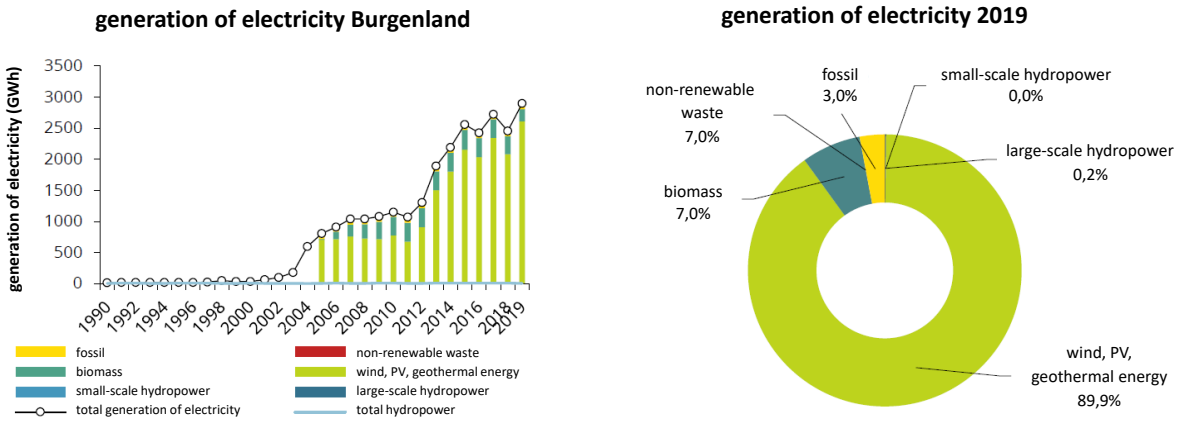


Fig. 16 Sources of electricity generation in Burgenland 1990-2019 (Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019)

Burgenland is a European pioneer in the field of wind energy. In 2000, around three percent of the electricity generated in the country came from wind turbines; in 2011, it were already 50%. In 2013, the country was self-sufficient in electricity. Several large wind farms have also been

built: the Andau/Halbturn wind park, for example, has an installed capacity of 237 MW and was the largest wind farm in Central Europe at its completion.

Economy

Due to the lack of alternatives, this part of Austria has long been dominated by agriculture. Burgenland, as an economically backward province of Austria, was declared an Objective 1 region of the European Union in 1995. Subsidies continued in a 'phasing-out' phase until 2013. During these ten years, Burgenland has made significant economic progress, as measured by gross domestic product (GDP) per capita at current prices. As shown in Tab. 3 below, it increased by 28 % between 2011 and 2019. However, its position relative to the level of Austria and, since 2012, the EU average has hardly changed (see Tab. 23 and Tab. 24).

Tab. 23 Gross domestic product per capita in Burgenland

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Burgenland	24 600	25 700	26 300	26 900	27 800	28 600	29 800	30 600	31 500	30 200
Nordburgenland	26 900	28 600	29 300	29 600	30 600	31 500	32 400	33 300	34 200	(-)
Mittelburgenland	20 900	21 100	22 200	23 000	23 700	24 500	26 500	26 700	27 200	(-)
Südburgenland	22 500	23 200	23 100	24 100	24 900	25 700	27 000	27 700	28 600	(-)
Austria	37 000	37 800	38 200	39 000	39 900	40 990	42 000	43 600	44 800	42 500

Source: Eurostat – Regional Specification of National Accounts Main Aggregates (2022)

When comparing the gross domestic product per capita (in current prices) for 2020, Burgenland with 30,200 Euros is still below the value of this indicator for Austria (42,500 Euros per capita) and even in comparison with 2011 this difference has not changed significantly.

Tab. 24 Gross domestic product per capita compared to the EU average

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Burgenland	96	100	101	101	101	102	102	101	100	101
Nordburgenland	105	111	113	111	111	112	111	110	109	(-)
Mittelburgenland	82	82	85	87	86	87	90	88	87	(-)
Südburgenland	88	90	89	91	91	91	92	92	91	(-)
Austria	144	147	147	147	145	145	143	144	143	142

Source: Eurostat – Regional Specification of National Accounts Main Aggregates (2022)

Compared to the gross domestic product of the European Union (EU-27 index = 100), Burgenland's value for the period 2012 to 2020 is just above 100, and in 2019 it is right on a par with the EU average. The values for Austria for this period were well above the EU average, between 143 and 147). In addition, there are still differences between Northern Burgenland and the remaining two regions.

Burgenland remains an agriculturally important area. Together with Lower Austria, it is the most important wine-growing region in Austria. There are more than 13,000 hectares of viticulture in Burgenland.

Leading companies in Burgenland include Unger Stahlbau, Felix Austria, Hella Fahrzeugteile Austria, Lenzing Fibers, Isosport Verbundbauteile and Becom Electronic. Another important economic factor is summer tourism. Tourism in Burgenland is driven by Lake Neusiedl, St. Martins Therme & Lodge, Lutzmannsburg, Stegersbach and Bad Tatzmannsdorf. Especially popular is the more than 5,000 km long and well-developed network of cycle paths. Shopping tourism should not be underestimated either. Near Parndorf (close to the border with Slovakia) there are currently two designer outlets with more than 200 shops and restaurants.

Higher education

The Burgenland University of Applied Sciences has two branches: the branch in the North (Eisenstadt) specialises in information technology, social work and economics, the branch in the South (Pinkafeld) in energy and environmental management and healthcare. It is worth noting that students in Burgenland do not have to pay tuition fees.

Environmental factors (air, water, flora and fauna)

The environment with its individual components is the starting point (as a supplier of the necessary inputs to production) as well as the final link (as a consumer of outputs, desirable as well as undesirable in the form of its pollution) of every economic activity. The quality of the environment according to its individual components is directly linked to economic activity.

Atmosphere

In terms of population (2019: 293 861 inhabitants), Burgenland is the smallest federal state in Austria. It is relatively less industrialised and rural, but since the early 1990s it has been one of the fastest growing regions in Austria.

In 2019, 3.3 % of Austria's population lived in Burgenland, but Burgenland's share of Austria's GHG emissions was only 2.3% (1.9 million tonnes of CO_2 equivalent). GHG emissions outside the emissions trading sector under the KSG amounted to 1.8 million tonnes of CO_2 equivalent in 2019, which corresponds to a share of 3.5 % of Austria's GHG emissions (excluding the emissions trading sector under the KSG).

Burgenland's per capita emissions of 6.3 t CO_2 equivalent in 2019 were well below the Austrian average of 9.0 t (Graph 5). If only emissions outside the emissions trading sector under the KSG are considered, the per capita emissions of 6.0 t CO_2 equivalent were slightly above the Austrian average of 5.7 t (for more details see Bundesländer Luftschadstoff-Inventur 1990 - 2019). The main reason for the overall low level of GHG emissions in Burgenland is the economic structure with relatively low industrial emissions (Fig. 17).

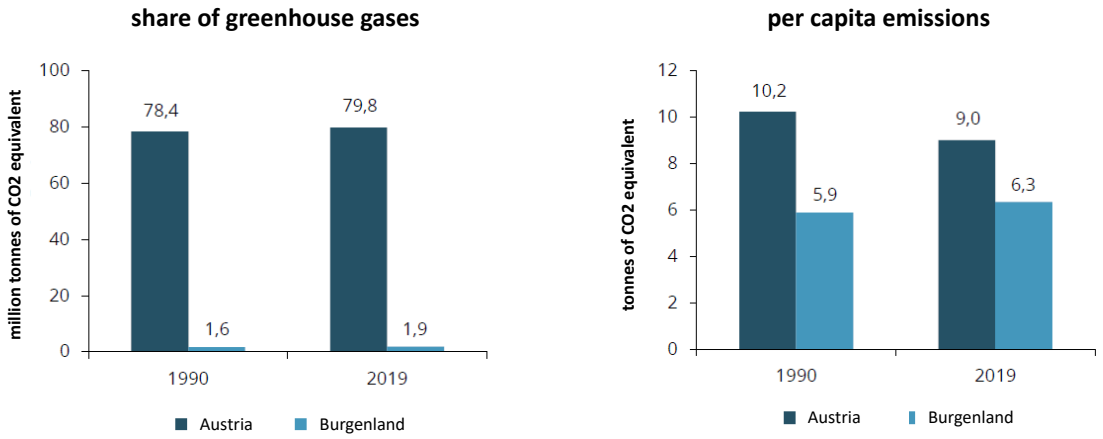


Fig. 17 Burgenland's share of Austria's greenhouse gas emissions and emissions per capita, 1990 and 2019 (Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019)

Emission trends

The development of emissions in Burgenland from 1990 to 2019 by individual greenhouse gases and by sector is shown in Fig.18.

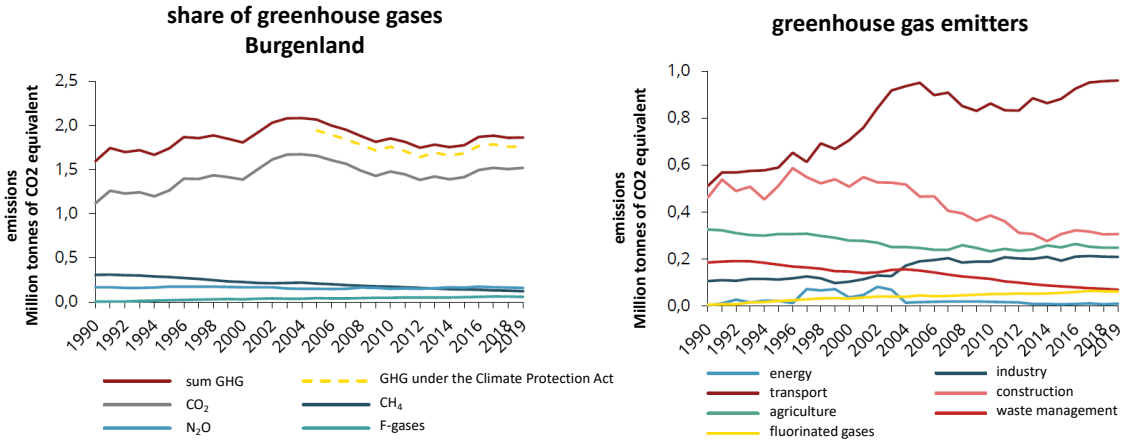


Fig.18 Total greenhouse gas emssions in Burgenland, by component and sector, 1990-2019 (Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019)

Transport accounts for the largest share of greenhouse gas emissions at 52 %, while industry accounts for only 11 % of total emissions. Between 2005 and 2014, greenhouse gas emissions - with the exception of 2010 and 2013 - decreased continuously, and between 2018 and 2019 they stayed at about the same level, with only a slight increase of 0.1 %. The overall trend is mainly determined by transport, which shows the highest increase in emissions over the period 1990-2019. The residential sector also shows a significant increase in emissions over this period. The relationship between the level of economic activity measured by gross regional product and the level of emissions is shown in Fig. 19.

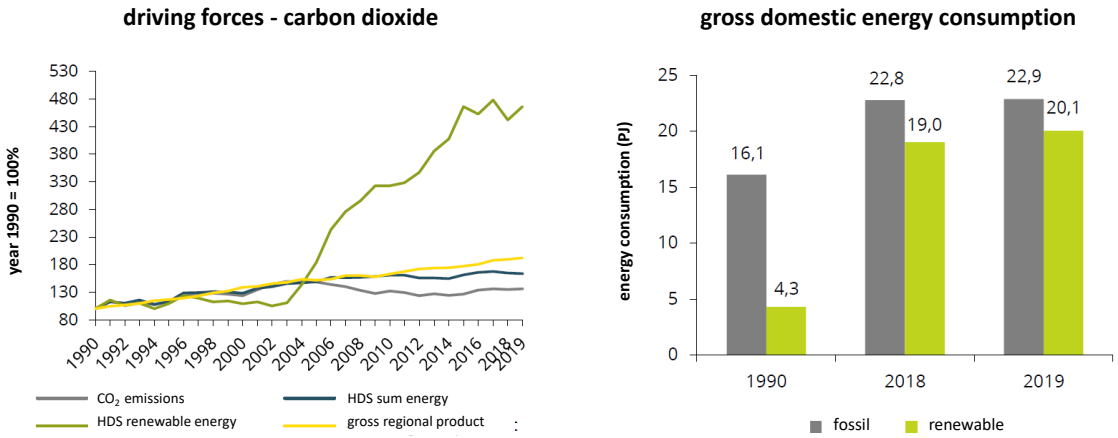


Fig. 19 CO_2 emissions, gross domestic energy consumption and gross regional product of Burgenland, 1990-2019. (Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019)

CO_2-Emissions increased by 36 % between 1990 and 2019 and the gross regional product increased by 92 % during this period, which shows the opening of the floodgates in the development of these indicators important for the environmental quality. While total energy consumption increased by 64 %, the increase in the consumption of energy from renewable sources was up by 36 %.

Private households

For a deeper insight into the development of emissions and the derivation of the necessary measures to reduce them, it is important to identify the influence of the individual factors contributing to their level. For this purpose, a methodology for the breakdown of the development of emissions of private households according to the individual components was presented in the study of the Austrian Environmental Office (Umweltbundesamt): "Bundesländer Luftschadstoff-Inventur", Reports, Band 0787,Wien,2021 – from which the results presented here originate.

The Fig. 20 shows the contributions of the individual factors relevant for the development of CO_2 emissions of private households in Burgenland from 1990 to 2019 and between 2005 and 2019.

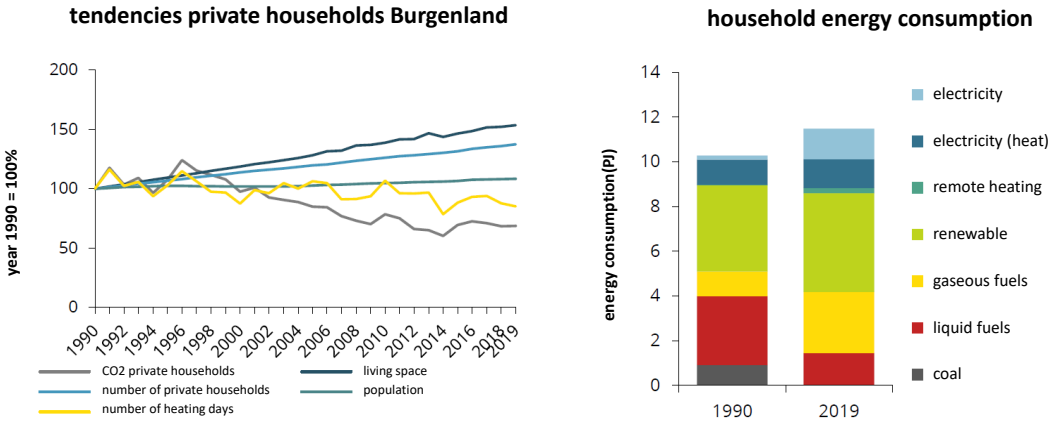


Fig.20 Energy consumption and CO_2 emissions of private households in Burgenland and their main

fators, 1990-2019 (Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019; Statistik Austria (2021))

From 1990 to 2019, the population of Burgenland grew by 8.4%. In the same period, the number of permanent residences increased by 37% and their living area by 54%. In 2019, the number of heating days in Burgenland decreased by 15% compared to 1990. In 1990 and 2019, the number of heating days in Burgenland decreased by 3.8% and 7.8%, respectively, compared to Austria as a whole.

Water

Most of the area of Burgenland drains into the Danube via the Raab River. Another watercourse in southern Burgenland - along the Raab - is the Pinka. In the extreme north, the Leitha is the border river with Lower Austria. The Wulka rises in the Rosalia mountains and flows into Lake Neusiedl. The Zöbern is a left-hand tributary of the Günse and joins it in the Burgenland town of Lockenhaus. The Tauchenbach or Tauchen (Tava in Hungarian) is an approximately 40 km long tributary that flows into the Pinka from the left. After Lake Neusiedl, the most important bodies of water are Lake Neufeld in the district of Eisenstadt-Umgebung, as well as the Lange Lacke, the Darscho and the Zicksee in Seewinkel.

The water quality of individual watercourses as measured by their chemical and ecological status is given in Tab 25.

Tab. 25 Water quality

River	measuring point	chemical condition	ecological condition
Leitha	Nickelsdorf	good	good
Goldbach	Nagycenk	good	moderate
Raab	Neumarkt	good	moderate
Lafnitz	Sankt Gotthard	good	good
Pinka	Felsöcsatar	good	good
Strem	Kemestarofda	good	moderate
Rechnitzbach	Uh ARA	good	moderate

Source: Jahrbuch Burgenland 2019

Wastewater treatment plants in Burgenland

The settlement structure of Burgenland, with the location of the municipalities in the valley plain and the dense development of the municipalities, supports regional waste disposal systems. Waste water collection and treatment is therefore provided by 17 sewerage associations in 133 municipalities in Burgenland. Waste water disposal and treatment of the other municipalities is provided by individual waste water treatment plants or by treatment plants in neighbouring provinces or abroad.

Since 2001, all 171 municipalities in Burgenland have had suitable sewage systems with biological wastewater treatment plants in operation. Overall, approximately 99 % of all inhabitants have a sewer connection. At the end of 2019, a total of 78 wastewater treatment plants were in operation in Burgenland. The wastewater of Burgenland's 13 municipalities

(local districts) is treated in wastewater treatment plants in neighbouring federal states and in Hungary (Szentpéterfa). Wastewater from 6 municipalities in Lower Austria and 7 municipalities in Styria is treated in Burgenland's wastewater treatment plants. In addition to domestic wastewater, industrial wastewater is also treated in 74 municipal wastewater treatment plants.

Terrain

The soils in Burgenland are very diverse, ranging from light sandy soils to heavy clay soils with various grades. In the Lake Neusiedl wine-growing region, loess soils and black-soil soils are found mainly on the north-eastern shore of Lake Neusiedl. Gravelly, sandy and saline soils are also found in the Seewinkel region. In the Illmitz area there are even pure quartz sand soils.

In the Neusiedlersee-Hügelland wine-growing region, the Leithagebirge slopes are dominated by crystalline ruthenian and schistose rocks, which are overlain by limestone. On the northern shore of Lake Neusiedl there are again loess and chernozem soils, and on the western shore near the lake sandy, loamy chernozem soils. In the Mattersburg district there are predominantly clayey soils.

The Mittelburgenland wine-growing area is more hilly and densely wooded. Soil types are predominantly sandy to heavy clay soils. In the southern Burgenland wine-growing area, the vines thrive mainly on heavy and partly ferruginous clay soils.

Flora and fauna

Burgenland offers an exceptional natural and cultural landscape. More than a third of the province's territory is protected as nature or landscape. In addition to the 14 European NATURA 2000 protected areas, the 6 Burgenland nature parks, the Lake Neusiedl-Seewinkel National Park and other protected nature and landscape areas are of major importance, which are not only a valuable habitat for many, sometimes very rare, animal and plant species, but are also of great significance to people: as a place of recreation, as a place for local food production, as a local recreation area and as an attractive tourist destination.

3.1.5 State of the Environment - Vienna

Territorial and administrative division of the region

Vienna is the capital and largest city of the Republic of Austria and one of its nine federal states. As of 1st January 2022, there were 1,931,593 inhabitants (about one-fifth of the total population of Austria) living in an area of 414.87km2 (the smallest federal state in Austria), making Vienna the city with the highest population density (4,654 inhabitants/km2). In the metropolitan area of Vienna live about 2.8 million people, which is about a third of the population of Austria. The name of the city of Wien is derived from the river of the same name flowing through the city.

Vienna is completely surrounded by Lower Austria, to which it belonged to until 1920. The stretch between the northern and southern borders of the city is 22.8km, and the distance between the western and eastern borders is 29.4km long. The highest point in the city is Hermannskogel at 542m above sea level and the lowest point is Lobau at 151m above sea level.

Vienna, which as a statutory city also functions as a political district, has been divided into 23 city districts and 89 cadastral municipalities since 1954. Viennese refer to the districts either by their names (e.g. "Ottakring") or by their numbers (e.g. "16th district" or also "16th", also spelled "Wien 16"). These numbers appear on every road sign before the street name (e.g. "16., Thaliastraße") and form the second and third digits of the postcode (1010 for the 1st district to 1230 for the 23rd district).
In determining the boundaries of the districts, there was an attempt to draw them distinctly along important roads or rivers, although this divided some former villages. The inner districts 1 and 3 to 9 are separated from the outer ones by a belt. In the districts 1, 2, 3, 9, 11, 19 and 20, the Danube Canal is part of the district boundaries, in the districts 2, 11, 19, 20, 21 and 22 the Danube. The Danube Canal and the Danube separate districts 2 and 20 from all the others; the districts 21 and 22 are the only ones on the left bank of the Danube. Also, the Vienna River defines the district border for almost its entire course through the city (except for the stretch from the western city border to Hütteldorf).

The largest district in terms of population is the tenth district, Favoriten, which has 212,255 inhabitants. The largest district by area, Donaustadt (22nd district), counts over 200,000 inhabitants, and five other districts have more than 100,000 inhabitants (Fig. 21).

Fig.21 Municipal districts of Vienna (Source: Wikipedia)

Demographic data

In the recent past Vienna's population development has been characterised by a significant increase in the number of inhabitants. On a national scale, the federal capital was the „demographic centre“ of Austria. Vienna's population development is characterised by

different trends, with the impact of international migration being directly visible in the population: stagnation at times of low migration inflows, as well as strong population growth at times of strong net immigration from abroad (Tab.26).

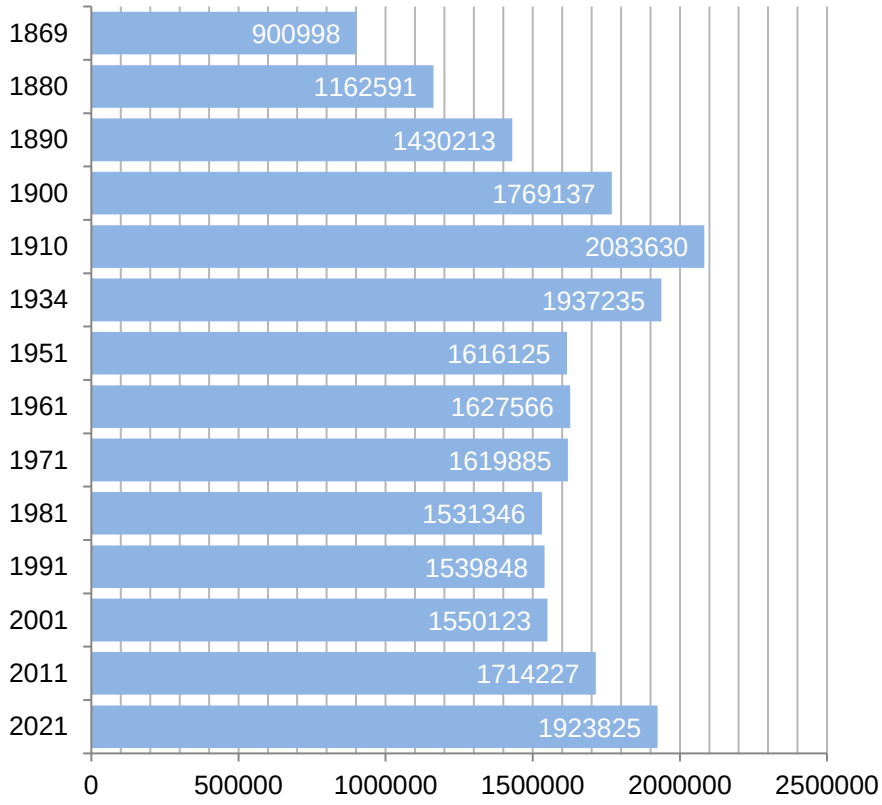
Since the recruitment and immigration of the so-called Gastarbeiter (guest worker) in the 1960s and 1970s, Vienna has once again become a city of immigration. However, due to a large birth deficit, this did not initially lead to an increase in population. Instead, the city's population continued to decline to 1.48 million by 1988, the lowest level since 1890.

Tab. 26 Population density in Vienna

population/km²	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Vieden	4 289,3	4 323,5	4 377,6	4 440,5	4 511,5	4 604,5	4 693,4	4 754,9	4 780,6	4 808,9
Austria	101,5	101,8	102,3	102,9	103,7	104,9	106,0	106,8	107,1	107,6

Source: Eurostat – UNIDEMO (2022)

At the beginning of 2020 the population grew to 1,911,191 (Fig. 22). The decisive influence on growth in recent years has been mainly due to immigration from abroad in connection with events such as the fall of the Iron Curtain, the wars in the former Yugoslavia, the accession of Austria to the European Union, the eastern enlargement of the European Union or, most recently, the migration of refugees from Syria and Afghanistan around 2015. Since 2004, Vienna has again recorded a surplus of births for the first time in many years.



Note: in thousands of inhabitants

Fig. 22 Population growth (Source: Statistik Austria (2022))

In 2019 about 855,000 (45.9 %) of the 1.862 million population had a migrant background. Of these, 644,000 were first-generation immigrants, i.e. born abroad like their parents. As of 1

January 2020, foreigners accounted for 30.8 % of Vienna's population (589,015 persons). Since 1991, the population has been growing steadily and according to forecasts, it could reach the 2 million mark in 2030, mainly due to immigration(Tab. 27).

Tab. 14 Population projections for Vienna from 2022 to 2045

Year	End-of-year population
2022	1 951 510
2023	1 963 637
2024	1 975 571
2025	1 987 291
⋮	
2030	2 041 823
⋮	
2035	2 088 294
⋮	
2040	2 128 749
⋮	
2045	2 164 691

Source: Stadt Wien Wirtschaft, Arbeit und Statistik – Bevölkerungsprognose 2018

Looking at the age structure measured by the proportion of the population over 65 years of age since 2016, the level remains approximately the same in Vienna, in contrast to the development in Austria, where this proportion is slightly increasing (see Tab.28).

Tab. 28 Age structure of the population of Vienna

	2016	2017	2018	2019	2020	2021
Vienna	16,7	16,5	16,5	16,5	16,5	16,5
Austria	18,4	18,5	18,7	18,8	19,0	19,2

Source: Eurostat – UNIDEMO (2022)

The proportion of the population over 65 years of age in 2021 was 16.5%, which is below the average for Austria (19.2 %) and indicates a younger population compared to the whole of Austria.

Health

Health is a key indicator of the quality of life. The level of healthcare is one of the criteria in the ranking of the quality of life of 172 cities worldwide, regularly published in the Economist. Other criteria are: education, culture and infrastructure, social security, political stability and crime rates.

From the indicators of health care facilities (Tab.29 in Vienna between the years 2001 and 2020, an increase in the total number of doctors, medical and auxiliary staff can be observed, with a decrease in the number of patients and a slight increase in the average length of stays at hospitals.

Tab. 15 Medical facilities in Vienna

Rok	Počet nemocníc	Systematizované postele	Počet postelí k dispozícii	Lekárky a Lekári	Nemedicínske zdravotnícke profesie	Pacienti v nemocničnej liečbe	Ø Čas pobytu
2001	47	18 713	17 904	5 527	20 724	630 847	6,0
2002	48	18 905	17 798	5 695	20 639	648 527	5,8
2003	48	19 093	17 701	5 762	20 873	633 112	5,9
2004	41	14 382	13 505	5 578	18 980	573 974	6,7
2005	40	14 304	13 167	5 611	19 233	579 929	6,6
2006	38	14 108	13 035	5 675	19 548	592 874	6,6
2007	39	14 140	13 061	5 752	19 581	602 123	6,3
2008	38	14 098	12 909	5 946	19 922	612 198	6,4
2009	38	14 069	12 900	6 044	20 282	614 923	6,3
2010	38	14 058	12 907	6 226	20 226	623 243	6,2
2011	41	14 544	13 210	6 330	20 709	626 712	6,3
2012	41	14 464	13 099	6 523	21 056	636 129	6,2
2013	42	14 753	13 398	6 563	21 202	636 912	6,2
2014	44	15 356	13 802	6 727	21 747	646 462	6,3
2015	47	16 029	14 491	6 841	22 688	650 417	6,6
2016	47	15 831	14 612	6 859	22 829	670 934	6,5
2017	46	15 666	14 572	6 528	23 313	682 485	6,0
2018	45	15 218	14 172	6 608	23 424	564 301	7,6
2019	46	15 206	14 319	7 295	24 130	570 292	7,5
2020	44	15 144	13 938	7 058	23 838	463 494	8,2

Note: up to and including 2003: Statistical Yearbooks of the City of Vienna, since 2004: Federal Ministry of Social Affairs, Health, Care and Consumer Protection

Source: Statistisches Jahrbuch der Stadt Wien 2021, page 106

The increase in the total number of doctors is mainly due to the increase in the number of specialist doctors, as can be seen in Table 5. The number of pharmacies is also slightly increasing (Tab. 30).

Tab. 16 Doctors and pharmacies in Vienna

year	specialist doctors	general practitioners	dentists	pharmacies
2001	2 796	1 323	902	286
2002	2 837	1 321	899	288
2003	2 930	1 352	891	294
2004	2 982	1 383	892	295
2005	3 019	1 404	882	296
2006	3 063	1 436	986	297
2007	3 108	1 424	927	299
2008	3 144	1 419	928	307
2009	3 190	1 434	925	311
2010	3 301	1 452	937	312
2011	3 331	1 468	921	314
2012	3 419	1 485	941	315
2013	3 481	1 470	942	316
2014	3 597	1 474	939	318
2015	3 631	1 458	948	322
2016	3 706	1 456	952	325
2017	3 789	1 440	959	326
2018	3 872	1 443	947	328
2019	3 976	1 456	944	330
2020	4 083	1 439	947	331

Source: Statistisches Jahrbuch der Stadt Wien 2021, page 108.

The number of cancer patients in relation to the population of Vienna is slightly decreasing, as shown in the last column of Tab.31.

Tab. 17 Incidence of cancer

year	total	men	women	population	incidence of cancer relative to the population
2001	7 354	3 632	3 722	1 550 123	0,47 %
2002	7 227	3 558	3 669	1 571 123	0,46 %
2003	7 650	3 905	3 745	1 592 846	0,48 %
2004	7 716	3 792	3 924	1 610 410	0,48 %
2005	7 747	3 815	3 932	1 632 569	0,47 %
2006	7 692	3 924	3 768	1 652 449	0,47 %
2007	7 622	3 628	3 994	1 661 246	0,46 %
2008	7 296	3 693	3 603	1 671 221	0,44 %
2009	7 261	3 605	3 656	1 680 135	0,43 %
2010	7 241	3 656	3 585	1 686 995	0,43 %
2011	7 285	3 515	3 770	1 714 227	0,42 %
2012	7 655	3 686	3 969	1 717 084	0,45 %
2013	7 135	3 644	3 491	1 741 246	0,41 %
2014	7 659	3 688	3 971	1 766 746	0,43 %
2015	7 834	4 041	3 793	1 797 337	0,44 %
2016	7 434	3 780	3 654	1 840 226	0,40 %
2017	7 322	3751	3 571	1 867 582	0,39 %
2018	6 679	3 412	3 267	1 888 776	0,35 %

Source: Statistisches Jahrbuch der Stadt Wien 2021, page 111 and own calculation

Technical infrastructure

Road traffic

Like the railroad tracks, the old main roads (later federal highways) exit the city in the shape of a star. Some of them are still named after historically important destinations (Linzer Straße, Prager Straße B3, Brünner Straße B7, Budapester Straße B10, Triester Straße B17).

The same applies to the motorways: the A1 Westautobahn, A2 Südautobahn, A4 Ostautobahn and A22 Donauuferautobahn leave the city radially. South of Vienna, the A3 motorway branches off the A2 motorway into Burgenland. The Nordautobahn is currently being extended as the A5 towards Brno to connect to the Czech motorway network. In 2007, the north-eastern motorway from the A4 to Bratislava (Slovakia) east of Vienna was opened as the A6.

The A23 Wiener Südosttangente (the busiest road in Austria) is a ring road between the A2, A4 and A22 motorways in the southern part of the city; to relieve congestion, the S1 Outer Ring motorway was built on the southern border of the city and opened in April 2006. This is to be continued east of the Danube by a motorway bypass leading to the A5 motorway; the necessary tunnelling under the Danube Floodplain Forest National Park is controversial for environmental reasons. The A1, A2 and S1 motorways are connected by the A21 motorway,

the outer ring or Wienerwald motorway, which runs outside Vienna and provides for west-east transit traffic.

In the city, the main roads start from the Gürtel, which closes off the inner districts. This six- to eight-lane road is therefore particularly prone to traffic congestion and deteriorates the quality of living due to the enormous amount of traffic. The entrances to the city are also problematic areas, especially in the west because of the Wienerwald. In the south, traffic congestion is particularly severe on the A2 and A23 motorways. Traffic on the A23 Südosttangente peaks almost every day.

Public transport

Vienna has an extensive public transport network. It consists of the S-Bahn lines belonging to the Austrian Federal Railways (ÖBB), the Badner Bahn and the Wiener Linien network (underground, trams and buses), the city airport train (CAT) and various private bus lines. Wiener Linien alone carried approximately 954.2 million passengers in 2016.

Cycling

The share of cycling in total traffic was 7.0 % in Vienna in 2016. Bicycle traffic is measured at approximately ten automatic counting stations and increased by 6.4% at these locations compared to 2015. In 2017, the network of public cycle paths, cycle lanes and cycle tracks within the city consists of approximately 1,298 kilometres, of this 53.7% is made up of cycle lanes, traffic calmed areas, residential streets, pedestrian zones, bus lanes and open bus lanes, 20.7 % is structurally separated from motor traffic and 25.5 % is made up of designated facilities (such as cycle lanes, multi-purpose lanes and cycle lanes against one-way streets).

Railway transport

Today there are two large terminals in Vienna, which mainly serve regional traffic:

- *Wien Westbahnhof as the historical starting point of the Western Railway (Westbahn),*
- *Franz-Josefs-Bahnhof in the north of Vienna as the starting point of the Franz-Josefs-Bahn.*

And many transit stations:

- *Vienna Central Station on the site of the former Southern and Eastern Railway Station as the (international) starting point of the Eastern and Southern Railway and the Central Station for long-distance traffic and with a direct connection to Vienna International Airport in Schwechat,*
- *Vienna Meidling (Philadelphiabrücke) on the Southern Railway and starting point of the Pottendorfer Linie, as well as with a connection to the Donauländebahn and via the Lainzer Tunnel to the Western Railway with the Wienerwaldtunnel and the Tullnerfeld to St. Pölten,*
- *Wien Mitte (Landstraße) on the main line between the Central Station and Praterstern, as well as with a fast City Airport Train (CAT) connection to and from Vienna International Airport,*

- *Vienna Praterstern, starting point of the Northern and Northwestern Railways,*
- *Vienna Floridsdorf (Northern Railway and Northwestern Railway),*
- *Vienna Hütteldorf on the Western Railway and suburban lines and with a line to Vienna-Meidling,*
- *Vienna Heiligenstadt on the Franz-Josefs-Bahn and with a suburban line,*
- *Vienna Stadlau with Laaer Eastern Railway and Marchegger Eastern Railway.*

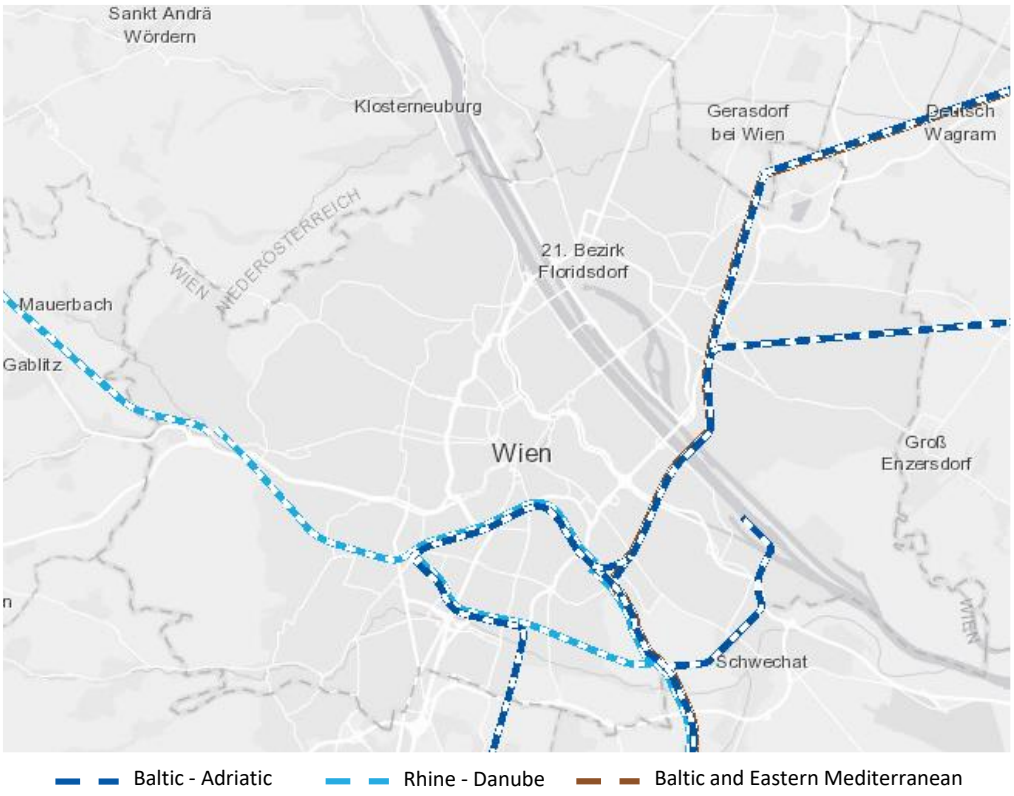


Fig.23 TEN-T Vienna railway corridors (Source: TENtec Interactive Map Viewer (2022))

The Lainzer Tunnel, the two connecting lines between the Western and Southern Railway and between the Southern and Northern Railway, as well as the central interchange station Wien-Kledering on the Eastern Railway are important for freight traffic.

The TEN-T (Trans-European Transport Network) (Fig. 23) comprises a total of 9 core network corridors, 3 of which run through Vienna: the Baltic-Adriatic, the Rhine-Danube and the Baltic-Eastern Mediterranean corridor. The TEN-T network includes rail infrastructure (conventional and high-speed), road, waterway and airport infrastructures.

Air transport

Vienna International Airport is located in Schwechat in Lower Austria, 16km southeast of the Vienna city centre. It is the home base and hub of Austrian Airlines, Eurowings Europe and EasyJet Europe and the largest employer in the eastern part of Austria. In 2017, 74 airlines connected it to 195 destinations in 70 countries.

Water transportation

The Rhine-Main-Danube Canal connects Vienna to the seaport of Rotterdam and Germany's industrial areas by water. Along the Danube there is a connection with the countries of Eastern Europe as far as the Black Sea. The planned Danube-Oder canal remains unfinished. In 2003, nine million tonnes of goods (mainly petroleum products, agricultural products and building materials) were handled at the cargo port and 1.550 ships were equipped for this purpose.

At present, passenger traffic on the Danube is almost exclusively touristic; fast boat services run to Bratislava and Budapest. Since June 2006, the fast catamaran "Twin City Liner" connects the two capitals Vienna and Bratislava three times a day across the Danube. In 2008, a second fast catamaran was purchased and has since been operating five times a day between Vienna and Bratislava

Energy supply

In Vienna, electricity generation has increased by 44% from 1990 to 2019. This trend is driven by the use of fossil fuels in thermal power plants (Fig. 24).

Between 2018 and 2019, electricity generation in Vienna increased significantly (+24 %), mainly due to an increase in the use of fossil fuels. Approximately 78.2 % of electricity in Vienna is generated in fossil fuel-fired thermal power plants. For the most part, heat is generated by cogeneration plants. The same applies to waste incineration, of which fossil fuels account for 2.1 % of electricity generation in Vienna. Among renewable energy sources, hydropower dominates with 16.2 %, followed by biomass with 2.9%. Wind power, photovoltaics and geothermal energy currently play a negligible role in energy generation (0.7 %).

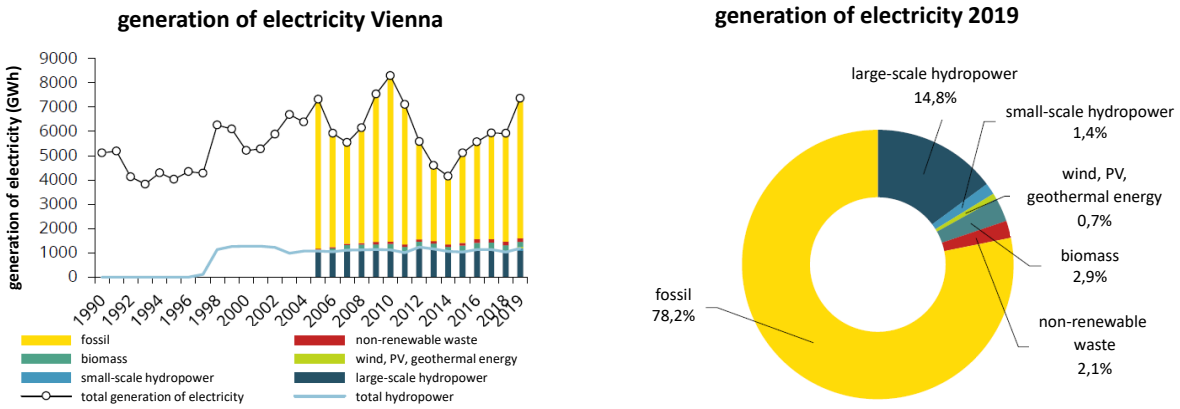


Fig. 24 Sources of electricity generation in Vienna 1990-2019 (Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019)

Economy

Environmental factors (air, water, flora and fauna)

Vienna regularly ranks first in quality-of-life rankings in major cities worldwide. In the latest „Economist Intelligence Unit Ranking“ of the best cities to live in 2022, which ranks 172 cities, Vienna was ranked in 1st place again (after falling to 12th place in 2021 as a result of the Covid pandemic).

Every year, the Mercer consultancy analyses the quality of life in more than 450 cities around the world. In 2019, Mercer once again named Vienna as the city with the highest worldwide quality-of-life, topping the list continuously since 2009. The quality and protection of the living environment is one of the relevant criteria for the evaluation in both rankings.

Atmosphere

In 2019, 21 % of the Austrian population lived in Vienna, the capital of the Federal Republic of Austria; its share of Austria's total greenhouse gas emissions was 11% (8.7 million tonnes of CO_2 equivalent) - Fig. 25.

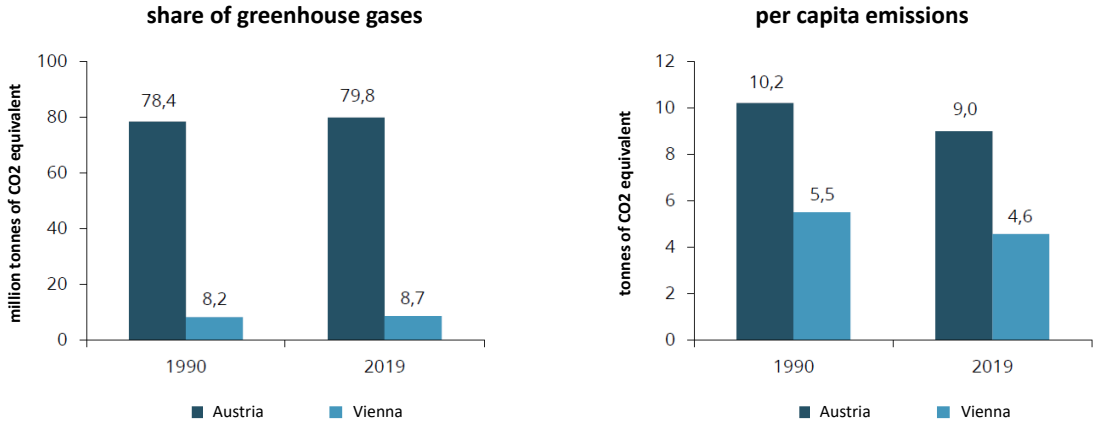


Fig. 25 Vienna's share of Austria's greenhouse gas emissions and emissions per capita, 1990 and 2019 (Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019)

Greenhouse gas emissions outside the emissions trading sector under the KSG (Klimaschutzgesetz - Climate Protection Act) amounted to 6.2 million tonnes of CO_2equivalent in 2019, which corresponds to a 12 % share of Austria's greenhouse gas emissions (excluding the emissions trading sector under the KSG).

Emission trends

In 2019, Vienna emitted 8.7 million tonnes of CO_2 equivalent, which is 5.4 % more greenhouse gases than in 1990; the increase in emissions in 2019 compared to 2018 was 3.5 %. 28 % of the greenhouse gas emissions in 2019 were generated in the emissions certificate trading sector, representing approximately 2.5 million tonnes of CO_2 equivalent. The volume of emissions outside of the emissions trading sector within the KSG has decreased by 13 % since 2005 and amounted to 6.2 million tonnes of CO_2 equivalent in 2019. Between 2018 and 2019 there was a decrease of 1.6 %.

The Fig. 26 shows the development of GHG emissions in Vienna as a whole, by individual components and sectors from 1990 to 2019.

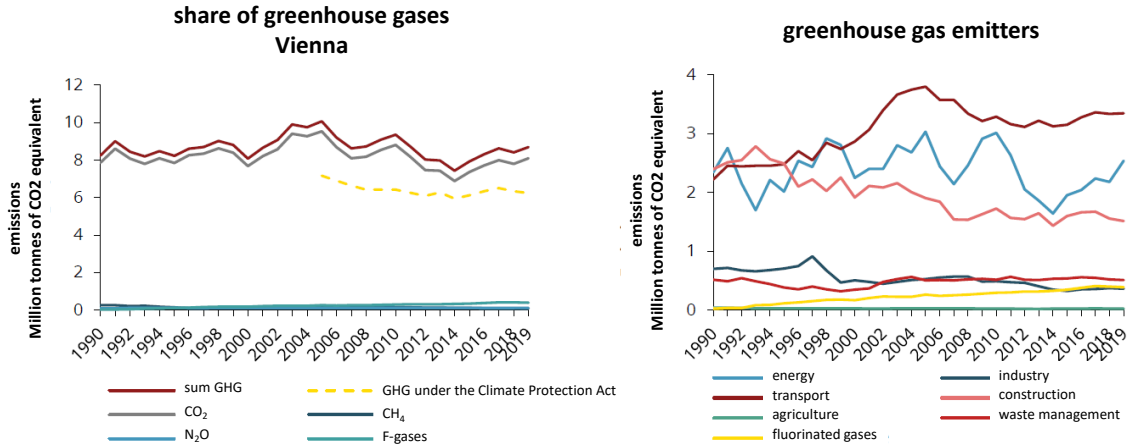


Fig. 26 Total greenhouse gas emissions in Vienna, by component and sector, 1990-2019(Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019)

From 1990 to 2019, Vienna's CO_2 emissions increased by 3.1 % to around 8.1 million tonnes. The Fig. 27 compares CO_2 emission with gross domestic energy consumption and gross regional product. In addition, fossil and renewable energy consumption is shown for 1990, 2018 and 2019.

Gross regional product increased by 49 % from 1990 to 2019 and gross domestic energy consumption increased by 18 %. The large increase in gross domestic energy consumption from renewable energy sources (+244 %) can be explained by the commissioning of the Freudenau power plant on the Danube, the Simmering biomass power plant, the increase in the consumption of biodiesel as fuel and the construction of the Pfaffenau waste incineration plant.

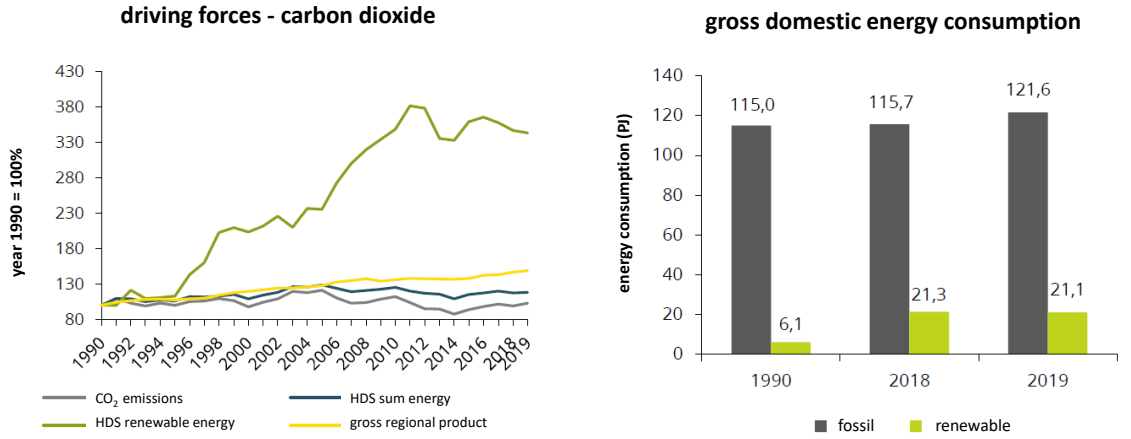


Fig. 27 CO_2 emissions, gross domestic energy consumption and gross regional product of Vienna, 1990-2019 (Source: Umweltbundesamt (2022), Bundesländer Luftschadstoff-Inventur 1990-2019)

From 2018 to 2019, CO_2 emissions in Vienna increased by 3.9 %. Total gross domestic energy consumption increased by 0.7 % (Fig. 28). Fossil fuel consumption increased by 5.1 %, while renewable energy consumption decreased by 1.0 %.

Private households

From 1990 to 2019, Vienna's population grew by 27 %. In the same period, the number of permanent residences increased by 24 % and their living area by 27 %. The number of heating days in Vienna in 2019 was 19 % lower than in 1990. Compared to Austria as a whole, the number of heating days in Vienna was 9,3 % lower in 1990 and 17 % lower in 2019.

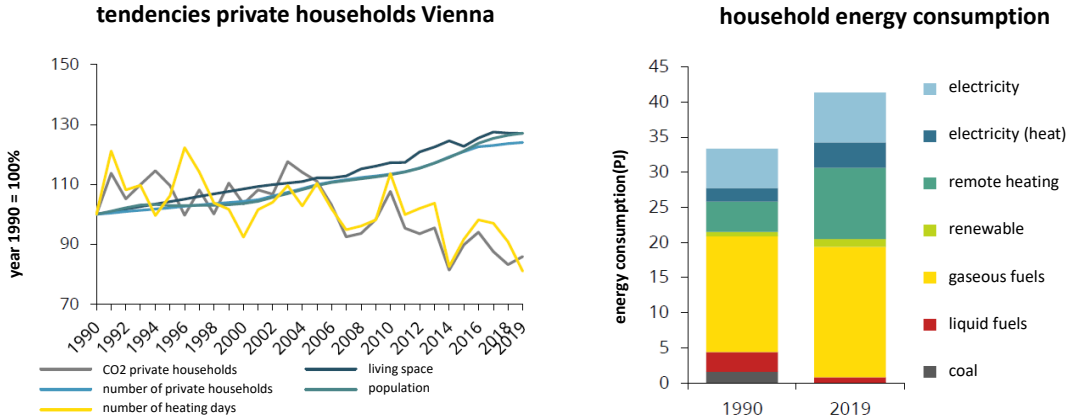


Fig. 28 Energy consumption and CO_2 emissions of private households in Vienna and their main factors, 1990-2019 (Source: Umweltbundesamt (2021), Bundesländer Luftschadstoff-Inventur 1990-2019)

The 3.2 % increase in residential CO_2 emissions in 2019 compared to the previous year was mainly due to increased use of natural gas (including the use of gas condensing boilers in new buildings) in significantly milder temperatures in 2019 (11 % decrease in heating days).

Water

Drinking water

Crystal-clear drinking water flows into Vienna from the Lower Austrian-Styrian Alps. Through high-pressure pipelines, reservoirs and the Viennese water network, households throughout the city are supplied with fresh spring water. This also contributes to the high quality of life in Vienna.

The source area of the I. Wiener Hochquellenleitung (high altitude spring pipeline) includes the Schneeberg, Rax and Schneealpe, the source area of the II. Wiener Hochquellenleitung consists of the Hochschwab Mountains. The protected areas of water resources cover a total area of 675 km². They are thus larger than the area of Vienna. An invaluable advantage of these water sources is that they are located in well-protected areas. For this reason, the waters of the mountain springs are free of industrial pollution.

Mountain spring water is characterised by a low calcium bicarbonate content and therefore has only low to medium hardness. The nitrate content is low. Due to its high oxygen content and cool temperature, Vienna's tap water always has a refreshing taste.

The inhabitants of Vienna are supplied with water from the mountain springs almost all year round. Only in times of increased water demand (e.g. in hot weather) or in the event of repairs to the pipeline supplying water from the mountain springs water is taken from the Lobau as well, which was built in the 1960s. The water is obtained from the Lobau floodplain forest area and is located in the Danube Floodplain National Park. The main advantage of this water is its short-term availability for the supply of Vienna and its quality, which is the result of good filtration and also the purifying effect of the soil.

Rivers

The Danube is the largest river in Vienna and Austria. However, there are other important watercourses in the city.

The Liesing is a river that flows through Vienna for approximately 18 kilometres. The 23rd district is named after it. The Vienna River flows through Vienna for approximately 16 kilometres. Its average water level is only about 20 centimetres. The Mühlwasser in the 22nd district is also almost 6 kilometres long. The Mühlwasser is an old branch of the Danube. Until the 1870s there was a connection between the Mühlwasser and the Danube.

Wastewater treatment plants in Vienna

Vienna has the following wastewater treatment plants:

- *Inzersdorf-Blumental: the construction of the mechanical-biological wastewater treatment plant Inzersdorf-Blumental began in 1967; it was opened on June 14th 1969.*
- *Simmering Main Sewage Treatment Plant: the construction of a main sewage treatment plant for Vienna became necessary when the city of Vienna was faced with the problem of disposing of sewage sludge produced in Vienna in the mid-1970s. The foundation stone was laid on June 5th 1978 and the plant was opened on the 30th of June 1980. The sewage treatment plant covers an area of 41 hectares.*

Terrain

Vienna lies at the eastern foot of the Northern Limestone Alps, which slope along the western edge of the Tertiary Vienna Basin and the alluvial plain of the Danube, which has shaped the landscape of the Vienna area from the Pleistocene to the present day. To the north of the city, the flysch belt extends over the Danube and continues into the Carpathian Mountains. The bedrock of the city is made up of various geological formations:

- *gravels and sands from the glacial and present-day Danube, as well as unconsolidated sediments,*
- *unconsolidated rocks, in particular Tertiary unconsolidated sediments of the Vienna Basin,*
- *solid rocks of the flysch zone and the Limestone Alps in the western part of the Wienerwald (Vienna woods).*

16% of Vienna's area is used for agricultural purposes by around 900 horticultural and agricultural enterprises. More than 5,000 hectares of this is arable land, 637 hectares are used for grapevines in 140 vineyards (Rieden), 870 hectares are used for horticulture - mainly for vegetable production. The most important wine-growing areas are Bisamberg, Nussberg, Kahlenberg and Georgenberg.

Of the approximately 115,000 tonnes of annual vegetable food production in Vienna, around 60,000 tonnes are accounted for by the approximately 40 types of vegetables grown in Vienna, mainly tomatoes, peppers, cucumbers, lettuce and radishes. Approximately one third of the vegetables consumed in Vienna are therefore grown within the city.

Flora and fauna

Vienna is the border between two floral regions belonging to the Holarctic floral kingdom. Only the westernmost part of the city, which belongs to the Vienna Woods, is part of the Central European Flora, as is almost all of the rest of Austria, while the rest of the city belongs to the Pannonian Flora, which in turn represents the westernmost part of the South Siberian-Pontic-Pannonian Flora. Apart from Vienna, only Burgenland and Lower Austria in Austria are part of the South Siberian-Pontic-Pannonian Flora, which stretches from southern Siberia through the Ukraine, Transylvania, Vojvodina and the Hungarian Plain to the eastern edge of the Alps. In addition, a sub-Mediterranean influence can be detected in Vienna. For this reason, many species grow in Vienna that are unique in Austria and deserve protection.

The Wienerwald, the Lainzer Tiergarten Nature Reserve and the Lobau - part of the Donau-Auen National Park - provide a unique environment for many animals and plants. Here are some specific numbers:

- *135 protected butterfly species,*
- *320 nesting sites for falcons,*
- *22 species of bats ,*
- *200 beavers in Lobau,*
- *19 species of fish in the Old Danube,*
- *2,400 plant species,*
- *450 species of wild bees.*

3.2 Information in relation to environmentally particularly important areas, such as proposed protected bird areas, areas of Community importance, a coherent European network of protected areas of conservation (NATURA 2000), protected water management areas, etc.

World natural and cultural heritage

The skeleton of national legislation in this area is Act No. 506/2013 amending Act No. 543/2002 Coll. on nature and landscape protection, as amended, and amending certain laws together with the Implementing Decree of the Ministry of Environment of the Slovak Republic No. 24/2003 Coll. ensure individual degrees of protection.

In total, seven sites are registered in the World Heritage List within Slovakia (SAEE, 2017). In the territory concerned, these are:

- ***within the framework of cultural heritage***
  Vlkolínec Folk Architecture Conservation Reserve, local part of Ruzomberok, also with a protection zone.

- ***within the framework of natural heritage***
  Since 2016, the European NATURA 2000 network has continued to prepare conservation projects for the declaration of territories of European importance for the Declaration of Territories of European Importance(OJ) (
  Fig. 139) not overlapping with the national system of the SPA, as well as in the process of supplementing the national list of THEEE in the light of the conclusions of the negotiations with the European Commission (EC) of 2018 on the sufficiency of the definition of the OJ. The first 6 programmes of care for protected bird areas (Veľká Fatra, Upper Orava, Kysuce, Strážovské vrchy) - (Fig. .

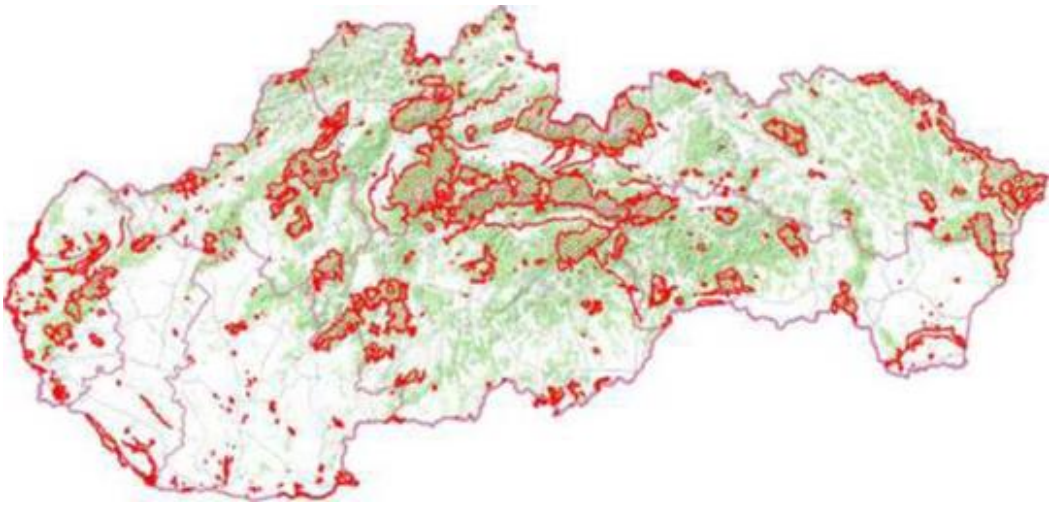


Fig. 139 Territories of European importance of natural heritage (from the foundations of the SoP SR - SAŽP, 2017)

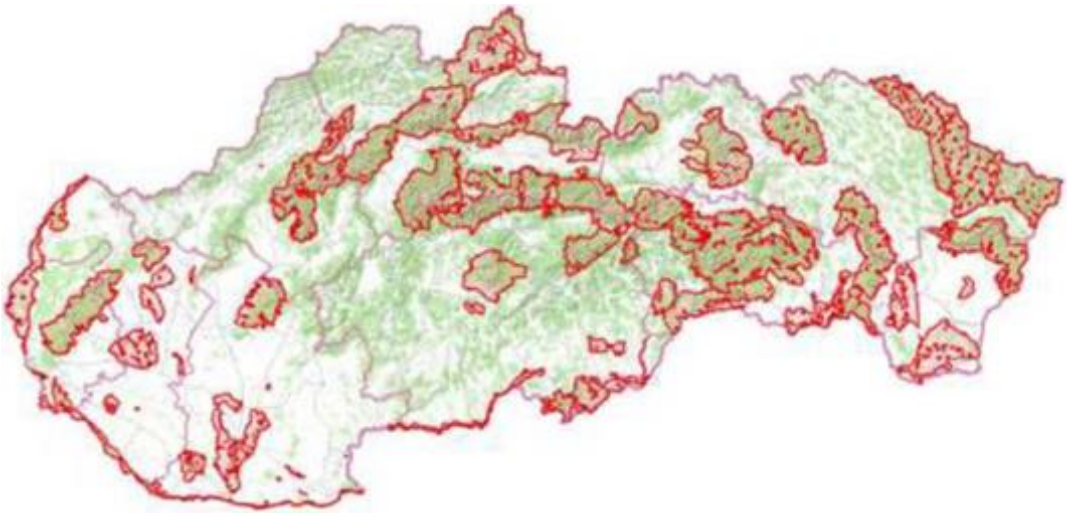


Fig. 30 Protected Bird Areas of Importance in the updated national list processed on the basis of documents from the SoP SR (from the documents of the SoP SR - SAŽP, 2017)

Environmentally particularly important areas are described in detail in the area concerned by region. However, we note that overlaps between individual areas are of a cross-border and nationwide nature, which must be taken into account in particular in the implementation of Priorities 2.2 Greener border.

3.2.1 Bratislava Region and NATURA 2000

Territorial protection - protected areas of nature

According to act No. 543/2002 Coll. on nature and landscape protection defines nature and landscape protection as limiting interventions that can endanger, damage or destroy conditions and forms of life, natural heritage, the appearance of the landscape, reduce its ecological stability, as well as the elimination of the consequences of such interventions. The protection of the ESBR landscape is based on the principle of maintaining the territorial system of ecological stability, which ensures the diversity of conditions and forms of life in the country. Territorial parts of high biological and ecological value are declared protected in one of the categories of protected areas or subject to special protection in terms of conservation or threat to habitats, while special care and regime in protected areas are provided by degrees of protection. Territorial parts of high biological and ecological value are declared protected in one of the categories of protected areas or subject to special protection in terms of conservation or threat to habitats, while special care and regime in protected areas are provided by degrees of protection. In ESBR, these are:

Tab. 32 Overview of the number of ESBR protected areas

Protected Areas	Small-scale	Large	NATURA - OJ	NATURA - SPA	Acreage [ha]
Bratislava I	4	1	1	0	25
Bratislava II	6	1	3	1	1 609
Bratislava III	1	1	3	1	3 278
Bratislava IV	11	2	11	3	3 873

Bratislava V	8	1	6	2	4 140
Malacky	24	2	38	2	44 777
Pezinok	10	1	8	1	17 706
Senec	1	1	6	2	5 263
Bratislava region	63	3	58	5	80 672

Source: Created according to the data of the SO SR, 2020

Large-scale protected areas

The area is affected by 3 large-scale protected areas - protected landscape area Záhorie, Protected Landscape Area of the Little Carpathians and Protected Landscape Area Dunajské luhy.

CHKO Záhorie

Plako Záhorie intervenes in the solved territory in its western part on the territory of the district Bratislava IV. It is the first declared lowland protected landscape area in Slovakia. It consists of two parts - northeast and west. It extends into the area mainly by its western part, which represents a landscape modelled on the activity of the Morava River with river terraces and wide river niva. The eastern part of the PLA extends into the territory of the region only a small part in the north.

In the western part of the PLA, two types of country predominate. the nive part of the so-called Dolnomoravská niva - is flat, with several living and dead river arms and with communities of floodplain forests and meadows. In addition to significant economic benefits, the extensive wet mowing meadows with the preserved natural composition of grasslands on the Morava nive are a unique demonstration of the landscape of floodplain forests and meadows, which is no longer unprecedented in Slovakia. This area with numerous dead river arms forms a unique environment and a zone of silence for many rare and protected animal species such as black stork, white stork, seagull, ash heron, wild duck, swans, thorns and more. East of this type of landscape, a slightly undulating landscape with remnants of Moravia river terraces, local islands of overt sands and smaller dunes, with mostly treated watercourses, water surfaces and settlements, continues gradually. Flooded flooded flooded meadows with a well-preserved rich flower are currently unprecedented in Slovakia. Meadows are harmoniously spread out in the neighborhood with floodplain forests, which are woody composition close to the original forests. The rugged boundaries of forests with meadows are densely interwoven with a network of old arms, river lakes and seasonal wetlands. Together, these three main elements of the landscape structure create a varied and regular flooding environment and suitable living conditions for a large range of plant and animal species. From the plantation very impressively, several square kilometers a large carpet of flamingo sounds whole-leafed. Of the animals, the most characteristic groups are water-bound, such as relict crustaceans, molluscs, fish, amphibians and many species of waterfowl. Recently, a beaver has returned to the coastal floodplain forests.

The area passes through the educational trail of the Nivou river Moravia, which runs from the faithful side of Devín Castle to the village of High near Moravia. The trail is only accessible during the non-refining of the Morava River. Interesting attractions of the educational trail are floodplain forests, river terraces of the Morava River with local islands of viaty sands and smaller dunes, dead shoulders, aluvial meadows with a well-preserved natural composition of grasslands, habitat of waterfowl (heron ash, gull laughing, buccaneer), large-moravian hradisks.

CHKO The Little Carpathians

CHKO Malé Karpaty (The Little Carpathians) intervenes in the solved territory with the outpouring of the massif of the Little Carpathians, which takes place in the direction of JZ - SV in the districts of Bratislava III, Bratislava IV and Pezinok. It is the only large-scale protected area of a viticulture character. The Little Carpathians represent the peripheral mountains of the inner Carpathians, decomposing at their south-western tip. They are nuclear mountain ranges with the specific development of crystalline, with packaging and attic units. In the territory, granitoid rocks, limestones, slates, phylithes, amphibolites and other rocks of nuclear mountains stand out.

The highest peak of the mountain range is Zarubs (768 m a.s.l.), in the territory of the Bratislava Region it is the highest peak High in the village of Kuchyňa (Kitchen) (754 m a.s.l.). Part of the territory is the Borinsky Karst around borinka castle /Pajštún/ with Zbojnícka jaskyňa (Zbojnícka Cave). In the Swimming Karst in the north of the territory there are surface karst pits /about 510 m/. The area is dominated by surface runoff of water, but there are several springs and springs. From the cultural and historical aspect, the deravá rock cave near Plavecký Mikuláš is important, which was settled by man already in the early Stone Age and the Cave Veľká furnace near Vrbov.

The territory is largely covered by deciduous forests with beech, lean ash, mountain maple and lime. From non-native trees, edible chestnut occurs here. In thermophilic grassinno - herbaceous communities there is a head of spring, golden-haired southern, nickel-flowered, cloves of Lumnitzers. Among the species that have a single occurrence here in Slovakia is a leafy tongue, ranostaj love, a rock rye.

The Little Carpathians have a species-colored animal. So far, 700 species of butterflies and about 20 species of ants have been found here. From the richly represented birds, it is possible to mention from the surroundings of the castle ruins, for example, the scalar of the colorful and the rocking of gray. Saker falcon has the most abundant occurrence in the Little Carpathians in Slovakia. Of other bird species in the area, for example, black stork nests, an ordinary beekeeper, a short-breasted snakeskin, a sprawling, mouse eared, a lelek common one.

Protected landscape area Dunajské luhy

The CHKO Dunajské luhy extends into the solved territory in its South-Western part along the Danube stream. The territory of the CHKO is situated on the Danube Plain in the geomorphological unit podunajská rovina, next to the Slovak and Slovak-Hungarian section of the Danube from Bratislava to the Grand Island in the district of Komárno. It consists of five separate parts. This unique area is all located on the recent agradation wall of the Danube. The system of agradation rollers and storage depressions with a dense network of river arms with the predominance of sedimentation accumulation was created even before the interventions in the natural hydrological regime of the Danube. The shoulder system thus created was preserved partly in the section from Dobrohošte to Sap, but nevertheless belongs to the largest inland river deltas in Europe.

Depending on the hydrological conditions along the Danube, there are forest, water, wetland, meadow and psamophilic communities in a relatively small area. In rare and endangered communities of aquatic plants of open areas of the shoulder system, protected species of white water lily, water lilies yellow, rare salvinium floating, berth floating, berth floating, lily shielded and others. Forest communities are mainly affected by higher to high groundwater levels and intermittent flooding. Depending on the height of the groundwater level, communities of willow alders, oak ash and brest ash with poplar, broest ash with hornbeam and marrow rainbows have developed here.

Zoocenosis of the Danube and adjacent luholes are influenced by the diversity of habitats from aquatic to xerothermal. Zoogeographically, the territory is under the influence of the Pannonian Lowlands, but also of the Alpine system, with which it is connected through the Danube. In particular, faunistic elements of swamp and aquatic biocenosis and floodplain forests are significantly represented here. For example, 109 shellfish species were detected in the territory, of which 22 were endangered. More than 1,800 species of beetles have been detected in the Danube Region (from Bratislava to Štúrovo). Of these, the occurrence of the hitherto unknown species Thinobius korbeli is particularly remarkable, but also several species that occur in Slovakia only in the area of the Danube shoulder system (Hydrovatus cuspidatus, Bagous bagdatensis, Donacia crassipes and others). From small mammals, there is a significant relict appearance of the Nordic vole. The area for nesting and hibernation of waterfowl is of particular importance. Rare bird species are regularly found here, such as sea eagle, small whitish and purple heron. The Slovak-Hungarian section of the Danube is an internationally important bird territory (IBA). Fish are an important component of the animal of the proposed protected area. In the Danube and its arms there is the highest number of fish species from all watercourses of Slovakia. This group of animals is among the most affected by the construction of waterworks on the Danube. Of the rare and protected species, there is a wild form of carp (sazan), dark mudguard, saber crook and spotted bull.

The entire territory of the PLA is entered in the List of Wetlands of International Importance (Ramsar Convention).

Small-scale protected area

In the solved area there are 63 small-scale protected areas - 22 protected areas, 1 national natural monument (PP), 7 natural monuments, 9 national nature reserves, 23 nature reserves and 1 protected landscape element. Some protected area extending into the Bratislava region partially extends into the territory of Trnava Region. In total, their BOD is more than 70, see: State List (ŠZ) of specially protected parts of nature and landscape, 2019.

Protected bird areas

There are 5 protected bird areas in the area that are part of the European continuous network of NATURA 2000 protected areas. Dunajské luhy (SKCHVU007), Malé Karpaty (the Little Carpathians) (SKCHVU014), Záhorské Pomoravie (SKCHVU016), Sysľovské fields (SKCHVU029) and Úľanská mokrade (SKCHVU023) are declared protected bird areas by the relevant decrees of the Ministry of Environment of the Slovak Republic within the meaning of § 26, para. 6 of Act No. 543/2002

- *Protected bird area Dunajské luhy,*
- *Protected bird area of Malé Karpaty (the Little Carpathians),*
- *Protected bird area Záhorské Pomoravie,*
- *Protected bird area Úľanská wetland,*
- *Protected bird area Sysľovské fields.*

Protected Areas under international conventions

According to the Convention on Wetlands of International Importance, in particular as waterfowl habitats (the Ramsar Convention), there are 4 territories in the area - Alúvium Rudavy, Dunajské luhy, Niva Morava and Šúr.

Nationally significant wetlands

In the solved territory there are 5 nationally significant wetlands - Hrušovská nádrž, Delay of waterworks Gabčíkovo, Jakubov - ponds, Koniarka - floodplain forest and Abrod.

Protection of plants

In the solved area there are protected trees in 28 locations, which are kept in the Catalogue of Protected Trees of the State List of Specially Protected Parts of Nature and Landscape. Protected trees are listed in district lists.

Water conservation

The protected water management area of Rye Island *extends into the area. The area of the Rye Island, due to its natural conditions, forms an important natural accumulation of groundwater and surface waters and extends on the area bounded by the Danube River on the section between the Capita town of the Slovak Republic Bratislava and the village of Palkovičovo, the canal Palkovičovo - Aszód to its confluence with Malý Dunaj (the Little Danube), the Little Danube to the rundown of Suchý potok (Dry potok), dry stream, Čierna Voda (Black Water), further connecting the canal near the village of Nová Dedinka and Bratislava,*

including the riverbeds of the above-mentioned watercourses, except for the main riverbed of the Danube.

Tab. 18 Water-related significant flows in the Territory of the Bratislava Region

Flow	Hydrological order number	In the section [km]	Border boundary in the section [km]
Small-scale canal	4-17-02-064	-	-
Raspberry	4-17-02-070	-	-
Swamp	4-17-02-084	-	-
Dry creek	4-17-02-090	-	-
Stupavský brook	4-17-02-095	-	-
Puddles	4-17-02-102	-	-
Danube	4-20-01-001	-	1708,2-1850,2 1872,7-1880,2
Vydrica	4-20-01-004		
Danube Canal	4-20-01-008		
Small Danube	4-20-01-010		
Mud	4-21-15-002		
Vine Canal	4-21-15-004		
Shura Canal	4-21-15-005		
Limbašský brook	4-21-15-006		
Black water	4-21-15-013		
Table creek	4-21-15-016		
Trnian Creek	4-21-15-018		
Steam	4-21-16-023		
Gidra	4-21-16-036		

Source: Decree of the Ministry of Environment of the Slovak Republic No. 211/2005 (Annex No. 1)

Water significant areas

The Sihoť water source is situated on an area which is also protected in accordance with Act No. 543/2002 Coll. on nature and landscape protection in a territory classified as a biocentre of regional importance, which represents an important ecosystem or group of ecosystems, which creates permanent conditions for the reproduction, shelter and nutrition of living organisms and for the conservation and natural development of their communities.

The territory of Sedločkov ostrov (Sedločkov island) is declared a nature reserve, where the highest level of protection applies. In practice, this means almost completely limiting any human activity.

VZ Petržalka - Bakniansky les, which is one of the last continuous units of floodplain forests in Bratislava's Petržalka, is located on the right side of the Danube River near the western edge of the VZ Sihoť. The level of protection applies in the locality of the II, III and IV. The protected area (CHO) is part of the area of European importance Bratislava luhy and protected bird area Dunajské luhy. The protection of this locality is extremely important, as the Bakniansky Forest is one of the most important sources for the supply of drinking water to Bratislava.

The largest and most important source of drinking water in the Bratislava Self-Governing Region VZ Ostrovné lúčky - Mokraď located on the right bank of the Danube approximately 10

kilometers from the VZ Bakniansky les has been declared an area of European importance. The site is also part of Ramsar sites and wetland sites of national importance.
Water protection is also strengthened by the proclaimed CHKO Dunajské luhy. In addition, the territory of European importance includes two nature reserves of the Danube Islands and island meadows. A possible declaration of a national park may also help to improve the current conservation status of the most valuable water resources. Žitný ostrov (The Rye Island), which is a water-economy unique from a nationwide point of view, has a special position with huge potential from the point of view of supplying the population with quality drinking water. The Rye Island region is the most important groundwater reservoir in Slovakia. The space between the Danube and Malý Dunaj (the Small Danube) is represented by a unique and unique structure with high-quality groundwater, which needs to be paid close attention in terms of qualitative and quantitative protection. Therefore, on an area of almost 1400 km^2 (of which about 220 km^2 in the Bratislava Region) the Protected Water Management Area of Žitný ostrov (the Rye Island) was declared. The declaration was implemented by means of decree of the Government of the CSF No. 46/1978 Coll. on the Protected Area of Natural Water Accumulation on Žitný ostrov (the Rye Island).
Protective zones of natural healing resources in Čilistov are affected by the solved territory according to the Decree of the Ministry of Health of the Slovak Republic No. 552/2005 Coll., which establishes protection zones of natural healing resources in Čilistov.
They are currently processed in detail for ESBR on the subject: The Programme of Economic Development and Social Development of the Bratislava Self-Governing Region for the years 2021-2027 (with a view to 2030) and the Report on evaluation of the strategy paper.

3.2.2 Trnava Region and NATURA 2000

The ÚPN VUC Trnava Region was prepared in 1998, its binding part - Regulation of the Government of the Slovak Republic declaring a binding part of the zoning plan was published in the Journal of Laws under number 183/1998. The following tables produce an overview of the elements of the skeleton of the territorial system of ecological stability in the Trnava Region - biocentres, biocorridors of supra-regional importance within the meaning of the G-NÚSES SR from 1992, the valid ÚPN VUC Trnava Region (1998) and R-ÚSES of individual districts. The level of processing of R-CSES for individual districts is different. Biocentres and biocorridors located at the interface of two or more districts are listed in each district.

***Elements of THEEC by district** (Tab. 19 to Tab. 25).*

Tab. 19 Galanta District

Category	*Title*	*Core*
Biocentre of supra-regional importance	*NRBc Dubník*	*NPR Dubník*
	NBC Uľanská wetland (according to ÚPN VUC)	*CHA Tamock wetland, PP Pustuľanská wetland, PP Caddská salting (all proposed SPA)*
	Abraham forest	

The biocentre of the regional Importance	Bishop's Forest, Orchid Meadow, Sitting Reeds	
	Family	
	Blade	
	Hrušovský forest	
	Chotarar	
	Kitten Grove	
	Feline overflow	
	Black Water Meanders and Lower-Aromatic Lake	
	Bridgeovianske spillways	
	Dead Arms of Black Water	
	To Garažda and Wet Meadows	
	Sládkovičovská dune and Vince Forest	
	Shoporian dead shoulders and Masquerade	
	Gravel	
	Gravel spillways	
	Tomášikovsky Spillway and Forest, Water Mill and Šoriákoš	
	Vineyard parties	
Biocoridor of supra-regional importance	River Váh	
	The flow of the River Little Danube with its surroundings	
	Foothills of the Little Carpathians	
Biocoridor of regional Importance	Black water	
	Derňa	
	Dudváh	
	Dudváh and Gidra	
	Spring	
	Novy Kálnik Stream	
	Šárd and Salibský Dudváh	

Tab. 20 Dunajská Streda District

Category	Title	Core
Biocentre of supra-regional importance	NRBc Číčovský luh	NPR Číčovský dead arm
Biocentre of regional importance	Danube lure	
	Small Danube	
	Small Danube-Klátovské arm	
	Fence and Bel Canal	
	Creek wetland	
	Číčovský luh	
	Boheľovské ponds -Sarkan (proposal)	
Biocoridor of supra-regional importance	Octarian Canal-Cilic Creek	
	The flow of the River Danube with its surroundings	
	The flow of the River Little Danube with its surroundings	
Biocorrid of regional importance	Boheľovské ponds -channel Dobrohosti - Kračany	
	Gabčíkovo-Topoľníky Canal	

	Gabčíkovo-Topoľovec Canal, Topoľovec-Vrbina Canal	
	Jurova-Sarkan Canal	
	Old Klátov canal- Pens	
	Komárno Canal	
	Leathers following the Chotársky Canal- Cilic Canal	
	Vieska - Hawks Kľačany - Mliečany Channel	
	Boheľovské ponds -Sarkan (proposal)	

Tab. 21 Hlohovec District

Category	Title	Core
Biocentre of supra-regional importance	NRBc Dubník	NPR Dubník
The biocentre of the regional Importance	Vineyard parties	
	Grandfather's Pit (proposal)	
	Háje and Mlynské (proposal)	
	Young grove -pheasant (proposal)	
	Peasants (proposal)	
	Strkoviská in Aluvia Váh (proposal)	
	Great Mount Fáneš	
Biocoridor of supra-regional importance	River Váh	
Biocoridor of regional Importance	Dudváh	

Tab. 22 . Piešťany District

Category	Title	Core
Biocentre of regional importance	-	
Biocentre of regional importance	Chtelnica Valley	
	Silver Valley	
	Grandfather's Pit (proposal)	
	Nadálky	
	Sunbathing and Leachings	
	Strkovská in Alluvia Váh	
Biocoridor of supra-regional importance	River Váh	
	Ridge system of the Little Carpathians	
Biocoridor of regional Importance	Dudváh	
	Holeška	
	Stroller Creek	
	Lopašský brook	
	Silversmith	

	Sterus Creek	

Tab. 23 Senica District

Category	Title	Core
Biocentre of supra-regional importance	NRBc Bor	NPR Red Pond, NPR Zelienka
	NRBc Grate	PR Kamenec, NPR Doorframes (according to UPN VUC)
	NRBc Zámčisko	CHA Zámčisko (proposal)
	PBC Moravian-Dysij luh (according to UPN VUC)	PR Bôrová, PR Ducks (suggested BY CHU)
	NBC Gbel forest (by UPN VUC)	-
The biocentre of the regional Importance	Sekule-sands	
	Ciglad	
	Cold water	
	Jasenácke	
	Sranek	
	Cerová Peatlands	
	Puddles	
	Crushes	
	Manor House Mountain	
	Creations at Hradiste	
	Long top	
	Lipovec-Hlaviny (proposal)	
Biocoridor of supra-regional importance	The Niva of the Morava River	
	Leading through the massif and the edge of the White Carpathians and passing through sudoměřický stream to the morava niva	
Biocoridor of regional Importance	Nivy river Myjava	
	Lakšársky brook	
	Rudava	
	Myjavská Rudava	
	Reeds	
	Orevka	
	leading through the Valley of Uninskied Creek	
	Chimneys	
	Teplica	
	Leading through the Mountains of the Little Carpathians - forest-bezlesia ecoton	

Tab. 24 Skalica District

Category	Title	Core
Biocentre of supra-regional importance	Gbel forest (by R-USES NRBc)	-
	Rocky Hill (by R-USES NRBc)	PR Slimmed coal
	NRBc Zámčisko	CHA Zámčisko (proposal)
Biocentre of regional importance	Holíč Forest	
	Pinwheel	

Biocoridor of supra-regional importance	Morava River	
Biocorrid of regional importance	Chvojnica	

Tab. 25 Trnava District

Category	Title	Core
Biocentre of supra-regional importance	Čachtic Carpathians (by R-USES - NRBc) -part	
	NRBc Grate	PR Kamenec, NPR Doorframes
The biocentre of the regional Importance	Beechová (proposal)	
	Doorframes	
	Klokoč	
	Black Rock	
	Valley Hlboče (proposal)	
	Slopy-Good water	
	Orešany	
	VN Boleráz	
	Droughts over Parna (proposal)	
	Dry Grove (proposal)	
	Trnava ponds (proposal)	
	Trnava Park (proposal)	
	Boleráz (proposal)	
	Upper Krupá-Upper Grove	
	Podhájaj	
	Brestovianske groves	
	Voderady (proposal)	
	Vlčkovský grove	
	Intersection Grove	
	Spurs	
	Castle Park Dolná Krupá (proposal)	
Biocoridor of supra-regional importance	River Váh	
	Ridge system of the Little Carpathians	
Biocoridor of regional Importance	Leading around Trnava	
	Tringles	
	Gidra	
	Steam	
	Blava	
	Dudváh	
	Krupian Creek	
	Derňa	
	Podmalokarpatský	
	Ronava	

Protection of biological diversity

In fulfilling the tasks arising from the Convention on Biological Diversity (CBD) and the EU Biodiversity Strategy 2020, the ŠOP SR expert was nominated to the CBD Coordinating Committee for the Global Plant Protection Strategy and participated in its 6th meeting as well as the Conference Global Partnership for Plant Protection 2018 (Cape Town). Attendance at the European expert meeting for the preparation of the meeting of the CBD Advisory Body on Scientific, Technical and Technological Affairs of the SBSTTA and subsequent its 22nd meeting (Montreal) was ensured. Active participation in the 14th Meeting of the Conference of the Parties (COP14) CBD, the 9th Meeting of the Parties to the Cartagena Protocol and the 3rd Meeting of the Parties to the Nagoya Protocol in Egypt were also ensured. During the meetings themselves, 38 decisions were approved, including decisions to revise the Aichi biodiversity targets, the process of preparing the post-2020 Global Biodiversity Framework (Post-2020), as well as global biodiversity outlook. Within COP14, ecological connectivity was presented in the Carpathians and Central Europe. 2 meetings of the Biodiversity Task Force in 2018 were prepared and implemented. The documents for the Ministry of Environment of the Slovak Republic for evaluation of the fulfilment of the tasks of the Action Plan for the implementation of measures resulting from the Updated National Biodiversity Protection Strategy for 2020 were processed, as well as the documents and proposal for the 6th National Report on the Implementation of CBD. The basis for environmental development scenarios for biodiversity by 2030 with a view to 2050 has been processed - also using COP14 CBD outputs. Cooperation was carried out on various documents, strategies and backgrounds related to mainstreaming biodiversity to other areas of environment as well as other sectors (e.g. climate change, drought fighting, flood protection, development aid, agriculture, forestry, fisheries, tourism, health protection and others). Preparation of the basis for the global strategic framework for the protection of biodiversity after 2020 (Post 2020) has also already started, as well as the preparation of the new common agricultural policy after 2020. Work was also under way on new activities, particularly concerning the protection of bees and pollinators, as this is a relatively new but very important conservation agenda for nature, biodiversity and landscape. All outputs so far, as well as other backgrounds, will already be part of the new strategy and action plan for the protection of biodiversity in Slovakia after 2020.

Protected trees

In Slovakia, the protection of old trees began to pay close attention, especially in the second half of the 20th century, when the most important trees were registered. In October 1955, the Slovak National Council adopted Act No. 1/1955 on state nature protection, according to which significant trees and their groups could be declared a protected natural creation or a protected natural monument. Forty years later, on 1st January 1995, the Act of the National Council of the Slovak Republic No. 287/1994 Coll. on nature and landscape protection entered into force. According to Section 34 of that law, culturally, scientifically, ecologically, landscaped or aesthetically extremely important trees or groups thereof, including tree trees, could be declared protected trees. The same strategy for the protection of important trees was adopted by the new Act on nature and landscape protection - ***Act No. 543/2002 Coll.*** *- with effect from 1st January 2003.*

The catalogue of protected trees was created in 2002. It is the current output of the database of the state list of protected trees and was intended not only for the lay but also for the professional public. According to experience to date, the outputs from it are used for its content not only by the state administration of nature protection bodies, regional departments of the professional nature protection organization, but also by scientific institutions, students of schools of various grades, NGOs or other interest groups and entities.
Protected trees have been identified in the solved ground: ***Trenčianske ginka*** *- two-lobed ginkgo (Ginkgo biloba L.). Reason for protection: Scientific and research, educational and cultural significance. Exotic and developmental old needles - the largest in the district of Trenčín. Year of declaration: 1990, protection zone 2nd degree of protection.*

Territorial protection

National system of protected areas
One large-scale protected area extends into the solved environment: the Protected Landscape Area of Biele Karpaty (the White Carpathians). From the small-scale protected areas, the following areas were identified in the solved area: Natural Monument (PP) Opatovská jaskyňa (Opatovská Cave), Nature Reserve (PR) Trubárka, Nature Reserve (PR) Zamarovské jamy (Zamarovské pits), Nature Reserve (PR) Bindárka, Nature Reserve (PR) Ostrý vrch (Sharp Moountain), Nature Monument (PP) Ječanka, Nature Reserve (PR) Prepadlisko (*Forfeiture).*

European System of Protected Areas
Protected bird areas (CHVÚ/SKCHVU) have been declared protected on the basis of the criteria laid down in Council Directive 79/409/EEC of 2 April 1979 on the protection of wild birds (Birds Directive). The National List of SPA was approved by the Government of the Slovak Republic by resolution No. 636/2003 on 9 July 2003. In 2004, the process of creating decrees and care programmes for individual SPA began. By Resolution of the Government of the Slovak Republic No. 345/2010 of 25. 5. 2010, the National List was amended and amended. 5 new territories (Čergov, Chočské vrchy (Choč Mountains), Levočské vrchy (Levoča Mountains), Slovenský raj (Slovak Paradise) and Špačinsko-nižnianske polia (Špačin-Nizhnianske fields) have been added to the list and the total number is 41 CHVÚ.

No protected bird area shall be affected by the area being addressed.
Territories of Community importance (ÚEV/SKUEV) are sites designated as protected areas on the basis of the criteria laid down in Council Directive 92/43/EEC on the protection of natural habitats, wildlife and plants (Habitats Directive). The national list of these territories was approved by the Government of the Slovak Republic by resolution No. 239/2004 on 17 March 2004 and was issued by Decree of the Ministry of Environment of the Slovak Republic No. 3/2004-5.1 of 14 July 2004 and sent for approval to the European Commission (EC). On 25. 10. 2017, the Government of the Slovak Republic approved the second update of the national list of territories of European importance, thereby fulfilling Slovakia's obligation of EU membership. The 473 protected sites with valuable habitats and species of Community

importance submitted to the European Commission in 2004 and 2011 will be added to the 473 protected sites with an area of 31 656 ha. The total area will thus be increased from 11.9% of the area of the Slovak Republic to 12.6 %.
Two territories of European importance intervene in the solved territory: SKUEV0397 Váh near Zamarovce, SKUEV0575 Prepadlisko (Forfeiture).

Territorial system of ecological stability
Elements of the ÚSES were identified in the solved territory on the basis of the documentation of the ÚPN VÚC of the Trenčín Region (UP project Bratislava, 11/2018), the Regional Territorial System of Ecological Stability of the District of Trenčín (SAŽP Banská Bystrica, 2013) and the Zoning Plan of the City of Trenčín, as amended no. 1 - 3 (AUREX Bratislava, 10/2018).

The following elements of the ÚSES have been identified in the area under resolution:
RBc Krasín (30)
RBc Zamarovské jamy (Zamarovské pits) - Nemšová (32)
RBc Trutrubárka(33)
RBc Považský Inovec (40), Svinnica (41)
NRBk River Váh RBk Chocholnica RBk Drietomica
RBk terrestrial connects RBc (32) and RBc (33)
RBk Ječanka RBk Tepličká - proposal
NRBk terrestrial connects RBc (40), (41) and NRBc Židzavník - Baske Local Biocentre
LBC 1 – Šerený vrch (Fencing Hill): Complex of preserved, valuable forest stands of Biele Karpaty (the White Carpathians)
LBC 2 – Nová hora (New Mountain): Mosaic of mowed orchards, meadows, meadows, meadows, meadows, boundary, draws and area plantations of trees, creating a habitat for a significant number of species of animals. Site highly rated in terms of vertebrate occurrence.
LBC 3 – Stará hora (Old Mountain) – Rúbanisko (Glade): Quite extensive complex of forest stands, wetlands on the niva of a small watercourse, orchards and meadows.
LBC 4 - Vineyards: The most extensive mosaic of orchards, meadows, meadows, meadows, meadows, meadow eels, boundary, draws and plantations of trees, creating a habitat for a significant number of species of animals. A site highly evaluated in terms of vegetation, important for several groups of animals.
LBC 5 - Gardianka: Forest complex outside continuous forest stands, significant especially in terms of the occurrence of vertebrates.
LBC 6 - Skalka: Preserved forest stands on limestones, stands are protective in nature. This includes rock stands on Skalka with the appearance of several rarer species.
LBC 7 - Zamarovské jamy (Zamarovské pits): Nature reserve, valuable plant and animal pricing, bound to aquatic ecosystems and lithoral band.
LBC 8 - Trenčiansky luh (Trenčín luh): Soft floodplain forest, lithoral vegetation on paved deposits of the River Váh, providing the environment mainly to waterfowl. Important arachnological site.

LBC 9 - Biskupická sihoť (Episcopal sihou): Grass-water vegetation in poor habitats of gravel deposits of the Váh River, significant for some groups of invertebrates. LBC 10 - Upper siehou: Grasslands of the Váh River, scattered plantations of trees and gravel pits in the initial stages of overgrowth.

LBC 11 - Halalovka: Forest cover, isolated from continuous forests, with good composition of woodland and relatively high representation of brekyňová partridge. On the other side of the road, wetland communities in the lateral valley and terrain reduction follow the forest cover - high sharpening plantations, willow ash and floodplain trees.

LBC 12 - Brezina: Quite extensive older forest stands with predominantly natural composition, part of the site are also grassland communities with the appearance of endangered plant species.

LBC 13 - Kočina Hora: Preserved forest stands of Strážovské vrchy (Strážovské Mountains), meadow communities with the occurrence of a forest wind farm (Anemone sylvestris), wetland communities of bacon alders on the nive of Kubrický potok (Kubrický brook) and wet nive herbal communities in the valley of the tributary of kubrický brook.

LBC 14 – Pod Krošňovcom (Under Košňovec): System of limits on slopes, mowing orchards and abandoned and overgrown meadow stands, location species-rich, habitat of a significant number of animals.

LBC 15 - Radochová: Complex of valuable forest stands, well preserved.

LBC 16 – Pod hôrkou (Under the hill): Oak forest stand with the appearance of pale build-up (Orchis pallens) and forest cover following species-rich eels of meadow stands with the appearance of rare and endangered plant species.

LBC 17 - Baranová: Protective forests on steep, south-facing slopes, marrow dunes and pulp pulp. Valuable, well-preserved alder floodplain forests on the nive of Opatovský potok (Opatovský brook).

Proposed biocentre of local importance

LBC-N 1 - Gardianka: The part, designated as a proposed local biocentre, forms one complex with a dedicated local biocentre. However, the quality of forest stands is of lower quality and some interventions are needed to improve the condition of these stands.

LBC-N 2 - Urbárska sihoť : Measures under the proposed vegetation adjustments, watercourse restoration and reclamation of the city's waste dump to create a territory that will not evolve towards ecologically valuable ecosystems.

LBC-N 3 - Nozdrkovske gravel pit site: Gravel pits closer to the village of Nozdrkovce has properties, allowing it to be classified in this category today. We propose to address the territory in such a way that, even after the eventual resumption of gravel extraction, the values of the site will be preserved and the end of the extraction and subsequent modifications of the territory so as to benefit the territory - appropriate final adjustments of water bodies, planting of woody vegetation, further care of the territory.

LBC-N 4 - Lower meadows: At the confluence of Soblahovský and Lavičková brooks/ streams to plant an area of shrubs and low-growth trees.

Biocoridor of local importance
Biocorridors of local importance are mainly tied to watercourses and ecotons on the edges of forest stands.
LBK 1 - Bukovinský potok (Bukovnský creek) above the highway
LBK 2 - Orechovský potok (Orechovský brook)
LBK 3 - Bukovinský potok (Bukovnský stream) with tributary under the highway
LBK 4 - Lavičkový potok (Bench creek)
LBK 5 - Soblahovský potok (Soblahovský brook)
LBK 6 - Hukov potok (Hukov Creek)
LBK 7 - Brezina - meadows under Košňovec
LBK 8 - Kubrický potok (Kubrick Creek)
LBK 9 - tributary of Kubrický potok (Kubrický brook)
LBK 10 - Opatovský potok (Opatovský brook)

The following biocorridors may also be included among the local biocorridors:

- *Bradlo: biocoridor, bound to the distinctive geomorphologic and geological phenomenon of the bradl band, in this zone there is also a different use of the territory with a larger number of ecotons.*
- *Kostolná - Vinohrady - Hrabovka: biocoridor, tied like the previous one to formation interfaces, in the territory are also part of the mosaic areas of Vinohrady, Stará and Nová hora (Stara and New Mountains).*
- *Opatová - Kubrická dolina (Kubrická valley) - Soblahov: biocoridor, bound to long formation interfaces of the forest - bezlesie type, leading through the Váh Valley.*

Proposed biocorrid of local importance
LBK-N 1 - Above the highway,
LBK-N 2 - Zlatovský potok (Zlatovský brook),
LBK-N 3 - Brezina - Halalovka.

Gene pool-related sites of flora and fauna
Genofond-significant areas and areas with preserved natural or nature-related phytocenosis and zoocenosis are such biologically and ecologically significant segments of the landscape which, among other functions, are of particular importance for ensuring species and landscape diversity, preventing aquatic and wind erosion, maintaining water quality, regulating drainage ratios, creating refugiates for many plants and animals, and creating buffer zones for many plants and animals. They therefore include rare natural and naturally close habitats in terms of protection of the gene pool as well as territories that fulfil the balancing function (dampening the negative consequences of human activity), protection of selected parts of the landscape and protection of the landscape system against negative degradation and destabilization processes.

In the following text, we list the gene pool-related sites of the territory, which were defined within the framework of the documentation of the MÚSES (Zoning Plan of the City of Trenčín AUREX Bratislava, 10/2018).

GL 1 - Town Hill - Drieňová. Complex of forest stands of bradl zone, meadows, meadows, meadow eels and limits

GL 2 – Pramenisko (Spring). Spring, located in the peripheral part of the meadow complex

GL 3 - Banks of Bukovnský brook and floodplain forest. Natural section of the watercourse with wide shore cover

GL 4 - Úhor v Zlatovskej doline (outfield in Zlatovská Valley). Extensive outfield after permanent grasslands at the stage of overgrown with shrubs

GL 5 – Nová hora (New Mountain). Extensive complex of mowed and overgrown orchards, boundaries and surface plantations of trees

GL 6 - The niva of the watercourse in the Rúbane Region. Well-developed floodplain on the nive of a small watercourse

GL 7 – Stará hora (Old Mountain). Complex of overgrown orchards with meadow eels.

GL 8 - Vineyards. Extremely extensive complex of grassland, mowed orchards, limits, meadow stands of xerothermal character, surface vegetation shrubs and forestlands.

GL 9 - Gardianka. Forest complex outside continuous forest stands, bushes and oak beuches

GL 10 – Orechovský potok (Orechovský brook). Part of Orechovský brook, located in forest complexes

GL 11 - Skalka - Kláštorisko (Monastery). Complex of forest stands, mostly classified in the category of protective forests.

GL 12 - Park in Zablati.

GL 13 - Park in Zlatovce. The park in Zlatovce is dominated by a group of massive platoons of western

GL 14 – Váh River. The most important natural ecosystem in the territory, its natural dominance. An important habitat for the animal, the migratory route of birds and an important biocoridor for the spread of new species from the northern regions to the south and vice versa.

GL 15 - Zamarovské jamy (Zamarov pits). Nature reserve, declared for the protection of water, lithoral and floodplain communities of the Váh River nive and their bound zoocenosis.

GL 16 - Trenčiansky luh (Trenčín luh). Territory in the interhage area of the Váh River, there are stages of overgrowth of water stations from the initial stages to the floodplain forest.

GL 17 - Biskupická sihoť (Episcopal sihoť). Gravel deposits, thinner overgrown with dry and thermophilic vegetation. Location, significant from the point of view of invertebrates.

GL 18 - dam of the Episcopal Canal. Regularly mowed the of the canal. The occurrence of plant communities of a meadow nature.

GL 19 - Soblahovský potok (Soblahov brook). A well-preserved section of the watercourse with a natural trough, well-developed shore stands with a natural structure.

GL 20 - Gravel pit near Nozdrkovce. Gravel with the appearance of endangered plant species.

GL 21 - Wetland near Halalovka. Wetland in the valley and along the road behind the settlement South.

GL 22 – Forest Halalovka. Isolated, relatively large forest cover near the South.

GL 23 - Meadow under Brezina. Unused meadow vegetation, species-rich with a natural species composition.
GL 24 - Boundary under Brezina. The limit and the subsequent eel of the former meadow plantation.
GL 25 - Brick house near the South. Former brick house, currently only the torso of the dust wall and its immediate surroundings are preserved. Location threatened by construction.
GL 26 - Boundary on the edge of the Vašíčková orchards. Limit with grassland.
GL 27 - Brezina. Extensive areas of the urban forest park, consisting of older plantations, classified among the purpose-built forests.
GL 28 - Hradný vrch (Castle Hill). The site, known as a habitat of rare vegetation from the last century.
GL 29 - Rocks above the settlement Pod sokolice. Vegetation, typical of rocks and debris on the limestone bedrock.
GL 30 - Meadow outfield above the cemetery. Meadow outfield with a natural species composition.
GL 31 - Jelšina at Kubrická kyselka (Alders at Kubrická acid). Wetland location on a fairly wide nive of Kubrický potok (Kubrický brook).
GL 32 - Niva of brook near the local part of Kubrá. Moistomile, species-rich moist meadow phytocenosis.
GL 33 - The limit above the overgrown pasture in Kubranská dolina (the Kubranská Valley). Wide, species extremely rich limit.
GL 34 - Limits on the edge of the forest and overgrown meadow outfield. The site is extremely species-rich, encompassing a system of limits and abandoned, unused permanent grassland.
GL 35 - Limit. Extremely species-rich limit with an unusually high number of bushes.
GL 36 - Forest and overgrown slopes near part of town Kubrica. Sparse forest communities and meadows in a rocky habitat, a noticeably thermophilic composition of the herbaceous floor.
GL 37 - Wetland near Kubrica. Surface wetland on the watercourse of the Kubrica watercourse.
GL 38 - Kubrická dolina - Trubárka (Kubrická Valley – Trubárka). The conclusion of the Kubrica Valley with preserved forest ecosystems.
GL 39 - Meadow outfield. Species-rich meadow vegetation with a natural species composition.
GL 40 - Limits, meadows and their outfield under Košňovce. Slope with a set of limits, meadows and meadow outfield, small-scale orchards.
GL 41 - Border on the slope of the terrace. Wide limit on the terrace of the Váh River, a significant part occupied by grass-water meadow outfield.
GL 42 - Pod Hôrkou(Under the Hill). Extensive eel after permanent grasslands, on part of the site there is an orchard and forest cover.
GL 43 - Horné Žilačky (Upper Žilačky - Cottages. Slope wetland between the cottages.
GL 44 - Opatovská dolina - Baranová (Opatovská Valley – Baranová). Well developed forest stands on the nive of Opatovský brook. Territories protected under international conventions.

Within the framework of international conventions, several important treaties and conventions apply on the territory of Slovakia, which aim to significantly preserve the world

heritage on Earth. According to them, protected areas and sites that are not a category of protected area according to Act No. 543/2002 Coll. are earmarked, but form an important basis for the development of science and presentation of nature protection abroad. These territories may also belong to the national network of protected areas or to the proposed European continuous network of NATURA 2000 protected areas.

Since 1 January 1993, the Slovak Republic has been a regular contracting party to the Ramsar Convention (as part of the Czecho- Slovak Federal Republik ČSFR since 2.6.1990). By joining this convention, Slovakia is committed to maintaining and protecting wetlands, such as regulators of water regimes and habitats supporting characteristic flora and fauna. Wetlands are defined by convention (Art. 1.ods.1) as "territories with marshes, salts and waters natural or artificial, permanent or temporary, standing and running".

There are no wetlands of international or national importance in the area. Wetlands of local and regional importance have been identified according to the documentation of Mokrade SR(Wetlands of SR) (Slobodník, Kadlečík, 2000).

<u>Locally significant wetlands</u>

Wetlands of local importance include smaller sites affecting the immediate surroundings, with a concentrated occurrence of common species of plants and animals bound to wetlands. These also include wetlands of local hydrological significance and sites important for their eco-stabilization function, such as amphibian hatcheries, sites significant in fish production, etc.

- *Pekelná dolina (Hell's Valley), South - East from the village of Soblahov (cadastral territory of Soblahov),*
- *Enclave Trenčianska Teplá (cadastral territory Trenčianska Teplá),*
- *Trenčín luh (cadastral territory Trenčín),*
- *Trenčín garbage dump (cadastral territory Trenčín),*
- *Depo Trenčianska Teplá (Depot Trenčianska Teplá (cadastral terr. Trenčianska Teplá),*
- *Kačák (cadastral territory Zamarovce),*
- *Fuchsove jamy (Fuchs pits) (cadastral territory Zamarovce).*

<u>Regionally significant wetlands</u>

The category of wetlands of regional importance includes sites of different sizes with more significant hydrological, biological and ecological influence of the surrounding area (at least several municipalities). We also include sites of the occurrence of important protected and endangered species of fauna and flora. Protected areas, areas of atypical or, conversely, characteristic of a given region (district, region, geomorphological unit) are also regionally significant. These include important habitats, and breeding sites for wetland fauna.

- *Bindárka, valley from South -West from the village of Soblahov (cadastral territory Soblahov),*
- *Prepadlisko (Kostolná-Záriečie),*
- *Zamarovské jamy (Zamarovské pits) (cadastral territory Zamarovce),*
- *Trenčianske kaskády (Trenčín cascades) (Kostolná-Záriečie).*

Likely development should the Programme not be implemented

Depending on the locations, the proposed measures will also improve and worsen the situation, even if maximum measures are taken to protect biota and biodiversity. Negative impacts can be expected during the construction and reconstruction of roads and other infrastructure. Overall, it is very difficult to estimate the impact on biota around major communications in the forward-looking periods at zero variant. The implementation of the Strategy will, on the one hand, significantly reduce traffic intensities in the built-up areas, but this will be compensated on the roads that take on this burden. And the same is true of the effects on the surrounding biota. Unless the Strategy is implemented, there will be such a degree of greening of the city and surrounding settlements, and in particular there will be no conditions for restoring biodiversity within the built-up areas.

3.2.3 Lower Austria and NATURA 2000

Lower Austria is home to a large number of nature reserves and natural monuments. In addition to two national parks, there are 20 nature parks and 29 protected landscape areas.

Of these, Lower Austria has selected a total of 36 Natura 2000 sites. Natura 2000 is a pan-European ecological network of more than 26,000 protected areas in the EU and the core of European nature conservation policy. Its aim is to protect biodiversity by conserving natural habitats and wildlife. The legal basis for this pan-European network of protected areas is two EU Directives: the Birds Directive and the Habitats Directive. In Lower Austria, 20 sites have been selected in this way under the Habitats Directive and 16 sites under the Birds Directive. These 21 Natura 2000 sites cover a total of approximately 23 % of the state's territory.

Natura 2000 region and National Park Donau-Auen (Dunajské záplavové oblasti-Danube floodplains)

The stretch of the Danube between Vienna and the state border at Hainburg is, together with the narrow Wachau valley, the last free-flowing stretch of the Danube in Austria. The National Park Podunajská nížina (Donau-Auen) thus protects one of the few large and ecologically largely untouched floodplains in Europe over an area of 93 km².

The diversity of its habitats allows for the occurrence of a huge diversity of often endangered and rare plants and animals. Beaver and bog turtle, kingfisher and golden eagle, black poplar and grape vine, as well as many species of orchids are just a few of them. Národný park Dunajská lužná oblasť (The Danube Floodplain National Park) is also a natural flood control area, guarantees quality drinking water sources and acts as a “green lung” and climate regulator in the region. In total, there are more than 5 000 animal species and more than 600 plant species in the area.

Natura 2000 region and National Park Thayatal

The Dyje River (Thaya River) flows through the middle of a gorge in Austria's smallest national park. In addition to its biodiversity and natural beauty, the Thayatal is of particular importance because it is still largely untouched.

This nature reserve connects the Czech Republic and Austria by a state border. The cold and humid Atlantic climate mixes with the last foothills of the dry Pannonian climate on the slopes of the valley. Gentle slopes alternate with steep rock walls, creating ideal conditions for a wide variety of plant and animal communities to live in a very limited space. More than 90% of the area of the national park is covered by forests. In Austria, the national park includes 26 kilometres of river course together with 1 300 ha of adjacent habitats.

Natura 2000 region Steinfeld

The European Protected Areas "Steinfeld" (Flora - Fauna - Habitat [FFH] and the bird sanctuary) are part of the Region Lower Austria-Southä (Dolné Rakúsko-Juh). The FFH area is located in the Southern part of the Vienna Basin near Wiener Neustadt above the glacier of glacial gravel fans of the Piesting River and consists of several sub-areas. The Bird Reserve site is considerably larger than the FFH area. It combines the sub-areas north of Wiener Neustadt and also includes an area of pine forest between Wiener Neustadt and Neunkirchen.

Natura 2000 region Nordöstliche Randalpen

The European protected areas "Nordöstliche (North-Eastern) Randalpen: Hohe Wand - Schneeberg - Rax" (FFH-area) and "Nordöstliche Randalpen" (bird sanctuary) are part of the industrial district Region Dolné Rakúsko-Juh (Lower Austria-South). The FFH-area is not only the largest FFH-area in Lower Austria, but also the one with the largest elevation difference in the area. It lies on the Eastern edge of Severné vápencové Alpy (the Northern Limestone Alps) in front of the flat landscape of the Pannonia area of Panónska panva (the Pannonian Basin). Due to the size of the area, the large range of altitudes and the location in the climatic transition zone from an Atlantic-influenced alpine climate to a continental Pannonian climate, the FFH area is home to a wide range of protected habitat types.

Natura 2000 region Hundsheimer Berge

At the easternmost point of Dolné Rakúsko (Lower Austria) is the European Nature Reserve "Hundsheimer Berge" (FFH area). The Danube and the Danube floodplains, the proximity of the Morava estuary, the Leithagebirge and Malé Karpaty (the Littla Carpathians), as well as the wide view of the Vienna Basin make this small European nature reserve something special. The Carpathian Mountains begin with the Danube valley at the Hainburg Gate and stretch in a 1,300 km long arc to reach the Danube again at Železné vráta (the Iron Gates). The Hundsheim Mountains are geologically part of the Carpathian Arch and the Leithagebirge connects the Carpathians with the Alps.

Natura 2000 region Feuchte Ebene – Leithauen

The European protected areas "Feuchte Ebene - Leithaauen" (FFH area + protected bird area) are located in the Southern part of the Vienna Basin. They are situated on a wide plain South-East of Vienna and stretch along the Leitha river up to the border with Burgenland. The total area (FFH area + protected bird area) comprises the most important remnants of the wetlands characteristic of this landscape area.

Natura 2000 region Ötscher-Dürrenstein

The European protected areas 'Ötscher-Dürrenstein' (FFH and bird sanctuary) are located in the southern part of the Mostviertel Region on the border with Styria. The whole area (FFH + bird sanctuary) is part of the northern Limestone Alps and includes the two mountain ranges that gave the area its name. The highest mountain is Ötscher with an altitude of 1,893m.

Natura 2000 region Strudengau-Nibelungengau

The European nature reserve 'Strudengau-Nibelungengau' (FFH area) includes the Strudengau, the narrow Danube valley from the Greiner Donaubrücke bridge to the Ybbs and the left bank slopes of the Waldviertel in the Nibelungengau from the Ybbs to the mouth of the Weitenbach. In addition, the lower parts of the Southern slopes of the Ostrongo as well as the lower valleys of the Große and Kleine Ysper are also included in this area.

Natura 2000 region Machland Süd

The European protected area "Machland Süd" (FFH and protected bird area) is located in the North-Western part of the Mostviertel on the border with the Upper Austrian Mühlviertel. The whole area (FFH + SPA) is a floodplain on the South bank of the Danube, between Wallsee and Ardagger-Markt in the district of Amstetten. The Grenerarm is an cut-off arm of the Danube flowing through and dividing the area into two parts: on the one side forests and fields predominate and on the other side meadows and orchards. Due to the relatively high proportion of natural habitats, many endangered animal species are found in Machland Süd.

Natura 2000 region Niederösterreichische Alpenvorlandflüsse & Pielachtal

The European Protected Areas 'Niederösterreichische Alpenvorlandflüsse' and 'Pielachtal' (habitats and bird sanctuary) are part of the Mostviertel core region and include rivers with important forest communities along the rivers and remnants of species-rich grassland and grassland. The FFH area includes the Alpine foothills of the Pielach, Melk, Mank, Erlauf, Ybbs, Zauchbach and Url, as well as the Danube in the Nibelungengau.

Natura 2000 region Wachau & Wachau – Jauerling

The European protected areas "Wachau" (FFH area) & "Wachau - Jauerling" (protected bird area) are part of the main region Lower Austria Central and extremely diverse. The site area (FFH area + SPA) includes the Danube valley between Melk and Krems and the surrounding mountains. In this area the Danube cuts through the south-eastern part of the Bohemian Massif. The climatically favourable area has a rich structure, numerous small side valleys and culminates in the Jauerling mountain (960 m).

Apart from Národný park Dunajská lužná oblasť (the Danube Floodplain National Park), the Wachau is the only free-flowing stretch of the Danube in Austria. The unique appearance is due to the alternation of rivers, remnants of floodplain forests, dry meadows and semi-natural forests, to which a mosaic of vineyards and orchards also contributes. The systems of terraces and stone walls give the Wachau its unique landscape character.

Natura 2000 region Wienerwald – Thermenregion

The European Protected Area "Wienerwald - Thermenregion" (FFH area + protected bird area) as part of the regions around Vienna is a hilly landscape characterised by forests. The valleys are used for grassland and arable land. Along the thermal line, forests give way to open vineyard landscape. The diversity of nature, the different forms of agriculture and the rich history have made this area a unique natural and cultural landscape.

Natura 2000 region Tullnerfelder Donau-Auen

The European protected areas "Tullnerfelder Donau-Auen" (FFH area + protected bird area) extend between Vienna and Krems, mainly on the Northern, but partly also on the Southern bank of the Danube. The Danube floodplain forests of the Tullnerfeld are the largest contiguous floodplain forests in Austria. However, the hydrology of the hardwood and softwood floodplains as well as the water bodies in this area has been severely disturbed as a result of the regulation of the Danube and the construction of the Greifenstein and Altenwörth power stations. Different types of grassland alternate here, ranging from wet meadows to steppe-like, species-rich dry grasslands.

Natura 2000 region Waldviertler Teich-, Heide- & Moorlandschaft & Waldviertel

The European protected areas 'Waldviertler Teich-, Heide- und Moorlandschaft' (FFH area) and 'Waldviertel' (protected bird area) as part of the Waldviertel core region are the South-Eastern foothills of the Bohemian Massif and are characterised by flat undulating plateaus, basins and hills. In the FFH area there are mainly river courses, ponds and peat bogs, while the bird sanctuary, which is many times larger, is made up of more extensive, partly wooded areas. Particularly in the South and West of the Waldviertel, large landscape areas are defined, the importance of which lies above all in the extraordinary richness of the various landscape features.

Natura 2000 region Kamp- & Kremstal

The European Protected Areas 'Kamp- und Kremstal' (FFH area + protected bird area) are part of the Waldviertel core region and include the river habitats of the Kamp and Krems in the Southern part of the Waldviertel, which form valleys deeply cut into the Bohemian Massif. The whole area links the Pannonian climate area with the cooler climate of the Waldviertel, which is also reflected in the richness of the natural environment.

Natura 2000 region Truppenübungsplatz Allentsteig

The Allentsteig military training area, which was established before the middle of the 20th century, is located in the center of the Waldviertel mountain range. The relief is very flat and rises to a height of approximately 500 to 600 m as part of the ridge separating the Kamp and Thaya river basins. Forests grow mainly on the uplands and around the river systems in the form of relatively large islands (spruce-pine forests - locally with oaks, spruce forests, occasionally beech-fir-spruce forests).

Natura 2000 region March-Thaya-Auen

The 'March-Thaya-Auen' European Protected Areas (FFH area + protected bird area) are located in the Weinviertel core region. In this area the March River forms the border with Slovakia and the Thaya River with the Czech Republic. East of Hainburg the March flows into the Danube. The floodplains of the March-Thaya are alluvial plains along the lowland rivers with extensive grasslands.

Characteristics for the whole area (FFH area + bird sanctuary) are regular floods, which are fed by the March and Thaya River basins from the Czech Republic. Most of these floods occur in spring. On the lower stretch of the March from Marchegg to the South, floods also occur in summer. These are the standing waters of the Danube. A special feature of this area is the continental (Pannonian) climatic influence, which reaches Austria from the East. This climatic peculiarity is also reflected in the distribution of certain animals, plants and communities, which reach the western limit of their distribution here.

Natura 2000 region Weinviertler Klippenzone

The European Nature Reserve "Weinviertler Klippenenzone" (FFH area) consists of several parts scattered throughout the main Weinviertel region. The individual parts of the rock zone are clearly visible in the form of partially rugged and rocky limestone hills. The chain of hills is characterised by a richly structured landscape area with forests and steppe grassland.

Natura 2000 region Westliches Weinviertel

The European Protected Areas 'Westliches Weinviertel' (FFH area + protected bird area) are part of the Weinviertel core region. The FFH area consists of many small sub-areas to the east of the Manhartsberg. In contrast, the bird sanctuary consists of a largely continuous and substantially larger area extending into the Pulka valley in the North. The area is part of the Pannonian climate zone and is one of the driest regions of Austria. The gently undulating hilly landscape rises sharply westwards towards the Waldviertel.

Natura 2000 region Pannonische Sanddünen, Sandboden & Praterterrasse

The 'Pannonian Sand Dunes' and the 'Sandy Soil and Prater Terrace' European Protected Areas (FFH and SPA) are part of the Weinviertel Core Region. The FFH area is mainly located in the Eastern part of the Marchfeld and includes parts of the Gänserndorf Terrace, the Prater Terrace and the Weinviertel Hills. In contrast to the FFH area, the SPA also includes large parts

of the Marchfeld south of the 'Marchegger branch of the Ostbahn' as well as the Triel area near Markgrafneusiedl.

The Pannonian sand dunes are among the most valuable biotopes in Austria. Many of them are endangered; the Pannonian sand dunes of Lower Austria are the only area of occurrence not only in Austria but also in the whole EU.

Natura 2000 region Bisamberg

The European Nature Reserve 'Bisamberg' (FFH area) is part of the Vienna North Region and includes forests, species-rich grasslands and, to a lesser extent, agricultural land such as fields and vineyards. It is located in the municipalities of Bisamberg, Hagenbrunn, Klein-Engersdorf and Langenzersdorf. Bisamberg lies in the North-West of Vienna, at the foot of the Wienerwald, which is separated from the rest of the Wienerwald by the Danube. Climatically, the area is situated in the Pannonian continental climate.

3.2.4 Burgenland and NATURA 2000

Natura 2000 region Auwiesen Zickenbachtal

The "European Nature Reserve Auwiesen Zickenbachtal" is located about 5 km south of Stegersbach and 12 km northwest of Güssing. The river Zickenbach flows through the area in a NW-SE direction and joins the Strem stream near Güssing. The area of approximately 40 hectares is one of the most beautiful wetlands in southern Burgenland. In its entirety, it can be regarded as an alluvial peat bog. Small areas of vernal marsh are formed when the water drains away. Peat formation is triggered by a permanently high water table with little fluctuation and flooding by foreign water.

The vegetation is characterised by a rich mosaic of lush to wet meadows, fallow, sedge meadows, reedbeds and grey willows. The stream is accompanied by stands of tree willows. As a result of abandonment, dominant stands of goldenrod (Solidago gigantea) have developed in parts of the area. In a few places, fragments of bogs with Salix repens and Eriophorum langustifolium have been preserved. The occurrence of yellow lily of the valley (Nuphar lutea) is preserved in remnants. The mown meadows in the study area belong to the wet meadow type, which is widespread in southern Burgenland.

The bird fauna is characterised by great diversity. Originally, wet meadow and reedbed species (Montagu's warbler, reed warbler) were typical of the area. However, these are declining or stagnating due to habitat changes. Scrub and woodland species are finding increasingly favourable conditions as a result of succession, hence the proliferation of the blackcap, tomtit and woodpeckers. Quail find suitable habitat here at least in some years. In addition, the area is important as a feeding ground for storks and migratory birds of prey. For the white stork (Ciconia ciconia) this area is important as a feeding area for breeding pairs in the surrounding villages as well as on migration routes.

Natura 2000 region Bernstein – Lockenhaus – Rechnitz

The area of approximately 25 700 ha largely corresponds to the large Bernstein-Lockenhaus-Rechnitz protected landscape area and comprises three nature conservation areas: 'Gößbachgraben', 'Galgenberg' and 'Trockenbiotop beim Friedhof in Rechnitz'. In terms of natural space, the area is characterised by large enclosed forest areas. Settlement rarely penetrates far into the forest areas. Due to the abundant serpentinite, the Bernsteiner Bergland is extensively covered with natural red pine forests, which grow into stony meadows and dry grassland in stony and shallow places. The more favourable growing conditions give rise to oak-hornbeam forests, which are widespread in the area and give way to beech-fir-spruce forests, especially in the higher areas of the Günser Bergland. The wooded valleys give rise to ravine forests and narrow floodplain forests accompanying streams. On the southern slopes and on the particularly shallow soils of the Geschriebenstein, there are small areas of xerophilous oak woodland, with Qercus pubescens and Castanea sativa. In the transition area between forest and arable land between Rechnitz and Markt Neuhodis, fruit meadows and remnants of formerly grazed dry grassland are preserved. Mesophilous meadow communities (oat meadows, Arrhenatherion) are particularly widespread in the Bernsteiner Bergland.

Due to the extensive forests, the diverse landscape and not least the presence of suitable large buildings, this area contains one of the most important bat roosts in the country. In total, six species have representative populations here. Large hibernation sites are found in particular in the area of the Lockenhaus and Stadtschlaining castles. The tunnels on the southern edge of the area are important wintering sites for bats.

Natura 2000 region Fronwiesen und Johannesbach

The „Fronwiesen and Johannesbach European Protected Area“, which is located in the municipality of Leithaprodersdorf and covers an area of approximately 49 ha, consists of five sub-areas: Johannesbach, Weierwiesen, Odelwiesen, Fronwiesen, Verbindung-sgräben.

Johannesbach is situated at the foot of the Leithagebirge in the eastern part of the Vienna Basin, south of Leithaprodersdorf. From its source, the Johannesbach flows for about 6,5 km in a north-easterly direction and joins the Leitha on its right bank at Kotzenmühle south-east of Seibersdorf. The catchment area of the Johannesbach lies in the Leith plain, which belongs to the natural area of the 'wet plain'.

Weierwiesen borders directly on Johannesbach to the south and is a traditional mown meadow, which is unsuitable for cultivation due to the wet conditions on the site and has therefore been preserved to this day. Different management practices (intensity of fertiliser use, mowing time) and the low relief have led to a very diverse range of meadow types. The Odel meadows are a complex of different meadow types, most of which are still cultivated. The meadows are located directly north of the urban area of Loretto and are bounded by ditches.

The Fronwiesen meadows, located on the northern edge of the Leithagebirge near Loretto, are among the most beautiful and botanically rich wet meadows in Burgenland. The geological bedrock of the area, which covers an area of approximately 17 hectares and slopes gently to the north-west, is made up of Pannonian teglae and sands. The soil formation is essentially shaped by the influence of hillside springs from the nearby Leitha mountains. There is a small calcareous peatland to the south-east of the Conservation Area. Some plant species that are extremely rare in Burgenland are found here: Mehl-Primel (Primula farinosa), Fettkraut (Pinguicula vulgaris), Simsenlilie (Tofieldia calyculata), Breitblättriges Wollgras (Eriophorum latifolium), Fieberklee (Menyanthes trifoliata) and Sumpf-Knabenkraut (Orchis palustris). The aquifer connecting ditches between the sub-areas serve as corridors and habitat networks between the sub-areas.

Natura 2000 region Nickelsdorfer Haide

The 12.25 ha nature reserve and European nature reserve north-west of Nickelsdorf is located on the edge of the Parndorfer Platte terrace, which slopes steeply down to the Leitha plain. Pannonian sands and acid Danube gravels form the geological basis of the dry soils, which are only lightly vegetated on the hilltops. The water-rich gravels and the drying effect of the wind on the tops of the steep slopes have allowed the survival of species-rich, previously grazed dry vegetation.

The area is characterised by very dry site conditions and strong sunshine at the top of the slope and at the top of the hill. There are therefore recurrent gaps in the stand structure and it is low growing. In less arid stands the vegetation can be denser and taller, leading to semi-arid grasslands. The dry grasslands developed in two-thirds of the area are characterised by a dominance of tufted grasses.

Natura 2000 region Lafnitztal

The „European Protected Area Lafnitztal“ comprises two areas that are currently protected under the Nature Conservation Act: the Lafnitz- Stögersbach-Auen Nature Reserve covering 70 ha in KG Wolfau and the Lahnbach Protected Landscape Area covering 31 ha near Kaltenbrunn. The „Life Project Area Loipersdorf-Kitzladen“ also belongs to this area. The separate parts of the area are connected by a flowing stretch of the Lafnitz river (public water property). The European nature reserve has a total area of 566 327 ha.

The Lafnitz is one of the last unregulated rivers in the lowlands of Austria. The free, unrestricted flow of the river naturally connects with the accompanying riparian forests and valley meadows and, due to the unrestricted flow dynamics, creates a variety of morphological river habitat structures. They are home to a variety of animal species with representative populations and the most important river habitat types.

The area comprises on the one hand an unregulated, mostly free meandering section as far as the village of Kaltenbrunn and on the other hand a „heavily“ regulated section of the river as

far as the state border. In particular, the abundance of fish species relevant for the FFH led to the inclusion of the lower part. River engineering measures to optimally arrange the habitats for the fish fauna are the main objective of the ongoing Life project in this area.

Natura 2000 region Lange Leitn Neckenmarkt

The Lange Leitn Neckenmarkt Nature Reserve and European Nature Reserve is located on the southern slopes of the Ödenburger Mountains directly on the Austrian-Hungarian border, about 4 km from the village of Neckenmarkt and 6.5 km southeast of Sopron. It is confined to parcel 3530 of the cadastral territory of the municipality of Neckenmarkt and covers an area of 28,981 ha.

The area is located at an altitude of 410-490 m in the eastern part of the Ödenburger Bergland and includes central European oak-hickory forests as well as acid oak forests. The succession of the individual plant communities is determined primarily by the depth of the soil and the associated water balance. The transitions between the habitat type Labrador oak-hornbeam forests Galio Carpinetum and the soil-acid oak forests are smooth and only moderately pronounced in terms of species composition.

From a forestry point of view, the area belongs to the Bucklige Welt of the main growth area 'Eastern Marginal Alps'. The Ödenburger Bergland as a crystalline bedrock belongs to the eastern foothills of the Central Alps. The oak and oak-hornbeam forests developed in this area correspond to the potential natural vegetation of this altitudinal level of the aforementioned growth area. The Central European oak-hornbeam forests on acid soil are located in the area at the eastern limit of their distribution. This implies a high responsibility to cover these edges of the range and to protect the overall distribution area of the habitat type.

Natura 2000 region Mattersburger Hügelland

The area nominated under the Birds Directive covers an area of approximately 3 100 ha and includes the European protected area 'Hangwiesen Rohrbach-Schattendorf-Loipersbach incl. Rohrbacher Kogel' designated under the Habitats Directive. Parts are located in the Forchtenstein-Rosalia protected landscape area (Forchtenstein, Neustift, Mattersburg, Marz and Sieggraben). As a result of this and the establishment of the nature park, it is surrounded by large protected areas and the various sub-areas are interconnected. The wooded areas of the Rosalia and Ödenburger mountains merge on the slopes into an open, still very richly structured cultural landscape by today's standards. The landscape is characterised in particular by extensive orchards with many chestnut trees. There are numerous groves, hedges and tree plantations among the small parcels of fields, vineyards, dry grassland and meadows with medium and tall fruit tree crops. Extensive woodland edges and smaller remnants of woodland also lead to a mosaic of diverse habitats. In the valley areas near Schattendorf and Rohrbach, remarkable wetlands have been preserved.

Natura 2000 region a national park Neusiedler See - Nordöstliches Leithagebirge

The European Protected Area Lake Neusiedl - the north-eastern Leithagebirge with a total area of 57 124 560 ha includes several already protected areas. The largest of these is the protected nature and landscape area of Lake Neusiedl and its surroundings.

The Lake Neusiedl-Seewinkel National Park is part of a European protected area. The nature reserves 'Hackelsberg', 'Jungerberg', 'Thenau', 'Goldberg', 'Pfarrwiesen' and 'Batthyanyfeld' are also part of it.

The area fully includes the Important Bird Areas (IBAs) 'Neusiedler See' (25 187 ha), 'Südlicher Seewinkel und Zitzmannsdorfer Wiesen' (13 995 ha) and 'Nordöstliches Leithagebirge' (6 320 ha). As part of the Lesser Hungarian Lowland, the Lake Neusiedl area borders directly on the eastern edge of the Central Alps. At the crossroads of the Pannonian and Alpine large-scale landscape, animal and plant species of different origins meet.

From the slopes of the Leithagebirge to the vast Pannonian plains, there is a great variety of habitats in the area. The thermophilous oak forests, the lowlands of Lake Neusiedl with its reed belt and the Seewinkel salt marshes amidst the vast open meadows and steppe dry grasslands form ecosystems with very different habitat conditions and diverse animal and plant communities.

Lake Neusiedl, with an area of approximately 320 km2 , is the central and defining habitat of the area. The steppe lake, which is generally known for its rich birdlife, is home to waterfowl populations that are unique in Central Europe, in particular geese, waders, limpkins, gulls and terns, as well as reed and grassland birds.

However, the Seewinkel, the Zitzmannsdorf meadows and the slopes of the Leithagebirge are hardly less important than Lake Neusiedl in terms of international bird conservation. The north-eastern Leithagebirge forms the north-western edge of the Neusiedler See.

The largest part, approximately 75%, is covered by warm-loving oak forests and oak-hickory forests. The upper slopes are characterised by richly structured vineyards with field groves and scattered fruit trees. Remnants of once extensive fruit crops can be found in Haniftal near Joise.

Natura 2000 region Parndorfer Heide

The Parndorfer Heath (Parndorfer Heide) is a remnant of a once extensive herding pasture. It is geographically located on the north-western edge of the Parndorfer Platte, approximately one kilometre from the centre of Parndorf. The area of approximately seven hectares was declared a nature reserve in 1992 because of the gopher population. The gopher mainly inhabits the southern part of the sub-pannonian steppe dry grasslands. The eastern part, characterised by overgrown rubble mounds from excavated former bunker material, is accompanied by higher dry grassland. In the northern part, on the other hand, the landscape is made up of small woods with robinia.

With around 200 individuals, this area forms one of the largest colonies of gophers (Spermophilus citellus) in Burgenland. The ideal conditions for the animals are on a fine sandy substrate and in the low-growing vegetation of the dry grasslands of Walliserschwingel. Maintenance measures have been carried out since 1992 by grazing and mowing, thereby maintaining optimum living conditions.

Most of the area is covered by Walliserschwingel dry grasslands (Poo angustifoliae-Festucetum valesiacae, Avenulo pratensis-Festucetum valesiacae); these dry grasslands are in a favourable state of conservation in spite of the small size of the area and the low diversity of plant species.

Natura 2000 region Parndorfer Platte – Heideboden

The Parndorfer Platte is a Pleistocene gravel body that drops steeply in the south-west with an elevation difference of approximately 40 m into the lowland of Lake Neusiedl. In the north, the terrain slopes down to the Leitha River. To the north-east, the so-called Heideboden extends as far as the Hungarian border. The whole area belongs to the Pannonian climate region and is one of the driest and warmest in Austria. The original forest cover has been preserved only in small remnants.

The traditional use was cattle breeding on the extensive pastures. In the last century it has been replaced by arable farming. The Vienna-Budapest railway line and the A4 motorway south of it can be classified as dividing structures in the Parndorfer Platte areas. Outside the enclosed village areas, settlement is limited to a few hamlets, so that large continuous 'rest areas' predominate. It is now predominantly used for agricultural purposes and the original open landscape character has in many cases been interrupted by the construction of windbreaks and more recently wind turbines. Near-natural grassland is only found in remnants.

The Parndorfer Platte and Heideboden mountain ranges contain the most important breeding populations of the great bustard in Austria, with the Austrian population being closely related to the population in western Hungary. Set-aside in Hungary and Austria and targeted fallow management as well as removal of disturbances have led to the creation of a peaceful habitat that meets the requirements of the great bustard. Over the last 10 years, the population has increased from approximately 20 to 94 individuals. In addition, Heideboden is considered to be the only bustard wintering site in the area with more than 500 individuals. Although the conservation of the great bustard is a major concern in this area, its central importance for the populations of many other bird species in Austria should not be overlooked. These species include, for example, the Montagu's waders, the golden eagle, the red-tailed hawk, the red-tailed falcon, the long-tailed owl and the common screech owl. It is also classified as an important wintering area for the hen herrier, the sea eagle and the merlin, as well as a resting place for the great snipe.

Natura 2000 region Siegendorfer Pußta und Heide

The European Protected Area Siegendorfer Pußta und Heide with an area of 27.69 ha is located about 4 km SE of Siegendorf on the edge of the Rust Mountains and is divided into two sub-areas:

'Siegendorfer Pußta', which covers 21,5 ha in the west, is characterised by large, mainly open, dry grasslands and wet meadows. To the east, on the northern edge of the Oberseewald, the 'Siegendorfer Heide' (Siegendorfer Heath), which is largely stocked and has only small areas of dry grassland features, is situated on an area of 6,3 hectares.

Both areas are composed of Pannonian sands, gravels and, in depressions, clayey deposits. The dominant soil types are chernozems, chernozems, brown earths with loose sediments, cultivated raw soils and colluvium. The soils are mostly clayey. The climate in the area is Pannonian with high humidity. Winters are cold with little snow. The average annual air temperature is about 10 °C. The average annual rainfall is approximately 570 mm.

The floristic composition of the area is very rich. On the north-facing slopes of the Siegendorfer Puszta there are continental semi-arid pinna-twenk grasslands, while the hilltops and south-west-facing areas are occupied by tragacanth dry grasslands. At the foot of the rising slopes of the Puszta, in a shallow depression with saline soil, salt meadows are formed. On less saline soils there are meadows with peat bogs and reedbeds. A small lake in the middle of a willow stand is surrounded by tall sedges dominated by marsh sedge. On the deep, decalcified sandy soils of the heathland, soil-acidic sedge-mow meadows form.

The importance of this area lies in the presence of sandy dry grassland communities with a number of highly endangered plant species not otherwise found in Burgenland. In addition, there are salt marshes and whistling grass meadows.

Management of these mainly secondary dry and semi-arid grasslands, which are nevertheless extremely valuable from a nature conservation point of view, must be maintained to preserve them. Coordinated grazing of dry grassland and mowing of salt meadows leads to conservation and improved conservation status. The dry grassland is grazed extensively by sheep, which rotate over several years; part of the meadows is mown each autumn (use of litter).

Natura 2000 region Südburgenländisches Hügel- und Terrassenland

In the North, the Pinka River cuts a narrow valley through the crystalline rock of the South Burgenland Threshold. The Eisenberg and Tschaterberg (crystalline) form the landscape. To the South of these is the Ehrensdorfer Platte, which is formed by Pannonian sediments. The freshwater limestones and dolomites of the Hohensteinmaißberg are also notable.
Characteristic forest communities are foothill beech and oak-hickory forests, acid oak forests with primary pine stands on the peaks. Emphasis is placed on the 'Punitzer Wald', the largest

contiguous forest area in southern Burgenland, and on the almost natural oak-hornbeam forest with isolated oaks and the species-rich orchid flora of the Hohensteinmaißberg. These forest areas are interspersed with vineyards on the southern slopes of the mountains. The most important watercourses are the Pinka, the Tauchenbach and the Strem in the southern part of the area, which are accompanied by alder stands and adjacent wet meadows.

Natura 2000 region Zurndorfer Eichenwald und Hutweide

In the North-Eastern part of the Parndorfer Platte, about three kilometres from Zurndorf, is the European Nature Reserve Zurndorfer Eichenwald und Hutweide. These two parts, consisting of about 100 hectares of woodland and about 20 hectares of herding pasture, form two very different types of habitat.

The oak forest is considered to be one of the best preserved forest stands on the Parndorf plateau. Approximately 70 hectares of it is considered to be oak woodland, which is surrounded by farmland. The south-eastern edge is characterised by a much thicker stand of cerulean oak, which contributes to the structure of the woodland. The edges of the woodland are also decorated in places with dwarf almond bushes. The eastern and north-western parts of the forest are accompanied by robinia trees, which are replanted in former pastures.

The hilltops as well as the slopes of the herding pastures are recognizable by the siliceous dry grasslands, while the depressions have shrubby semi-dry grasslands. On the northern edge is a smooth oat meadow of approximately two hectares. The main component of the forest is oak woodland. Approximately six hectares in the northwest at lower elevations are characterized by hardwood clearings. The Zurndorfer Heide is characterised by dry, shallow hills and slopes with siliceous dry grassland. In the north, the area is characterised by small smooth oat meadows.

Natura 2000 region Waasen – Hanság

South-East of Lake Neusiedl lies Hanság, which is largely in Hungary and is called Waasen in the Austrian part. In the 16th century the area was still part of the lake, but over time it was drained by several canals. With the effect of the drainage ditches, fishing was abandoned in favour of hay production from 1855. After the Second World War, and especially since 1965, whole systems of new drainage ditches have been created, which have made it possible to break up the meadow areas and farm them intensively. South of Andau and Tadten, as well as south-east of Wallern, close to the Hungarian border, remnants of the former marsh meadows and reedbeds have been preserved. The core of these areas consists of 140 ha of 'Kommassantenwiesen', which were declared a complete nature reserve in 1973. In 1992, the 'Waasen-Hanság' conservation area was created as part of the Lake Neusiedl-Seewinkel National Park. After the accession to the EU in 1995, extensive arable land around Kommassantenwiesen was extended under the names 'Backwater Project Hanság', 'Buffer Areas National Park' and 'Ecological Areas Wallern'. The set-aside has allowed measures to be

taken on the drainage canals so that the now mown or hedgerowed areas are again exposed to a stronger water influence.

3.2.5 Vienna Natura 2000

Natura 2000 region and national park Donau-Auen

Most of this area, which forms the north-western part of the largest contiguous Central European floodplain forest, has been behind a flood barrier since the 1970s. As a result, the vegetation is increasingly turning into 'hard meadow'. Since 1978, the area has been a nature reserve and since 24th October 1996, together with the Lower Austrian part, it has been a national park. It is currently being considered to endow the area for nature conservation reasons.

Together with the adjacent Lower Austrian part, this area is of supra-regional importance for species and habitats of the floodplain landscape. The 'hotlands' (gravel areas with scrubby dry grassland) with hawthorn (Crataegus monogyna) and horsetail (Hippophae rhamnoides) and numerous orchids are a particular feature.

Natura 2000 region Lainzer Tiergarten

The Lainzer Tiergarten is located in the west of Vienna in the 13th district and covers an area of 2,258 hectares. The entire Lainzer Tiergarten is part of the Wienerwald Biosphere. The protected area is a former imperial hunting ground - walled since 1784. Since 1941 it has been declared a nature reserve with hunting and partly agricultural and forestry use. It serves as a local recreational area for the inhabitants of Vienna.

The Lainzer Tiergarten is of national importance, especially for old forest species, and contains botanically valuable meadow and forest communities.

Natura 2000 region Landschaftsschutzgebiet Liesing

The Liesing Protected Landscape Area is located in the south-west of Vienna (23rd district) and has a total area of 639 ha. In the defined area, the Frankenfelser Decke limestone passes into the sandstones of the flysch zone. The relatively narrow valleys are cut into the harder rocks of the Limestone-Alpine formation (Kalksburger Klause, confluence of the Gütenbach valley with the Liesingbach valley) and their steep slopes are covered with oak forests. The division between limestone and flysch is also reflected in the distribution of dry grassland and fertile meadows in the grassland vegetation. Depending on the habitat conditions, very different formations of oak forests of Transylvania, oak-hornbeam and copper beech forests, as well as primary and secondary forests of black pine, occur.

Together with the adjacent Natura 2000 sites in Vienna and Lower Austria, this site forms the peripheral zone of the Wienerwald and should be considered as part of or linking these Important Bird Areas. The quality of the area is determined in particular by the extensive agricultural use of the meadows in the Gütenbach valley and the interconnection of different types of forest and meadow.

Natura 2000 region Bisamberg

The area is a Pannonian lowland-influenced wine-growing landscape with numerous field groves, loess hollows, fallow land and wooded hilltops. The Bisamberg Nature Reserve also includes the „Alte Schanzen“, former defensive fortifications from the Napoleonic Wars, which are now a natural monument. Land use has hardly changed, with the exception of the conversion of arable land into meadows for recreational purposes. The area is remarkable for its diversity: a structurally rich, Pannonian-influenced wine-growing landscape with dry grasslands and warm-loving forests.

Natura 2000 region Leopoldsberg

The nature reserve covers an area of approximately 6 hectares and is located on the Leopoldsberg, which is a 425-metre-high hill in the 19th district of Vienna and the north-easternmost foothill of the Wienerwald, the main ridge of the Alps. It lies at the northernmost point of the mountainous northern edge of the city district of Vienna on the right bank of the Danube.

4 (IV.) Basic data on the expected impacts of the strategy document, including health

4.1 Likely significant environmental and health impacts (primary, secondary, cumulative, synergistic, short-term, medium-term, long-term, permanent, temporary, positive and negative)

*The projected significant environmental impacts were analysed under the Programme in the structure **of individual priority steps** and interventions implemented through individual activities. This structure makes it possible to provide a basic picture of the expected impacts, corresponding to the degree of accuracy of the statements in the Programme, as an overarching strategy, which will then be reflected in the strategies of the affected regions and implementation documents, which will be subject to individual environmental assessment (Activities). Therefore, the assessment **of cumulative and synergistic** impacts within the framework of the integrated development programmes in the structure of the programme's specific challenges is crucial. They themselves build on integration and the effects of the interaction of a range of Activities, fulfilling individual priority actions, which should guarantee the achievement of defined objectives.*

The Interreg VI-A 2021-2027 cross-border cooperation programme between the Slovak Republic and Austria is one of the European territorial cooperation programmes implemented in the period 2021-2027. The main objective of the Programme is to face the most important challenges and overcome the weaknesses typical of the border. Through the implementation of joint cross-border projects, the Programme will implement the policy objectives set out in the relevant EU regulations on the European Regional Development Fund. The Working Party selected the following four key areas of support for the 2021-2027 Programme:

- ***Priority 1:** More innovative borders,*
- ***Priority 2:** Greener border,*
- ***Priority 3:** More social borders,*
- ***Priority 4:** Cooperation between border institutions and residents.*

The objectives and priorities are derived from the objectives and priorities of the 2030 Agenda and represent the ambition of Slovakia and Austria to achieve the objectives of this Agenda with a reflection of the specificities of the Slovak Republic as the managing state of the Programme. The objectives are linked to priorities based on expert analytical evidence and a broad participatory process. They are ambitious and their achievement appears to be a prerequisite for ensuring sustainability in all three of its pillars – social, environmental and economic in relation to each other. Its complexity and integrated approach towards a community-based approach and leading to both environmental, social, and economic challenges and challenges and challenges can be considered as a key new quality of the Programme. The Interreg Document also has the ambition to work towards sectoral strategies in this regard.

Integrated development programmes provide a logical system consisting of protection and creation of resources, their sustainable use in an economy is heading to the quality of life of

citizens in all regions of Slovakia and Austria, by the help of cross-border cooperation with their active participation in the administration of public affairs and fulfilling mutual ***long to lasting*** *cooperation.*

Individual development programmes, their priority actions and activities can be assessed as follows:

The likely significant environmental and health impacts in the territory concerned in the implementation of the Interreg VI-A Slovakia-Austria- 2021- 2027 cross-border cooperation programme are processed in its Chapter III., in the prescribed structure pursuant to Act No. 24/2006 Coll. :

1. Input requirements.
2. Output data.
3. Data on direct and indirect environmental impacts.
4. Impact on the health status of the population.
5. Impacts on protected areas.
6. Possible risks related to the implementation of the strategic material.
7. Transboundary environmental impacts.

The description of individual impacts in the strategic document under consideration meets the requirements of the Act in form and content to a sufficient extent and gives information about the anticipated effects of the document on environment and health. This is assessed in detail in the Report according to the individual Priorities of the Programme.

Priority 1: *More innovative borders*
This area implements the preconditions for the first EU policy objective, a more competitive and smarter Europe by promoting innovative and intelligent economic transformation and regional connectivity of information and communication technologies (IKT). The Programme will support the following objective: - ***(i) Development and expansion of research and innovation capacities and the use of advanced technologies.***

Assessment of the effects of the priority
A key step is ***primary*** *intervention aimed at implementing the first EU policy objective, a more competitive and smarter Europe by promoting innovative and intelligent economic transformation and regional IKT connectivity.*
An important activity is the addition and alignment of educational thematically environmentally oriented practices with educational activities applied at all levels of education, including lifelong learning in order to develop pupils' knowledge, skills, critical thinking and decision-making. It is also very important to support the improvement of the conditions for increasing media literacy of a wide range of recipients of information through digital platforms. Emphasis should be placed on the way data sources are selected, knowledge

is increased in the selection of quality sources of information, and this approach also reduces the degree of infantilization of society.

The innovative objectives of the Slovakia-Austria border include:

- *Linking research, innovation and production in innovation clusters in the specialisation domains defined in the Smart Specialisation Strategy (RIS3), with an emphasis on transferring innovation to regional economies efficiently and sustainably evaluating available human and natural resources.*
- *Connecting the academic, industrial and public sectors and civil society in regional and domain innovation clusters and their cooperation on cutting-edge international innovation-oriented research within the European Research Area (ERA).*
- *Increase the added value of a regional product and limit exports with low added value from agriculture, forestry and mineral extraction.*
- *Paying special attention to the transformations of the automotive industry towards low-emission transport.*
- *Supporting the development of creative industries, particularly in relation to increasing added value in industry and tourism.*
- *Initiating and supporting the reorientation of agriculture and forestry towards products with higher added value, in particular in relation to crop and animal production and the use of ecosystem services of agricultural and forest ecosystems, in line with the concept of a sustainable economy and sustainable bio-economy.*
- *Use of climate change prevention and adaptation for the development and production of new technology products, processes and services in the agricultural, industrial production and tourism sectors.*
- *Promoting technical and technological innovations enhancing energy efficiency and the development of low-carbon energy.*
- *Fostering innovation to ensure the security, building and maintenance of critical infrastructure.*

<u>Intervention</u>

*The level of innovation performance shown by **the Innovation Index of Slovakia** is low, slightly above the European average level, with the areas of financing and support for innovation of small and medium-sized enterprises being assessed the weakest. The level of innovation performance of the Slovak Republic, characterized by the Innovation Union Scoreboard (IUS) index, is at a low level for a long time compared to other EU countries, which gives scope for its improvement in cooperation with Austria.*

*Innovation in Slovakia focuses mainly on the field of **information and communication technologies**, in which the most of the total amount of money invested in start-ups in Slovakia was invested. **The digital economy** in Slovakia, in cooperation with Austria, can exploit the potentials of high added value in the field of culture and creative industries.*

Both countries have a unique opportunity under the Covid-19 Recovery Plan to use funds for the digital transformation, to build common information and pandemic warning systems.

Priority 2: *Greener border*

The priority element responds to a highly topical theme, which is the protection and sustainability of the use of natural resources, taking into account the possible impacts of climate change.

This area implements the preconditions for the second EU policy objective, namely the transition from a greener, low-carbon economy to a zero-carbon economy and a resilient Europe by promoting a clean and fair energy transition, green and blue investments, the circular economy, climate change mitigation and adaptation, risk prevention and management, and sustainable urban mobility. The Programme will support two specific objectives: - ***(iv) Promoting adaptation to climate change and disaster risk prevention and resilience, taking into account ecosystem approaches;*** *-* ***(vii) Strengthening the conservation and conservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution****.*

The European Green Deal is at the heart of the European Commission's strategy for the implementation of the UN 2030 Agenda and and sustainable development goals. The main objective of the European Green Deal is to transform the EU economy for a sustainable future.

The EU's climate ambitions for the Programme:

- *secure supply of clean and affordable energy,*
- *mobilizing industry for a clean and circular economy,*
- *energy and resource-efficient construction and renovation,*
- *zero pollution ambition for a non-toxic environment,*
- *preserving and restoring biodiversity ecosystems,*
- *from farm to table: a fair, healthy and environmentally friendly food system,*
- *accelerating the transition to sustainable and smart mobility,*
- *mainstreaming of sustainability into all EU policies.*

<u>Assessment of the effects of the priority</u>

This area implements the preconditions for the second EU policy objective, namely the transition from a greener, low-carbon economy to a zero-carbon economy and a resilient Europe by promoting a clean and fair energy transition, green and blue investments, the circular economy, climate change mitigation and adaptation, risk prevention and management, and sustainable urban mobility. The Programme will support two specific objectives: - ***(iv) Promoting adaptation to climate change and disaster risk prevention and resilience, taking into account ecosystem approaches****; -* ***(vii) Strengthening the conservation and conservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution.***

Austria is one of the European leaders in green solutions at national and local level, whether it is nature and landscape protection or waste separation and recycling.

The integration of excessive urbanization and climate change manifestations creates the conditions for unprecedented threats to the quality of life of the population, as well as economic and social development. The high concentration of people, infrastructure, industry

and services increases the vulnerability of settlements to climate change. Cities are primarily heavily influenced by the physical and geographical characteristics of the landscape (temperature bands, altitude, reliefs, etc.), which determine their energy needs and the level of threats resulting from possible climatic phenomena. It is therefore necessary to influence ***secondary*** *factors in favour of positive regional and territorial development through strategy and policies, and in particular by meeting defined objectives. According to the characteristics of environmental components and the expected impacts of climate change, most cities in Slovakia should place emphasis on* ***cumulative*** *adaptation related to heat waves, floods, storms, rises in average temperatures, drought or adaptation to extreme manifestations of various climatic phenomena and their rapid changes in the short term. The aim should be to increase the resilience of settlements and landscapes to those impacts. The expected benefits are: improvement of conditions for living in settlements, better protection of health of residents of settlements, reduction of susceptibility of economic activities to interruption (e.g. consequences of extreme climatic phenomena, emergency situations due to the impacts of climate change, etc.), reduction of damage to public property, etc. This will not only make settlements and landscapes more resilient to the impacts of climate change an advantage for the population, but will also increase the attractiveness of individual territories to investors.*

Linking territorial development and adaptation to climate change at settlement level is a more dimensional ***synergistic*** *process requiring strong political support, concentrated procedural and specialised expertise, joint efforts by stakeholders, financial resources and, last but not least, public support. The priority step is to respond to the acute need to improve the adaptability* of *settlements and landscapes to the* ***short, medium, long-term and lasting*** *impacts of climate change.*

The proposed activities in this priority step are aimed at: reducing greenhouse gas emissions, reducing environmental pollution and avoiding degradation of strategic natural resources and creating adequate capacities to control the fulfilment of these commitments; introduction of binding sustainability criteria for all renewable energy sources; decommissioning of coal fuels from slovakia's energy system; inclusion of carbon life cycle intensity in the environmental impact assessment; setting up system measures to extend the use of best available techniques (BAT – Best aviable Techniques)); reducing emissions in transport; modernising local heating sources at low emission levels, developing and implementing an integrated river basin management plan, including challenges related to climate change (prevention of flood and drought relief); restoration of longitudinal continuity of watercourses; taking into account the costs of water services in the price of water, including the costs of maintaining its availability and protecting the environment; the use of innovative, nature-friendly technologies to effectively ensure a substantial increase in the proportion of urban waste water discharged and treated; processing and implementing a comprehensive plan for the reduction of biocides and the use of chemicals in accordance with European legislation; the elimination of all environmental burdens with the highest priority of the solution; optimising the division of competences of state administration bodies responsible for environmental protection and creation and, last but not least, to achieve better enforcement of environmental law. These activities can be assessed as beneficial in relation to their environmental impacts in view of the

fact that they are directly or indirectly oriented towards a more efficient use of natural resources, including non-renewable resources, are linked to innovative (reducing energy and resource intensity) production and distribution cycles in the economy, while fostering environmental innovation and environmental burdens.

Intervention

Improving the adaptability of human settlements and landscapes to the adverse effects of climate change. The positive trend in the use of renewable energy sources needs to be targeted rationally and systematically, including the creation of long-term follow-up support for incentive schemes that correlates with the interests of knowledge-based environmental management. The creation of mechanisms for a long-term and systematic approach to the efficient use of renewables is crucial. Rational regulation of the use of various resources (without short-term profit priority) would be essential, the effectiveness of which will be cumulatively assessed, in particular in terms of strengthening the quality of the environment, in terms of rational use of the land and also in economic terms. At the same time, it is essential that the control of compliance with the rules and criteria is an integral part of such mechanisms. Financial resources are a fundamental problem in the implementation of activities, so in order to achieve the objectives, it will be necessary to identify the possibilities of obtaining financial resources to implement the systematic elimination of all.

Priority 3: *More social borders*

This area implements the preconditions for the fourth EU policy objective A more social and inclusive Europe implementing the European Pillar of Social Rights. The Programme will support three specific objectives: - ***(ii) Improving equal access to inclusive and high-quality education, training and lifelong learning services by developing available infrastructure, including strengthening resilience for distance and online education and training****; -* ***(v) Ensuring equal access to healthcare and enhancing the resilience of healthcare systems, including primary care, and supporting the transition institutional care for family and community care****; -* ***(vi) Strengthening the role of culture and sustainable tourism in economic development, social inclusion and social innovation****.*

The Interreg VI-A Slovakia-Austria -Austria-2021-2027 cross-border cooperation programme is one of the European territorial cooperation programmes implemented in the period *2021-2027.*

Assessment of the effects of the priority

Through the implementation of joint cross-border projects, the Programme will implement the policy objectives set out in the relevant EU regulations on the European Regional Development Fund. The Working Party selected the following key areas of support for the 2021-2027 programme.

A post-COVID-19 recovery plan for Europe and a systemic approach to addressing the impacts of the coronavirus. *The impacts of the COVID-19 pandemic have a significant impact on society and the economy and highlight the importance of the state's functional critical*

infrastructure. The pandemic has exposed the vulnerability of border coordination of measures to the spread of the pandemic and has revealed a number of characteristics of contemporary society, such as dependence on foreign markets and the supply of raw materials, materials and products, or the impacts of the degradation of ecosystems on human health. At the request of the European Commission in order to draw down funds for cross-border cooperation, the Programme has the character of a multiannual financial framework, which also includes an instrument to promote recovery and resilience.

According to Eurostat population forecasts, Slovakia and Austria are among ***the European countries with the fastest ageing populations****. The current ratio between the population of post-productive and working age, which is approximately 1:4.8 , will change to around 1:3 by 2030. Slovakia and Austria therefore face challenges linked to population reduction, including significant social and economic impacts, negative consequences for the social security and healthcare systems and the need to take unprecedented and costly measures. Therefore, the primary task is to make efforts to reverse this trend, in line with international experience, to build more social borders and to formulate and promote a strong pro-family policy in the area. Measures to mitigate the impacts of population decline include maintaining and* ***increasing the prosperity of an ageing population****, which is not possible without increasing labour productivity and fundamentally improving access to quality healthcare as well as lifelong learning.*

According to an estimated 300,000 Slovaks have left Slovakia in the last 15 years, most often university-educated young people under the age of 30. A good social policy in the border area with Austria can mitigate this trend by creating border jobs.

<u>Intervention</u>

Reflections on social border issues can also be oriented towards the active protection and sustainable use of cultural heritage, including the cultural landscape, and this significantly appreciates the activities supporting the making available of digitised cultural heritage content to the general public and businesses, in several technological forms, the modernisation of the presentation of cultural heritage using new technologies and progressive marketing methods, as well as the involvement of local actors in the commercial exploitation of cultural heritage and the provision of services with genius loci originality.

In the conditions of Slovakia, it is necessary to support activities (from the state level and also from the level of municipalities) that will involve local actors in the commercial exploitation of the potential of cultural heritage sites. These are often unique places where actors cannot be successful.

Many natural and semi-natural landscapes are different types of cultural heritage, including archaeological monuments, historical landscape features, architectural elements, but also values of an intangible nature such as traditions, stories and customs, which is a space for social convergence of the border population.

Priority 4: *Cooperation between border institutions and residents*
This area implements the preconditions for the EU policy objective ISO 1 Better governance of cooperation. The Programme will support two specific objectives: - ***(ii) Improving the efficiency of public administration by promoting legal and administrative cooperation and cooperation between citizens, civil society actors and institutions, in particular with a view to addressing legal and other obstacles in border regions****; -* ***(iii) Building mutual trust, in particular by promoting 'people to the people'*** *actions . The purpose of the environmental impact analysis within the programme area of the Programme is to identify the most important environmental problems, including their most sensitive elements and the factors causing adverse changes to the environment, which may result from the implementation of the programme.*
The Interreg VI-A Slovakia- Austria- 2021-2027 cross-border cooperation programme has a budget of more than €69 million. The territory on the Slovak side of the border includes the Bratislava and Trnava regions, on the Austrian side of Lower Austria, Vienna and Burgenland.

Assessment of the effects of the priority
In addition to concrete measures for mutual institutional cooperation on the border, these include proposals for reforms in the financial, economic and social spheres. ***However, systemic measures within public administrations, in particular the introduction of a supra-ministerial approach, must also be taken to enforce these reforms.***
Regional development is therefore not possible without a supra-ministerial approach. Therefore, municipalities must jointly prepare integrated territorial strategies, which are also intended to contribute to the objectives of the 2030 Agenda. This will be ensured in the territory, in particular by linking regional planning processes to EU programming processes, namely in the preparation of economic development and social development programmes, including for strategic-planning regions and sustainable urban development areas. At the same time, at national level there will be sectoral and territorial coordination of investments, in order to materially link the investment priorities of integrated territorial strategies of self-governing regions and departments.
In view of the changing environment in industry, the change in structure as well as labour shortages or its inconsistencies with labour market demand (in particular regional, border) The Programme can contribute to the areas of skills acquisition and the preparation of a new workforce.
Investments in social inclusion policies and social infrastructure, in particular in affordable social housing, healthcare, long-term care and childcare, with due regard to regional disparities, are needed to fully exploit the employment potential. Investment is also necessary to ensure universal access to public technical infrastructure and services, especially in the case of segregated Roma communities.

Intervention
This area implements the preconditions for the EU policy objective ISO 1 Better governance of cooperation. A specific objective will be supported under priority. Increasing the efficiency of

public administration by promoting legal and administrative cooperation and cooperation between citizens, civil society actors and institutions, in particular with a view to addressing legal and other obstacles in border regions.
The establishment or improvement of cooperation links and the promotion of the creation of information-sharing platforms, which are one of the key preconditions for participating in a broad, sustainable form of resource management.
Support for regional economies building their specialization in local natural, raw material, human and geographical specificities is one of the appropriate, if not the most appropriate, forms of economic development from an environmental point of view.
A valuable contribution from the point of view of assessing cooperation between the institutions and the inhabitants of the border is to support the development of ecosystem services as a basis for the development of individual sectors of regional economies, including in the fields of agriculture, forestry, water management, tourism and energy, thus creating a prerequisite for a sustainable environmentally sound fashion for the development of the economies of individual regions of the border region, strengthening their resilience and adaptability climate change and, last but not least, the creation of sustainable jobs saturated by the local workforce.
In the light of the above, it is possible to positively evaluate the orientation of the intervention leading to the emergence of powerful and resilient regional economies on the basis of the local potentials of individual regions.

A detailed description of the priorities is given in Annex 1 - Chapter 2 of the Programme, a commentary on them is given in Chapter 11 (XI.) Specific requirements.

Analysis of the state of the environment in the region covered by the

On the basis of the available materials, in particular reports on the state of the environment in Austria and Slovakia, the main problems and environmental risks in the area covered by the Programme were identified and in Chapter 3.(III) 1 its current state was described. On the one hand, this was intended to shape the programme so that it is used as much as possible to improve the state of the environment and, on the other hand, to enable the environmental impact assessment and the identification of potential significant negative impacts and the design of activities minimising this impact, to indicate alternative and, where appropriate, compensatory activities. This analysis has also been used to define the criteria for selecting projects for support under the programme.
The environmental health analysis (Chapter 3 (III.)) included all its components, namely: nature and biodiversity, climate change, resources, precipitation and the earth's surface, air quality, water, soil, impact on human health, flood protection issues and drought prevention and cultural heritage.
In general, the evaluation can be declared that, as far as natural and landscape values are concerned, the programme area is one of the most valuable regions in both countries, with a

large share of Natura 2000 areas, national and natural parks and UNESCO biosphere reserves. It is also rich in sights.

However, it encounters serious environmental problems such as: loss, fragmentation and changes in habitats, degradation of landscape values, amplifying impacts of meteorological phenomena linked to climate change, problems related to waste management, air pollution above standards (especially in many cities), problems with exposure of the population to noise, polluted surface waters and danger to groundwater, water management problems (floods and droughts), threat from landslides. Negative phenomena occur to varying degrees in parts belonging to both states.

Environmental impact assessment

The analyses assessed in detail the possible impact of all areas of support envisaged by the programme on individual environmental components, including: humans, animals, plants, water, air, earth surface, landscape, climate, natural resources, monuments and tangible property. The evaluation used developed impact assessment criteria taking into account the state and greatest environmental problems, the possible negative impact and the characteristics of projects that can be supported by the Programme, as well as the objectives of the EU and both States strategy papers.

Detailed analyses have been carried out for each type of project identified during the analysis, as potential projects that can be implemented under the programme. They are contained in documents : document “Program of economic development of social development BSK 2021 - 2027 (with a view to 2030)", „Program of economic development of social development of the Trnava Self-Governing Region 2022 - 2030“, „Framework strategy of the smart city / Smart City) 2019 - 2050 (Vienna)“, „Statistik Austria (2022): Statistik des Bevölkerungsstandes“, „Statistik Austria (2022) : Demographic Yearbook 2020 and their summary is the main part of the evaluation report. It should be stressed that, due to ***the general nature, the potential effects of action could not be presented*** *only in a general way, namely the actions* ***will depend on the location and characteristics of the specific activity proposed for support under the Programme in the individual calls.***

As a result of the analyses, it was found that the most significant negative environmental impact of the programme may occur in the implementation of projects related to the construction and modernisation of roads, multimodal centres and car parks (implemented under the Second Axis sustainable cross-border transport). They may relate in particular to exposure to biodiversity, animals, plants and may also affect the integrity of protected areas. The construction and operation of these buildings can cause numerous complications in the functioning of ecosystems, which is mainly associated with the emergence of communication barriers and with interference with water relations. This may be particularly important for roads and car parks located in Natura 2000 areas where they may pose a danger to protected species in those areas.

In terms of impact on air quality, climate and human health, projects of this type will have both a positive and a negative impact. The positive impact will be associated with an increase in transport efficiency, which entails a reduction in emissions of pollutants, including greenhouse

gases. In addition, such projects may reduce traffic intensity in the most populated areas by transferring it to other roads and bypasses. The negative impact may be associated with an increase in the attractiveness of road transport, this may be reflected in the intensification of road transport with all the consequences associated with it.

Similarly, but on a much smaller scale, projects implemented under the I. axis Protection and development of the natural and cultural heritage of the border area in the form of car parks, cycle paths and other activities in favour of the use of natural and cultural heritage will also operate. As mentioned above, the level of action will depend on the type of project and its location, but it is generally considered that they will primarily have a positive effect on the environment.

Another group of projects carried out under this axis, including restoration, preservation, expansion of conservation objects and other activities, will also have a positive impact on the environment, especially in the case of projects related to the modernisation and conversion of existing buildings, where modern methods of improving their thermal economy will be applied.

Projects Development of cross-border education and lifelong learning will also be important and positive for the environment. Any projects implemented under this axis will not directly affect the environment, but by increasing the level of general and professional knowledge, the level of knowledge of society regarding the environment will be developed.

GIS software was also used for the analysis, allowing to apply layers of maps to each other, e.g. planned investments and protected areas or ecological corridors. This will make it possible to help identify the impact, at known project locations, on individual environmental components, e.g. on protected areas.

Assessment of cumulated effects

The cumulated impacts of the programme analysed are defined as changes in the environment caused by the action of the activities proposed in the programme in combination with other influences present in the space and the impacts of activities envisaged to be implemented in the future.

An analysis of the possible environmental impacts of the programme, which may be cumulated with other impacts, is presented on the in-depth analysis pages constituting of another materials – Projects of Slovakia and Austria.

The problem is that the Programme is of a general nature and does not specify action that can be supported, either in terms of characteristics or their location. In this situation, it can only be accepted that accumulation of impacts is likely as long as they are located in an area of pre-existing or future anticipated accumulations of impacts from existing and/or planned infrastructure.

To indicate possible areas of accumulation of influences, it is necessary to use GIS software. By overlaying maps of different contents, sites with potential accumulation of effects have been identified. The materials available on both sides of the border in the form of strategies and programmes at national, regional and sectoral level have been used for this. Potential locations where the impacts of the programme and other activities outside the programme can accumulate are presented on the map in Fig. 1, Chapter 3.

Analysis of possibilities for cross-border operations

The work on the evaluation report analysed the possibility of environmental exposure in the cross-border aspect, as well as in the area of activity between States participating in the Programme, as well as the cross-border impact of the Programme on neighbouring States. Identifying the nature and extent of any cross-border operation is unusually difficult, taking into account the very broadly formulated majority of areas of support, as well as not specifying the location of individual projects that may receive financial support for their implementation. During the work on the evaluation report, all types of projects included in the programme were analysed and the analyses carried out show that any environmental exposure in the cross-border aspect may be linked not only to the implementation of road projects linking the two States participating in the programme. Although the programme only envisages this type of communication, cross-border action against neighbouring countries, including the Czech Republic and Hungary, can be expected.

Intervention

Taking into account the above, it is not possible to carry out a final assessment as regards the possibility of cross-border operation during the strategic evaluation phase of the programme, but it may prove necessary during the environmental impact assessment phase of individual Activities on environment.

5 (V.) Proposed measures to prevent, eliminate, minimize and compensate for environmental and health impacts

The purpose of the proposed measures is to make effective use of the territorial potential of the regions. A key prevention is the creation of a mutually harmonised system of management of public policies to ensure joint intervention of all levels of public administration (from municipalities to VUCs to the national level) in the territory of the affected regions of Slovakia and Austria, which represent a broader level of economic and social development management with interregional and local levels with the participation of all stakeholders.

These measures will be achieved through the following steps:

1. *Prevention of environmental and health impacts of the territory concerned.*
2. *Elimination of environmental and health impacts of the territory concerned.*
3. *Minimisation of environmental and health impacts of the territory concerned.*
4. *Compensation for environmental and health impacts of the territory concerned.*

In view of the above assessment of measures and the expected impact of the implementation of this Strategy Paper, it is necessary to build on other strategy papers with an impact for 2030 and to take the following measures to prevent, eliminate and offset environmental impacts in the implementation of the visa and the strategy contained therein:

- *make consistent use of the coordinating function of this strategy paper, with an emphasis on increasing the synergies between environmental, social and economic policy, the efficiency of public interventions and their synergies in the regions concerned,*
- *project the individual Priorities of the Programme into the **prevention** of environmental and health impacts, while carefully applying the integration of environmental aspects across all integrated investment packages and individual investments in the regions,*
- *pay particular attention to the promotion of environmental innovation and the development of environmental infrastructure and to the use of its synergies in the sphere of economic and social, necessary to **eliminate** environmental and health impacts,*
- *when deciding on management interventions aimed at fulfilling the individual activities of the Programme, consistently apply not only monetary but, above all, socioeconomic, social and environmental aspects of assessing their effectiveness and ensure their thorough assessment within the framework of the SEA and EIA processes, thereby **minimising** their impact on the environment and health,*
- ***to compensate for the** impact of the Programme through the implementation of the Agenda 2030 document fulfilling the function of the National Strategy of Regional and Territorial Development, consider as the starting binding document for the formulation of the Partnership Agreement of the Slovak Republic and the EU for the programming period of the Structural Funds 2021-27 and project the development programmes defined by it into the structure of the support instruments,*

- *make consistent use of monitoring and objective evaluation tools in the implementation of the Programme and adapt the strategy on the basis of them, reflecting current changes in the external and internal conditions of its implementation.*

5.1 Measures to avert, reduce or mitigate any significant negative impacts on the environment, including health, that could result from the implementation of the strategy paper

Protection and development of natural, human and cultural resources

The Programme pays particular attention to local public sector investment in all proposed Priorities in key public infrastructure projects.

In the projection of the Program into regional strategy papers, ensure that all priorities defined in the Programme are met in a balanced manner, in particular:

- *to pay attention to investment interventions aimed at optimising modal split under the EU White Paper on Transport (European Commission, 2020) as a key aspect of increasing the environmental sustainability of transport,*
- *pay attention to investment interventions aimed at reducing final energy consumption in the transport sector (in the territory concerned),*
- *pay attention to investment interventions towards electro-mobility in road and rail transport and to a substantial reduction in emissions and noise in transport,*
- *until 2027, take into account in Activities - projects the need to increase the pace of the share of renewable energy sources from renewable energy sources (hereinafter referred to as RES) in the total coverage of energy needs in the Slovak Republic by 2030, taking into account environmental limits and real potential in Slovakia as well as social availability of energy from RES,*
- *for specific actions - projects for the use of RES, it is necessary to take into account and respect Natura 2000 sites and their subject-matter not only in their implementation, but already at the stage of their preparation and planning, and also not only in their construction directly in those territories,*
- *in the investment priority of supporting the use of biomass, as an energy source in Actions - projects, evaluate the potential of biomass production suitable for such a method of appreciation in Slovakia and A with the inclusion of installed capacity and consumption of already existing facilities, especially in the case of energy use of wood chips,*
- *consider this as a last resort for investments in waste as a last resort for its recovery and to prioritise recycling recovery,*
- *pay attention to Actions - projects aimed at eliminating old environmental burdens in order to fundamentally change the quality of long-term ecologically burdened territories and to exploit the potential of these sites/areas for rational territorial development,*
- *For preventive measures to mitigate the negative consequences of potential flooding, entanglement and drought by reconstructing drainage channels in order to improve the potential of agriculture, particular attention should be paid to the impact of these*

measures on the impact of these measures on the country's water regime, the watercourse regime, on the impacts on natural ecosystems, particularly on valuable wetland communities, but also on the impact on soil erosion. In the development of the Programme, particular attention should be paid to the directing of investments related to human resources development, Activities to focus on environmental education (environmental protection, organic farming, healthy food, impact of environmental quality on quality of life, etc.),

- *in relation to the development of human resources, it is essential in the development of the Programme to promote activities aimed at substantially improving the quality of education in the long term, the creation of a functional modern concept of the education system at all educational levels, including lifelong learning,*
- *for the development of human resources with a view to improving population development through support for young families, it is necessary to support investments developing ecological land management,*
- *from the point of view of stabilising young people, activities aimed at building so-called stabilisation apartments, infrastructure development and job creation are essential in the development of the Development Programme,*
- *involve local actors in the commercial exploitation of the potential of cultural heritage sites in the conditions of the regions concerned. These are often unique places in which actors cannot be automatically dependent solely on commercial activities using genia loci and on services provided to visitors of the sites.*
- *the establishment of a system for monitoring cultural activities at all levels, including mapping cultural values and activities, institutions and organisations, creative industries activities with the creation of information databases.*

Specific measures to avert, reduce or mitigate potentially significant negative impacts on the environment, including health, are assessed in the structure of the individual Priorities of the Programme under review (Annex 1. Chapter 2. Priorities):

Priority 1: More innovative borders

Development and expansion of research and innovation capacities and use of advanced technologies.

Specific objective:

The specific objective of the Programme is to promote cross-border cooperation in research and innovation in line with national smart specialisation strategies.

Types of actions:

The types of actions referred to in this Part shall contribute to the achievement of a specific objective, in particular by following the following approaches:

- *support for cross-disciplinary, multidisciplinary and interdisciplinary cooperation activities, i.e. cooperation between several sectors in line with smart specialisation strategies in Slovakia and Austria,*
- *sharing and transferring research and innovation results into practice,*
- *raising awareness among the professional and wider public about cross-border research and innovation.*

Related action types can be included:

1. Interdisciplinary cross-border cooperation in research and innovation

The objective of this type of action is to strengthen cross-border research and development in areas of common interest, such as life sciences (including biomedical and biotechnology), (digital) health (including an ageing society, food and nutrition), sustainability and the environment. (including eco-innovation, waste management, climate change and sustainable energy), creative industries and digital transformation (including smart technologies and services and industry 4.0).

Design of activities:

- *joint research and innovation activities in areas of common interest,*
- *university cooperation activities with MSP private sectors to transfer research technologies and knowledge into practice,*
- *cross-border mobility of researchers, for example through post-doctoral scholarships and staff exchanges.*

2. Implementation of actions in joint research facilities, including smaller-scale investments

The objective of this type of action is to develop or improve shared (digital) research and transmission infrastructure and services.

Design of activities:

- *investments in new or improved joint research and innovation facilities and services of cross-border interest,*
- *the development of common transfer and technological facilities, including social innovation, such as clusters, high-quality (research and design) R&D centres or cross-border incubators,*
- *support for (digital) social innovation, e.g. setting up digital innovation centres, accelerators or co-working & technopreneur campus.*

3. Scientific education and awareness-raising activities

The aim of this type of action is to raise awareness of research and innovation among local and regional actors and the general public.

Design of activities:

- *awareness-raising and capacity-building activities at local and regional level, such as excursions, (digital) trainings or other information activities,*
- *science education in schools and other educational institutions, including the exchange of know-how.*

Contribution to macro-regional strategies

Actions will contribute to priority area 7 of the EU Danube Strategy under the EUSDR - Action Plan (2020), for example to improving the framework conditions for building a knowledge society, to increasing the level and quality of network activities, to strengthen existing links and promote new cooperation in the Danube region, to strengthen the implementation of the European Research Area in the Danube region, to reverse the brain drain and to promote brain circulation, and to implement smart specialisation strategies in all Danube countries.

All implemented projects will take into account related strategies and action plans at regional, national and EU level, such as the Renewed European Agenda for Research and Innovation (2018), the Open Innovation Strategy for Austria (2016) or the Slovak Research and Innovation Strategy for Smart Specialisation (2013) as well as the Research and Innovation Strategy Action Plan for Smart Specialisation of the Slovak Republic (2015). Wherever possible, they shall exploit synergies with related initiatives and projects, taking into account in particular the results of previous INTERREG V-A SK-AT projects and other EU programmes such as LIFE and Horizon 2020.

Intervention:

The output indicators are adequate, the numbers of organisations, solutions and participants are adequate with the financial plan.

The result indicators are also adequate, the numbers of organisations, solutions and participants adequate with the financial plan.

<u>Opinion of the report's processor:</u>

The More Innovative Frontier activity focuses on the development and expansion of research and innovation capacities and the use of advanced technologies. There is little likelihood that they will have an impact on the environment, including human health, that could result from the implementation of this strategy paper. However, for projects for the application of advanced technologies, it is necessary to consider proposed measures to prevent, eliminate minimization and compensate for environmental and health impacts.

It is logical to specify audiences:

- *the population in the programme area directly benefiting from the research and innovation activities put into practice,*
- *public and private institutions in all sectors directly benefiting from better access to research and innovation results,*
- *public and private (research and innovation) R&I institutions through participation in actions or the adoption of solutions, sectoral agencies such as local or regional*

development agencies, higher education and research institutions, educational institutions, training centres and schools, MSP or economic development institutions.

The planned use of financial instruments is in line with the allocation of resources to EU programmes.

Priority 2. Greener borders

Supporting adaptation to climate change and disaster risk prevention, as well as resilience, taking into account ecosystem-based approaches.

Specific objective:

The specific objective is to increase know-how and resilience to the impacts and risks of climate change at regional and local level, including natural risks.

Types of actions:

Types of actions and their expected contribution to those specific objectives and, where relevant, to macro-regional strategies and also for the maritime areas of neighboring states:
The types of actions referred to in this Part shall contribute to the achievement of a specific objective, in particular by following the following approaches:

- *supporting the identification of climate risks and the development of appropriate measures to adapt to and mitigate climate change, focusing on particularly affected areas such as forestry, agriculture, urban development, water management and tourism in the SK-AT border region,*
- *supporting the prevention of natural dangers caused by climate change, such as floods and forest fires, assistance in mitigating threats to settlements, infrastructure, livelihoods and human lives,*
- *supporting climate-resilient cities and communities by finding optimal, cost-effective, science-based and consistent solutions for sustainable, future-oriented communities and by informing authorities and stakeholders, as well as the general public, of the measures they can take to proactively adapt to climate change.*

Related action types can be included:

1. Data collection and analysis, exchange of know-how and development of strategies

The objective of this type of action is to strengthen and coordinate know-how and preparedness for the impacts and risks of climate change at regional and local level, with an interdisciplinary focus.

Design of activities:

- *data collection and harmonisation of data on climate-related risks in the border region, such as extreme weather, heat waves or pests, or for assessing the impact of climate change mitigation measures, including open data activities,*

- *studies and analyses on climate change to better understand the interrelationship between vulnerability and adaptation capability in the programme area,*
- *(digital) scientific activities of citizens, such as phenological observations,*
- *(digital) workshops, conferences, discussion panels on possible climate change adaptation measures involving different types of target groups and stakeholders at local and regional level, including networking activities between technology providers and main users,*
- *the development of an interdisciplinary strategy for climate-related actions such as soil protection or green and open spaces for recreation and leisure in changing climate conditions,*
- *risk management plans dealing with specific sectors in the cross-border region (e.g. water, agriculture and forestry, tourism, housing, services and infrastructure, ...), including response organisations.*

2. Implementation of joint (pilot) actions, including small-scale investments

The objective of this type of action is to support the implementation of innovative or practice-tested actions that help adapt to the impacts of climate change at regional and local level, building on best practices and providing them at local, national and EU level.

Design of activities:

- *specific local mitigation measures, such as measures relating to greening and shielding in residential areas or water maintenance in rural and urban areas,*
- *actions introducing new research results or innovative solutions into practice,*
- *development of tools with different adaptation measures for urban areas, communities and businesses with a view, for example, to reducing heat islands, cooling buildings or adapting infrastructure towards greater energy efficiency and reducing* CO_2 emissions*,*
- *implementation of common (digital) risk management systems and tools, e.g. flood warning,*
- *pilot measures to improve the management of the Danube with regard to sediment transport and river morph-dynamics for adaptation to climate change.*

3. Awareness-raising and capacity-building activities

The aim of this type of action is to raise awareness and capacity - predominantly local - decision-makers and the wider public about the impacts and risks of climate change and related adaptation measures.

Design of activities:

- *general awareness-raising activities at local level addressing the wider public, e.g. gaming events, urban horticultural activities, trips, trainings, school and community events,*
- *(digital) seminars or other specific information activities aimed at local decision-makers on climate-related health risks, such as heat, the spread of allergenic and toxic species*

or outbreaks of infectious diseases, also taking into account knowledge from the COVID-19 pandemic on civil protection measures and natural risks;

- *(digital) civil protection training or field exercises to improve the region's preparedness for climate change risks.*

Contribution to macro-regional strategies

Actions shall contribute to Action 3, 4, 5 and 7 of EUSDR PA6, for example to improve the management of Natura 2000 sites and other protected areas, to halt the deterioration of species and habitats, to reduce the introduction and spread of invasive alien species (IAS) in (Poddunajská oblasť) the Danube region, or to the conservation and restoration of green infrastructure elements.

All projects implemented take into account related strategies and action plans at regional, national and EU level, such as the EU Adaptation Strategy (2021), the Austrian Climate Change Adaptation Strategy (2017) or the Action Plan to Adapt to Adverse Climate Impacts. change in the Slovak capital Bratislava for the years 2017-2020. Wherever possible, they shall exploit synergies with related initiatives and projects, taking into account in particular the results of previous INTERREG V-A SK-AT projects and other EU programmes such as LIFE and Horizon 2020.

Intervention:

The output indicators are adequate, the numbers of organisations, action plans, solutions and participants are adequate with the financial plan.

The result indicators are also adequate, the number of organisations, action plans, solutions and participants adequate with the financial plan.

<u>Opinion of the Report's processor:</u>

Activity for The Greener Border sufficiently defines the main target groups:

- *the programme population directly benefiting from improved green infrastructure and induced ecosystem services and reduced pollution,*
- *public and private institutions in all sectors directly benefiting from improved green infrastructure and induced ecosystem services and reduced pollution, for example in the fields of agriculture, forestry, tourism and water management,*
- *public and private institutions in the programme area, for example in the fields of nature protection, forestry, education, hunting, tourism, transport, water management or regional development, material economy or green economy, by participating in actions or adopting solutions such as local, regional or national public authorities, sectoral agencies (local or regional development agencies, environmental associations or energy agencies), providers of infrastructure and/or (public) services, interest groups including non-governmental organisations (including nature parks), higher education and research institutions, educational and training organisations, including kindergartens or economic development institutions.*

The designation of a specific target area shall be complete, including the planned use of integrated territorial investments (Integrované územné investície - IÚI), community-led local development or other territorial instruments.
Activities will be carried out throughout the programme area. This applies in particular to awareness-raising activities, as well as measures aimed at preserving and improving green infrastructure as an essential contribution to climate change mitigation and nature conservation, as well as measures aimed at reducing pollution, which are crucial in both urban and rural areas.
As regards the preservation and restoration of biodiversity, particular attention should be paid to sensitive but unprotected areas of the region, such as wet habitats and wetlands along the region's water bodies, as they are crucial for improving the cross-border interconnection of protected areas and habitats. In addition, priority should be given to all areas with valuable natural assets, particularly affected by environmental pressure and/or with the potential to restore the region's biodiversity.

The main target groups are correctly specified by:

- *the programme population directly benefiting from improved green infrastructure and induced ecosystem services and reduced pollution,*
- *public and private institutions in all sectors directly benefiting from improved green infrastructure and induced ecosystem services and reduced pollution, for example in the fields of agriculture, forestry, tourism and water management,*
- *public and private institutions in the programme area, for example in the fields of nature protection, forestry, education, hunting, tourism, transport, water management or regional development, material economy or green economy, by participating in actions or adopting solutions such as local, regional or national public authorities, sectoral agencies (local or regional development agencies, environmental associations or energy agencies), providers of infrastructure and/or (public) services, interest groups including non-governmental organisations (including nature parks), higher education and research institutions, educational and training organisations, including kindergartens or economic development institutions.*

No use of ITI, CLLD or other territorial instruments is planned.

Both the planned use of financial instruments and the indicative allocation of resources to EU programmes by type of intervention correspond to territorial focus mechanisms.

Priority 3: More social borders
Objective 1:
Improving equal access to inclusive and high-quality education, training and lifelong learning services by developing available infrastructure, including strengthening resilience for distance and online education and training.
Specific objective:

Improve mutual understanding and strengthen educational capacities.

Types of actions:

The types of actions referred to in this Part contribute to a specific objective, in particular by strengthening cross-border links through educational activities focusing on language, skills and cultural competences.

Related action types can be included:

1. ***Development of common strategies and implementation of common solutions, including small investments to promote cooperation in the field of education***

The main objective of this type of action is to improve joint education, training and lifelong learning activities in order to improve mutual understanding.

Design of activities:

- *the creation of a common database by collecting, harmonising and sharing data relevant to education, training and lifelong learning,*
- *development of training programmes improving skills and competences (language and culture; environmental, technical and digital education);*
- *the development of a regional/subregional education and training strategy,*
- *developing a strategy for closer cooperation enabling exchanges of teachers and students.*

2. ***Exchange of know-how and training of relevant stakeholders actively involved in the educational process***

The main objective of this type of action is to promote synergies between educational, university and vocational training institutions in order to strengthen educational capacities.

Design of activities:

- *exchange of know-how on effective approaches and methods in education, e.g. language and cultural education, environmental, technical and digital education or inclusive education,*
- *joint learning activities for teachers,*
- *cooperation of organisations providing vocational training,*
- *cooperation between educational institutions in the programme region or between educational institutions and the business sector,*
- *working orientation.*

Contribution to macro-regional strategies

Actions will contribute to priority area 7 of the EUSDR "Developing a knowledge society (research, education and IKT)" and in particular to priority area 9 "Invest in people and skills", which aims to contribute to improving learning outcomes, skills and competences, focusing on learning outcomes in employability, entrepreneurship, innovation, active citizenship and well-

being, contributing to higher quality and efficiency of education, ensuring inclusive education, equal opportunities and non-discrimination, as well as promoting civic competences and lifelong learning opportunities for all. In addition, closer cooperation between education, training and labour market institutions and research institutions is strongly envisaged.
All projects implemented take into account related strategies and action plans at regional, national and EU level, such as Education for Sustainable Development, Austrian Lifelong Learning Strategy, Qualification Plan (Qualifikationsplan Wien 2030, 2018), Smart City Vienna Framework Strategy 2019-2050 (Smart City Rahmenstrategie 2019-2050, 2019), as well as the National Programme for The Development of Education and Training (2019-2019), as well as the National Programme for The Development of Education and Training (2019-2050), as well as the National Programme for The Development of Education and Training (2019-2050), Action Plan for Lifelong Learning (2011) and Regional Strategy for Education and Education in Secondary Schools in the Bratislava Self-Governing Region for 2019-2022 (2019) and Strategy for development of education in Trnava Self-Governing Region (2019) on the Slovak side.

Intervention:
The output indicators are adequate, the numbers of organisations, action plans, solutions and participants are adequate with the financial plan. The result indicators are also adequate, the number of organisations, action plans, solutions and participants adequate with the financial plan. The indicative allocation of resources shall be proportional to the funds provided.

Opinion of the report processor:
The main target groups are selected sensitively, including in particular:

- *the population in the programme area directly benefiting from the improved health and social care system,*
- *educational institutions active in the field of health and social care,*
- *research institutions benefiting from the results of joint health research,*
- *public, regional and local institutions in the programme area, such as hospitals, emergency and rescue systems, non-governmental organisations active in the field of health and social care.*

For these actions, the focus is on the whole programme area. No use of ITI, CLLD or other territorial instruments is planned.

Objective 2:

Ensuring equal access to healthcare and making healthcare systems more resilient, including primary care, and supporting the transition from institutional to family and community-based care.

Specific objective:
The aim is to improve the cross-border accessibility of healthcare and social services.

Types of actions:

The types of actions referred to in this section contribute to the specific objective, in particular through closer and systemic cooperation for better accessibility of healthcare and social services in the cross-border region.

Related types of actions include:

1. ***Development and implementation of cross-border strategies and action plans to strengthen cooperation between healthcare providers and social services***

The aim of this type of action is to develop joint strategies and action plans to overcome the different legislative framework and provide quality health and social services.

Design of activities:

- *data collection and joint research projects, e.g. digital health, etc.,*
- *development of joint strategies and action plans for cooperation between healthcare providers and educational/research institutions, cooperation between social care providers or between client-oriented health and social services,*
- *innovative concepts for regional health care structures or the transition from institutional to family and community-based care.*

2. ***Implementation of solutions, including small investments, to facilitate cross-border cooperation in the provision of healthcare and social services***

The aim of this type of action is to strengthen cooperation and ensure better access for health and social service providers across borders.

Design of actions:

- *joint actions for better access to emergency health services across borders,*
- *pilot actions for the cooperation of relevant actors providing health care and social services,*
- *activities towards common standards for health care and social services,*
- *joint cross-border awareness-raising campaigns.*

Contribution to macro-regional strategies

There is no direct link between the actions and the EUSDR; However, actions under the priority will be guided by the Commission's priority for 2019-2024 (2019), which focuses on 'An economy that works for people with a focus, inter alia, on social Europe (social protection and inclusion)' and on 'Promoting our European way of life aimed, inter alia, at health protection'. All projects implemented take into account related strategies and action plans at eu regional, national and EU level, such as Health Targets Austria (Gesundheitsziele Österreich, 2017), Masterplan Care Services – proposal (Masterplan Pflege - Entwurf, 2018), Smart City Vienna

Framework Strategy 2019 -2050 (Smart City Rahmenstrategie 2019-2050, 2050, 2019- (2019) on the Slovak side.

Intervention:
Output and result indicators are acceptable, target groups corresponding to share types are targeted. The allocation of resources is proportional.

Opinion of the report processor:
Add in the section ***"Contribution to macro regional strategies*** *Information on the fulfilment of the National Goals of the Slovak Republic III, to the Protocol on Water and Health to the "Convention on the Protection and Use of Transboundary WaterCourses and International Lakes of 1992" issued by the Ministry of Health of the Slovak Republic, Ministry of Environment of the Slovak Republic and ÚVZ SR in November 2021 with content at all levels of cross-border decision-making in the national and international context at individual and collective level, implemented through the improvement of water management, the protection of aquatic ecosystems, the quality and quantity of water, as well as through the control and reduction of water-related diseases.*
For each Action, determine how to achieve the objectives of the Water Health Protocol as a macro regional strategy.

The main target groups are acceptable:

- *the population in the programme area directly benefiting from the improved health and social care system,*
- *educational institutions active in the field of health and social care,*
- *research institutions benefiting from the results of joint health research,*
- *public, regional and local institutions in the programme area, such as hospitals, emergency and rescue systems,*
- *non-governmental organisations active in the field of health and social care.*

Add information on the common cross-border UNESCO World Heritage site "Borders of the Roman Empire (Hranice Rímskej ríše – Dunajský limes (západná časť)) – Danube limes (western part), Germany, Austria, Slovakia and Hungary, as a joint cross-border awareness campaign.

Objective 3:
Strengthening the role of culture and sustainable tourism in economic development, social inclusion and social innovation.

Specific objective:
The objective specific objective aims to assess and improve their accessibility in a coordinated and sustainable manner the tourist assets and locations of the regions.

Types of actions:

The types of actions referred to in this Part shall contribute to a specific objective, in particular by preserving, maintaining and evaluating the cultural and natural heritage of the cross-border region through sustainable tourism and cross-border connectivity that promote sustainable forms of mobility.

Related types of actions include:

1. ***Development and implementation of cross-border strategies and action plans for the sustainable development of tourism***

The main objective of this type of action is to implement cross-border tourism strategies and to improve the development of sustainable tourism.

Design of activities:

- *studies on the sustainable and efficient appreciation of cultural and natural heritage in tourism,*
- *initiatives coordinating cultural and natural heritage development plans, e.g. joint preparation of exhibitions, joint research initiatives,*
- *action plans for the development of quality labels in services and products,*
- *development of new innovative mediation/digital formats,*
- *common approaches to valorising prospective sites and attractions, promotional activities or educating the public and volunteers,*
- *development of common thematic hiking trails and offers based on natural and cultural heritage (e.g. wine, cycling, architecture, history, etc.).*

2. ***Implementation of joint solutions, including small investments in natural and cultural heritage sites and joint tourism services***

The main objective of this type of action is to support projects that can contribute to the diversity of tourism supply and products with a more strategic approach that achieves synergies between them.

Design of activities:

- *cross-border destination management and marketing activities such as promotions of natural or cultural heritage sites (joint tour guides, information boards, tourist tours),*
- *implementation of thematic offers such as routes on common themes (e.g. Cesta šľachtických rodov (Aristocratic Families Path), Cesta železnej opony (Iron Curtain Road), Vodné chodníky (Water Trails), Geopark Malé Karpaty (the Geopark Little Carpatians),Trasa historických parkov (Historical Park Route),*
- *preservation and maintenance of cultural heritage sites, sites and monuments, including investments in tourist infrastructure, e.g. visitor centres,*
- *activities related to the mobility of cross-border tourism, including small investments,*

- *educational activities for the competent authorities/owners of historical sites or volunteers,*
- *activities to raise the general public's awareness of the natural and cultural heritage,*
- *exchange of know-how, improving cooperation and promoting culture, arts and artists.*

3. Infrastructure investments to improve the accessibility of cross-border regions and locations for citizens and tourists

The main objective of this type of action is to improve the local and regional level of cross-border accessibility.

Design of activities:

- *planning process and implementation of sustainable cross-border connections (e.g. Angern – Záhorská Ves, Dürnkrut – Gajary),*
- *filling gaps in cycle paths anchored in tourism projects.*

Contribution to macro-regional strategies

Actions shall contribute to priority area 3 of the EU Strategy for the Danube Region (EUSDR) "Promoting culture and tourism, people-to-people contacts", in particular:

- *developing sustainable forms of tourism (green tourism products and sustainable mobility solutions) and ensuring sustainable preservation, protection, socialisation and simultaneous interpretation of cultural heritage and natural values,*
- *promoting science, research and new technologies in culture, tourism and people's contacts with people by supporting the implementation of a harmonised monitoring system dedicated to sustainable tourism and cultural/natural heritage and promoting the exchange of practices and networking in the arts, further promoting the creation of links and synergies between the cultural and creative sectors and the tourism sector,*
- *the appreciation, promotion and protection of cultural heritage, inter alia through the creation of the Danube region as an important European tourist destination, by supporting the development of quality products, infrastructure and innovative forms of tourism and culture by (Malé a stredné podniky- MSP and public-private partnerships.*

All implemented projects will take into account related strategies and action plans at regional, national and EU level, such as the Masterplan of Tourism (Plan T – Masterplan für Tourismus, 2019) and the Strategy for Tourism Development in Slovakia up to 2020 (2013), the Marketing Strategy of the Slovak Tourism Agency 2014-2020 (2013) at national level. Furthermore at regional level Tourism Strategy (Tourismusstrategie Burgenland 2022+, 2018), Cultural Strategy (Strategie für Kunst und Kultur des Landes Niederösterreich, 2016), Tourism Strategy 2020 (Tourismusstrategie 2020, 2017), Shaping Vienna – Visitor Economy 2016-2020, Strategy for tourism development in the Bratislava Self-Governing Region (2015) and Strategy for tourism development in Trnava Self-Governing Region (2015).

Intervention:

Output and result indicators are acceptable, target groups corresponding to the types of actions. The allocation of resources is proportional.

Opinion of the Report processor:

Strengthening the role of culture and sustainable tourism in the areas of economic development, social inclusion and social innovation is well declared in order to achieve the objective and specific objective and can be considered as an important contribution to priority area 3 of the EU Strategy for the Danube Region (EUSDR) "Promoting culture and tourism, people-to-people contacts".

The design of actions of the specific objective “to assess the tourist assets and locations of the regions in a coordinated and sustainable manner and to improve their accessibility” is precisely detailed in the design of actions at all points and the actions also cover the scope of the priority objective.

The main target groups are acceptable:

- *the population in the programme area directly benefiting from improved offers of culture and tourism and mobility,*
- *local tourism service providers,*
- *local entrepreneurs actively participating in tourism services,*
- *owners of local cultural sites,*
- *public, regional and local authorities in the programme area,*
- *NGOs active/providing tourism and culture services.*

Priority 4: Cooperation between border institutions and residents

Objective 1:

Enhancing the efficiency of public administration by promoting legal and administrative cooperation and cooperation between citizens, civil society actors and institutions, in particular with a view to addressing legal and other obstacles in border regions

Specific objective of the activity:

is to remove obstacles to cross-border cooperation and to promote institutional cooperation and to improve the development of a common strategy in areas of cross-border relevance.

Types of actions:

The types of actions referred to in this Part contribute to the specific objective, in particular by enabling stakeholders at all levels to address cross-border aspects, remove obstacles to cross-border cooperation for the long-term development of the programme area and improve data exchange and know-how.

Particular emphasis could be placed on strengthening the functional area of the Twin-City region and its background by promoting institutional cooperation and improving a common development strategy in areas of cross-border relevance. Joint administrative cooperation

should address the needs and dynamics evolving in the Twin-City region. This is particularly important in thematic areas such as mobility, housing, the labour market, health and social services.

Related action types can be included:

1. Know-how and data exchange to improve the development of the strategy in the cross-border region

The objective of this type of action is to improve the cross-border exchange of information and data in support of joint administrative and legal activities dealing, for example, with obstacles at borders.

Activity suggestions:

- *exchanging experience to share solutions and increase their impact,*
- *studies to understand cross-border barriers, processes and acquire expertise,*
- *data collection and harmonisation for the establishment of a solid database,*
- *development of the strategy (e.g. transport and mobility, housing, labour market, demographic changes in business development, RTI, emergency services, health education, regional development).*

2. Joint pilot actions aimed at removing border barriers

The objective of this type of action is to promote common cross-border solutions in order to reduce barriers and obstacles caused by different legal and administrative systems.

Activity suggestions:

- *joint activities and exchange of know-how between public actors in relevant thematic areas, e.g. housing, mobility, environmental protection or tourism, etc.*

3. Strengthening the institutional capacity of public authorities/organisations

The objective of this type of action is to improve institutional capacity towards information on cross-border cooperation and skills development in order to better understand each other.

Activity suggestions:

- *joint actions supporting the development of the skills of public authorities,*
- *training, mutual evaluations, language training and staff exchanges.*

Contribution to macro-regional strategies

Actions will contribute to initiatives in priority area 10 of the EU Danube Strategy under the EUSDR Action Plan (2020), for example by harmonising the regulatory framework and strengthening cross-border governance, promoting more effective cooperation between administrations, providing support for actions that contribute to strengthening institutional capacity to improve decision-making and administrative performance in the border region in

specified topics, and increasing the involvement of civil society; actors for more effective policy-making and implementation at regional level in the programme area.

The actions will also contribute to the 4th objective of the EU Strategy for the Alpine Region of EUSALP ***"Improving cooperation and coordination of action in the Alpine region"****.*

Intervention:
The output indicators are adequate, the numbers of organisations, action plans, solutions and participants are adequate with the financial plan.
The result indicators are also adequate, the number of organisations, action plans, solutions and participants adequate with the financial plan. The indicative allocation of resources shall be proportional to the funds provided.

Opinion of the Report processor:
The main target groups are selected sensitively, including in particular:
According to their thematic scope, the main target group is local, regional and national public authorities/institutions, intermediary organisations, EZÚS and non-governmental organisations in the programme area.
Another target group is the general public, which benefits from cross-border successes, such as better coordinated approaches to effectively address the main societal challenges and obstacles in the programme area and to provide services of general interest in a more efficient way.
According to their thematic scope, the main target groups are correctly identified: local, regional and national public authorities/institutions, intermediary organisations, EZÚS and non-governmental organisations in the programme area.
Another target group is the general public, which benefits from cross-border successes, such as better coordinated approaches to effectively address the main societal challenges and obstacles in the programme area and to provide services of general interest in a more efficient way.
The whole programme area is focused. No use of ITI, CLLD or other territorial instruments is planned.

Objective 2:
Building mutual trust, in particular by promoting 'people to people' actions*.*

Specific objective:
The specific objective is to deepen citizens' cooperation in the programme area.

Types of actions:
The types of actions listed in this section contribute to the achievement of a specific objective, in particular by promoting bottom-up cooperation between citizens in the programme area and by reducing negative thinking and bringing people together across borders.

Related types of actions:

1. Joint actions to build mutual trust and promote citizens' cooperation

The aim of this type of action is to improve local interaction between citizens across borders and to reduce negative thinking and improve communication between people in the border area.

Design of activities:

- *networking activities to improve cultural, social and economic relations with a clear cross-border focus, in particular by promoting trust and capacity building in the programme area (e.g. exchanges of educational visits, cultural events, conferences, tourist trips/excursions, etc.),*
- *jointly explore and develop solutions at local level, e.g. to overcome obstacles in areas of public administration, or to facilitate exchanges between associations, e.g. in the fields of education, natural and cultural heritage, etc.*

Contribution to macro, regional strategies

Actions will contribute to initiatives in priority area 3 of the EU Strategy for the Danube Region under the EUSDR Action Plan (2020) by supporting local initiatives related to culture and tourism and related societal activities.

Intervention:

The output indicators are adequate, the numbers of organisations, action plans, solutions and participants are adequate with the financial plan.

The result indicators are also adequate, the number of organisations, action plans, solutions and participants adequate with the financial plan. The indicative allocation of resources shall be proportional to the funds provided.

<u>Opinion of the report processor:</u>

The main target groups are selected sensitively, including in particular:

The main target group is, inter alia, citizens of the cross-border region, local public authorities/institutions, bodies governed by public law, intermediary organisations, EZÚS who can contribute to a common understanding and a common identity in the border region.

The whole programme area is focused. No use of ITI, CLLD or other territorial instruments is planned.

The whole programme area is focused. No use of ITI, CLLD or other territorial instruments is planned.

5 (V.) Proposed measures to prevent, eliminate, minimize and compensate for environmental and health impacts

The purpose of the proposed measures is to make effective use of the territorial potential of the regions, a key prevention is the creation of a mutually harmonised system of management of public policies to ensure joint intervention of all levels of public administration (from municipalities to VUCs to the national level) in the territory of the affected regions of Slovakia and Austria, which represent a broader level of economic and social development management with interregional and local levels with the participation of all stakeholders.

These measures will be achieved through the following steps:

5. *Prevention of environmental and health impacts of the territory concerned.*
6. *Elimination of environmental and health impacts of the territory concerned.*
7. *Minimisation of environmental and health impacts of the territory concerned.*
8. *Compensation for environmental and health impacts of the territory concerned.*

In view of the above assessment of measures and the expected impact of the implementation of this Strategy Paper, it is necessary to build on other strategy papers with an impact for 2030 and to take the following measures to prevent, eliminate and offset environmental impacts in the implementation of the visa and the strategy contained therein:

- *make careful use of the coordinating function of this strategy paper, with an emphasis on increasing the synergies between environmental, social and economic policy, the efficiency of public interventions and their synergies in the regions concerned,*
- *project the individual Priorities of the Programme into the **prevention** of environmental and health impacts, while carefully applying the integration of environmental aspects across all integrated investment packages and individual investments in the regions,*
- *pay particular attention to the promotion of environmental innovation and the development of environmental infrastructure and to the use of its synergies in the sphere of economic and social, necessary to **eliminate** environmental and health impacts,*
- *when deciding on management interventions aimed at fulfilling the individual activities of the Programme, consistently apply not only monetary but, above all, socioeconomic, social and environmental aspects of assessing their effectiveness and ensure their thorough assessment within the framework of the SEA and EIA processes, thereby **minimising** their impact on the environment and health,*
- ***to compensate for the** impact of the Programme through the implementation of the Agenda 2030 document fulfilling the function of the National Strategy of Regional and Territorial Development, consider as the starting binding document for the formulation of the Partnership Agreement of the Slovak Republic and the EU for the programming period of the Structural Funds 2021-27 and project the development programmes defined by it into the structure of the support instruments,*

- *make consistent use of monitoring and objective evaluation tools in the implementation of the Programme and adapt the strategy on the basis of them, reflecting current changes in the external and internal conditions of its implementation.*

5.1 Measures to avert, reduce or mitigate any significant negative impacts on the environment, including health, that could result from the implementation of the strategy paper

Protection and development of natural, human and cultural resources

The Programme pays particular attention to local public sector investment in all proposed Priorities in key public infrastructure projects.

In the programme's projection into regional strategy papers, ensure that all priorities defined in the Programme are met in a balanced manner, in particular:

- *to pay attention to investment interventions aimed at optimising modal split under the EU White Paper on Transport (European Commission, 2020) as a key aspect of increasing the environmental sustainability of transport,*
- *pay attention to investment interventions aimed at reducing final energy consumption in the transport sector (in the territory concerned),*
- *pay attention to investment interventions towards electromobility in road and rail transport and to a substantial reduction in emissions and noise in transport,*
- *by 2027, take into account in Activities - projects the need to increase the pace of the share of renewable energy sources from renewable energy sources (hereinafter referred to as RES) in the total coverage of energy needs in the Slovak Republic by 2030, taking into account environmental limits and real potential in slovakia as well as social availability of energy from RES,*
- *for specific actions - projects for the use of RES, it is necessary to take into account and respect natura 2000 sites and their subject-matter not only in their implementation, but already at the stage of their preparation and planning, and also not only in their construction directly in those territories,*
- *in the investment priority of supporting the use of biomass, as an energy source in Actions - projects, evaluate the potential of biomass production suitable for such a method of appreciation in Slovakia and A with the inclusion of installed capacity and consumption of already existing facilities, especially in the case of energy use of wood chips,*
- *consider this as a last resort for investments in waste as a last resort for its recovery and to prioritise recycling recovery,*
- *pay attention to Actions - projects aimed at eliminating old environmental burdens in order to fundamentally change the quality of long-term ecologically burdened territories and to exploit the potential of these sites/areas for rational territorial development,*
- *For preventive measures to mitigate the negative consequences of potential flooding, entanglement and drought by reconstructing drainage channels in order to improve the potential of agriculture, particular attention should be paid to the impact of these*

measures on the impact of these measures on the country's water regime, the watercourse regime, on the impacts on natural ecosystems, particularly on valuable wetland communities, but also on the impact on soil erosion. In the development of the Programme, particular attention should be paid to the directing of investments related to human resources development, Activities to focus on environmental education (environmental protection, organic farming, healthy food, impact of environmental quality on quality of life, etc.),

- *in relation to the development of human resources, it is essential in the development of the Programme to promote activities aimed at substantially improving the quality of education in the long term, the creation of a functional modern concept of the education system at all educational levels, including lifelong learning,*
- *for the development of human resources with a view to improving population development through support for young families, it is necessary to support investments developing ecological land management,*
- *from the point of view of stabilising young people, activities aimed at building so-called stabilisation apartments, infrastructure development and job creation are essential in the development of the Development Programme,*
- *involve local actors in the commercial exploitation of the potential of cultural heritage sites in the conditions of the regions concerned. These are often unique places in which actors cannot be automatically dependent solely on commercial activities using genia loci and on services provided to visitors of the sites.*
- *the establishment of a system for monitoring cultural activities at all levels, including mapping cultural values and activities, institutions and organisations, creative industries activities with the creation of information databases.*

Specific measures to avert, reduce or mitigate potentially significant negative impacts on the environment, including health, are assessed in the structure of the individual Priorities of the Programme under review (Annex 1. Chapter 2. Priorities):

Priority 1: More innovative borders

Development and expansion of research and innovation capacities and use of advanced technologies.

Specific objective:

The specific objective of the Programme is to promote cross-border cooperation in research and innovation in line with national smart specialisation strategies.

Types of actions:

The types of actions referred to in this Part shall contribute to the achievement of a specific objective, in particular by following the following approaches:

- *support for cross-disciplinary, multidisciplinary and interdisciplinary cooperation activities, i.e. cooperation between several sectors in line with smart specialisation strategies in Slovakia and Austria,*
- *sharing and transferring research and innovation results into practice,*
- *raising awareness among the professional and wider public about cross-border research and innovation.*

Related action types can be included:

1. Interdisciplinary cross-border cooperation in research and innovation

The objective of this type of action is to strengthen cross-border research and development in areas of common interest, such as life sciences (including biomedical and biotechnology), (digital) health (including an ageing society, food and nutrition), sustainability and the environment. (including eco-innovation, waste management, climate change and sustainable energy), creative industries and digital transformation (including smart technologies and services and industry 4.0).

Design of activities:

- *joint research and innovation activities in areas of common interest,*
- *university cooperation activities with SMEs/private sectors to transfer research technologies and knowledge into practice,*
- *cross-border mobility of researchers, for example through post-doctoral scholarships and staff exchanges.*

2. Implementation of actions in joint research facilities, including smaller-scale investments

The objective of this type of action is to develop or improve shared (digital) research and transmission infrastructure and services.

Design of activities:

- *investments in new or improved joint research and innovation facilities and services of cross-border interest,*
- *the development of common transfer and technological facilities, including social innovation, such as clusters, high-quality R&D centres or cross-border incubators,*
- *support for (digital) social innovation, e.g. setting up digital innovation centres, accelerators or co-working & technopreneur campus.*

3. Scientific education and awareness-raising activities

The aim of this type of action is to raise awareness of research and innovation among local and regional actors and the general public.

Design of activities:

- *awareness-raising and capacity-building activities at local and regional level, such as excursions, (digital) trainings or other information activities,*

- *science education in schools and other educational institutions, including the exchange of know-how.*

Contribution to macro-regional strategies

Actions will contribute to priority area 7 of the EU Danube Strategy under the EUSDR - Action Plan (2020), for example to improving the framework conditions for building a knowledge society, to increasing the level and quality of network activities. , to strengthen existing links and promote new cooperation in the Danube region, to strengthen the implementation of the European Research Area in the Danube region, to reverse the brain drain and to promote brain circulation, and to implement smart specialisation strategies in all Danube countries.

All implemented projects will take into account related strategies and action plans at regional, national and EU level, such as the Renewed European Agenda for Research and Innovation (2018), the Open Innovation Strategy for Austria (2016) or the Slovak Research and Innovation Strategy for Smart Specialisation (2013) as well as the Research and Innovation Strategy Action Plan for Smart Specialisation of the Slovak Republic (2015). Wherever possible, they shall exploit synergies with related initiatives and projects, taking into account in particular the results of previous INTERREG R-A SK-AT projects and other EU programmes such as LIFE and Horizon 2020.

Intervention:

The output indicators are adequate, the numbers of organisations, solutions and participants are adequate with the financial plan.

The result indicators are also adequate, the numbers of organisations, solutions and participants adequate with the financial plan.

<u>Opinion of the report's processor:</u>

The More Innovative Frontier activity focuses on the development and expansion of research and innovation capacities and the use of advanced technologies. There is little likelihood that they will have an impact on the environment, including human health, that could result from the implementation of this strategy paper. However, for projects for the application of advanced technologies, it is necessary to consider proposed measures to prevent, eliminate minimization and compensate for environmental and health impacts.

It is logical to specify audiences:

- *the population in the programme area directly benefiting from the research and innovation activities put into practice,*
- *public and private institutions in all sectors directly benefiting from better access to research and innovation results,*
- *public and private R&I institutions through participation in actions or the adoption of solutions, sectoral agencies such as local or regional development agencies, higher education and research institutions, educational institutions, training centres and schools, SMEs or economic development institutions.*

The planned use of financial instruments is in line with the allocation of resources to EU programmes.

Priority 2. Greener borders

Supporting adaptation to climate change and disaster risk prevention, as well as resilience, taking into account ecosystem-based approaches.

Specific objective:

The specific objective is to increase know-how and resilience to the impacts and risks of climate change at regional and local level, including natural risks.

Types of actions:

Types of actions and their expected contribution to those specific objectives and, where relevant, to macro- regional strategies and strategies for the maritime areas of neighboring countries.

The types of actions referred to in this Part shall contribute to the achievement of a specific objective, in particular by following the following approaches:

- *supporting the identification of climate risks and the development of appropriate measures to adapt to and mitigate climate change, focusing on particularly affected areas such as forestry, agriculture, urban development, water management and tourism in the sk-AT border region,*
- *supporting the prevention of natural dangers caused by climate change, such as floods and forest fires, assistance in mitigating threats to settlements, infrastructure, livelihoods and human lives,*
- *supporting climate-resilient cities and communities by finding optimal, cost-effective, science-based and consistent solutions for sustainable, future-oriented communities and by informing authorities and stakeholders, as well as the general public, of the measures they can take to proactively adapt to climate change.*

Related action types can be included:

1. Data collection and analysis, exchange of know-how and development of strategies

The objective of this type of action is to strengthen and coordinate know-how and preparedness for the impacts and risks of climate change at regional and local level, with an interdisciplinary focus.

Design of activities:

- *data collection and harmonisation of data on climate-related risks in the border region, such as extreme weather, heat waves or pests, or for assessing the impact of climate change mitigation measures, including open data activities,*
- *studies and analyses on climate change to better understand the interrelationship between vulnerability and adaptation capability in the programme area,*
- *(digital) scientific activities of citizens, such as phenological observations,*

- *(digital) workshops, conferences, discussion panels on possible climate change adaptation measures involving different types of target groups and stakeholders at local and regional level, including networking activities between technology providers and main users,*
- *the development of an interdisciplinary strategy for climate-related actions such as soil protection or green and open spaces for recreation and leisure in changing climate conditions,*
- *risk management plans dealing with specific sectors in the cross-border region (e.g. water, agriculture and forestry, tourism, housing, services and infrastructure, ...), including response organisations.*

2. Implementation of joint (pilot) actions, including small-scale investments

The objective of this type of action is to support the implementation of innovative or practice-tested actions that help adapt to the impacts of climate change at regional and local level, building on best practices and providing them at local, national and EU level.

Design of activities:

- *specific local mitigation measures, such as measures relating to greening and shielding in residential areas or water maintenance in rural and urban areas,*
- *actions introducing new research results or innovative solutions into practice,*
- *development of tools with different adaptation measures for urban areas, communities and businesses with a view, for example, to reducing heat islands, cooling buildings or adapting infrastructure towards greater energy efficiency and reducing* CO_2 emissions*,*
- *implementation of common (digital) risk management systems and tools, e.g. flood warning,*
- *pilot measures to improve the management of the Danube with regard to sediment transport and river morphodynamics for adaptation to climate change.*

3. Awareness-raising and capacity-building activities

The aim of this type of action is to raise awareness and capacity - predominantly local - decision-makers and the wider public about the impacts and risks of climate change and related adaptation measures.

Design of activities:

- *general awareness-raising activities at local level addressing the wider public, e.g. gaming events, urban horticultural activities, trips, trainings, school and community events,*
- *digital) seminars or other specific information activities aimed at local decision-makers on climate-related health risks, such as heat, the spread of allergenic and toxic species or outbreaks of infectious diseases, also taking into account knowledge from the COVID-19 pandemic on civil protection measures and natural risks;*

- *(digital) civil protection training or field exercises to improve the region's preparedness for climate change risks.*

Contribution to macro-regional strategies

Actions shall contribute to Action 3, 4, 5 and 7 of EUSDR PA6, for example to improve the management of Natura 2000 sites and other protected areas, to halt the deterioration of species and habitats, to reduce the introduction and spread of invasive alien species (IAS) in the Danube region, or to the conservation and restoration of green infrastructure elements.
All projects implemented take into account related strategies and action plans at regional, national and EU level, such as the EU Adaptation Strategy (2021), the Austrian Climate Change Adaptation Strategy (2017) or the Action Plan to Adapt to Adverse Climate Impacts. change in the slovak capital Bratislava for the years 2017-2020. Wherever possible, they shall exploit synergies with related initiatives and projects, taking into account in particular the results of previous INTERREG R-A SK-AT projects and other EU programmes such as LIFE and Horizon 2020.

Intervention:

The output indicators are adequate, the numbers of organisations, action plans, solutions and participants are adequate with the financial plan.
The result indicators are also adequate, the number of organisations, action plans, solutions and participants adequate with the financial plan.

<u>Opinion of the report's processor:</u>

Activity for The Greener Border sufficiently defines the main target groups:

- *the programme population directly benefiting from improved green infrastructure and induced ecosystem services and reduced pollution,*
- *public and private institutions in all sectors directly benefiting from improved green infrastructure and induced ecosystem services and reduced pollution, for example in the fields of agriculture, forestry, tourism and water management,*
- *public and private institutions in the programme area, for example in the fields of nature protection, forestry, education, hunting, tourism, transport, water management or regional development, material economy or green economy, by participating in actions or adopting solutions such as local, regional or national public authorities, sectoral agencies (local or regional development agencies, environmental associations or energy agencies), providers of infrastructure and/or (public) services, interest groups including non-governmental organisations (including nature parks), higher education and research institutions, educational and training organisations, including kindergartens or economic development institutions.*

The designation of a specific target area shall be complete, including the planned use of integrated territorial investments (IUIs), community-led local development or other territorial instruments.

Activities will be carried out throughout the programme area. This applies in particular to awareness-raising activities, as well as measures aimed at preserving and improving green infrastructure as an essential contribution to climate change mitigation and nature conservation, as well as measures aimed at reducing pollution, which are crucial in both urban and rural areas.
As regards the preservation and restoration of biodiversity, particular attention should be paid to sensitive but unprotected areas of the region, such as wet habitats and wetlands along the region's water bodies, as they are crucial for improving the cross-border interconnection of protected areas and habitats. In addition, priority should be given to all areas with valuable natural assets, particularly affected by environmental pressure and/or with the potential to restore the region's biodiversity.

The main target groups are correctly specified by:

- *the programme population directly benefiting from improved green infrastructure and induced ecosystem services and reduced pollution,*
- *public and private institutions in all sectors directly benefiting from improved green infrastructure and induced ecosystem services and reduced pollution, for example in the fields of agriculture, forestry, tourism and water management,*
- *public and private institutions in the programme area, for example in the fields of nature protection, forestry, education, hunting, tourism, transport, water management or regional development, material economy or green economy, by participating in actions or adopting solutions such as local, regional or national public authorities, sectoral agencies (local or regional development agencies, environmental associations or energy agencies), providers of infrastructure and/or (public) services, interest groups including non-governmental organisations (including nature parks), higher education and research institutions, educational and training organisations, including kindergartens or economic development institutions.*

No use of ITI, CLLD or other territorial instruments is planned.

Both the planned use of financial instruments and the indicative allocation of resources to EU programmes by type of intervention correspond to territorial focus mechanisms.

Priority 3: More social borders
Objective 1:
Improving equal access to inclusive and high-quality education, training and lifelong learning services by developing available infrastructure, including strengthening resilience for distance and online education and training.
Specific objective:
Improve mutual understanding and strengthen educational capacities.

Types of actions:

The types of actions referred to in this Part contribute to a specific objective, in particular by strengthening cross-border links through educational activities focusing on language, skills and cultural competences.

Related action types can be included:

3. Development of common strategies and implementation of common solutions, including small investments to promote cooperation in the field of education

The main objective of this type of action is to improve joint education, training and lifelong learning activities in order to improve mutual understanding.

Design of activities:

- *the creation of a common database by collecting, harmonising and sharing data relevant to education, training and lifelong learning,*
- *development of training programmes improving skills and competences (language and culture; environmental, technical and digital education);*
- *the development of a regional/subregional education and training strategy,*
- *developing a strategy for closer cooperation enabling exchanges of teachers and students.*

4. Exchange of know-how and training of relevant stakeholders actively involved in the educational process

The main objective of this type of action is to promote synergies between educational, university and vocational training institutions in order to strengthen educational capacities.

Design of activities:

- *exchange of know-how on effective approaches and methods in education, e.g. language and cultural education, environmental, technical and digital education or inclusive education,*
- *joint learning activities for teachers,*
- *cooperation of organisations providing vocational training,*
- *cooperation between educational institutions in the programme region or between educational institutions and the business sector,*
- *working orientation.*

Contribution to macro-regional strategies

Actions will contribute to priority area 7 of the EUSDR "Developing a knowledge society (research, education and ICT)" and in particular to priority area 9 "Invest in people and skills", which aims to contribute to improving learning outcomes, skills and competences, focusing on learning outcomes in employability, entrepreneurship, innovation, active citizenship and well-being, contributing to higher quality and efficiency of education, ensuring inclusive education, equal opportunities and non-discrimination, as well as promoting civic competences and

lifelong learning opportunities for all. In addition, closer cooperation between education, training and labour market institutions and research institutions is strongly envisaged.
All projects implemented take into account related strategies and action plans at regional, national and EU level, such as Education for Sustainable Development, austrian Lifelong Learning Strategy, Qualification Plan (Qualifikationsplan Wien 2030, 2018), Smart City Vienna Framework Strategy 2019-2050 (Smart City Rahmenstrategie 2019-2050, 2019), as well as the National Programme for The Development of Education and Training (2019-2019), as well as the National Programme for The Development of Education and Training (2019-2050), as well as the National Programme for The Development of Education and Training (2019-2050), Action Plan for Lifelong Learning (2011) and Regional Strategy for Education and Education in Secondary Schools in the Bratislava Self-Governing Region for 2019-2022 (2019) and Strategy for development of education in trnava self-governing region (2019) on the Slovak side.

Intervention:
The output indicators are adequate, the numbers of organisations, action plans, solutions and participants are adequate with the financial plan. The result indicators are also adequate, the number of organisations, action plans, solutions and participants adequate with the financial plan. The indicative allocation of resources shall be proportional to the funds provided.

Opinion of the report processor:
The main target groups are selected sensitively, including in particular:

- *the population in the programme area directly benefiting from the improved health and social care system,*
- *educational institutions active in the field of health and social care,*
- *research institutions benefiting from the results of joint health research,*
- *public, regional and local institutions in the programme area, such as hospitals, emergency and rescue systems, non-governmental organisations active in the field of health and social care.*

For these actions, the focus is on the whole programme area. No use of ITI, CLLD or other territorial instruments is planned.

Objective 2:

Ensuring equal access to healthcare and making healthcare systems more resilient, including primary care, and supporting the transition from institutional to family and community-based care.

Specific objective:
The aim is to improve the cross-border accessibility of healthcare and social services.

Types of actions:

The types of actions referred to in this section contribute to the specific objective, in particular through closer and systemic cooperation for better accessibility of healthcare and social services in the cross-border region.

Related types of actions include:

3. Development and implementation of cross-border strategies and action plans to strengthen cooperation between healthcare providers and social services

The aim of this type of action is to develop joint strategies and action plans to overcome the different legislative framework and provide quality health and social services.

Design of activities:

- *data collection and joint research projects, e.g. digital health, etc.,*
- *development of joint strategies and action plans for cooperation between healthcare providers and educational/research institutions, cooperation between social care providers or between client-oriented health and social services,*
- *innovative concepts for regional health care structures or the transition from institutional to family and community-based care.*

4. Implementation of solutions, including small investments, to facilitate cross-border cooperation in the provision of healthcare and social services

The aim of this type of action is to strengthen cooperation and ensure better access for health and social service providers across borders.

Design of actions:

- *joint actions for better access to emergency health services across borders,*
- *pilot actions for the cooperation of relevant actors providing health care and social services,*
- *activities towards common standards for health care and social services,*
- *joint cross-border awareness-raising campaigns.*

Contribution to macro-regional strategies

There is no direct link between the actions and the EUSDR; However, actions under the priority will be guided by the Commission's priority for 2019-2024 (2019), which focuses on 'An economy that works for people with a focus, inter alia, on social Europe (social protection and inclusion)' and on 'Promoting our European way of life aimed, inter alia, at health protection'. All projects implemented take into account related strategies and action plans at eu regional, national and EU level, such as Health Targets Austria (Gesundheitsziele Österreich, 2017), Masterplan Care Services – proposal (Masterplan Pflege - Entwurf, 2018), Smart City Vienna Framework Strategy 2019 -2050 (Smart City Rahmenstrategie 2019-2050, 2050, 2019- (2019) on the Slovak side.

Intervention:
Output and result indicators are acceptable, target groups corresponding to share types are targeted. The allocation of resources is proportional.

Opinion of the report processor:
Add in the section ***"Contribution to macro regional strategies*** *Information on the fulfilment of the National Goals of the Slovak Republic III, to the Protocol on Water and Health to the "Convention on the Protection and Use of Transboundary WaterCourses and International Lakes of 1992" issued by the Ministry of Health of the Slovak Republic, MoE SR and ÚVZ SR in November 2021 with content at all levels of cross-border decision-making in the national and international context at individual and collective level, implemented through the improvement of water management, the protection of aquatic ecosystems, the quality and quantity of water, as well as through the control and reduction of water-related diseases.*
For each Action, determine how to achieve the objectives of the Water Health Protocol as a macro regional strategy.

The main target groups are acceptable:

- *the population in the programme area directly benefiting from the improved health and social care system,*
- *educational institutions active in the field of health and social care,*
- *research institutions benefiting from the results of joint health research,*
- *public, regional and local institutions in the programme area, such as hospitals, emergency and rescue systems,*
- *non-governmental organisations active in the field of health and social care.*

Add information on the common cross-border UNESCO World Heritage site "Borders of the Roman Empire – Dunajský limes (western part), Germany, Austria, Slovakia and Hungary, as a joint cross-border awareness campaign.

Objective 3:
Strengthening the role of culture and sustainable tourism in economic development, social inclusion and social innovation.

Specific objective:
The objective specific objective aims to assess and improve their accessibility in a coordinated and sustainable manner the tourist assets and locations of the regions.

Types of actions:
The types of actions referred to in this Part shall contribute to a specific objective, in particular by preserving, maintaining and evaluating the cultural and natural heritage of the cross-border

region through sustainable tourism and cross-border connectivity that promote sustainable forms of mobility.

Related types of actions include:

2. Development and implementation of cross-border strategies and action plans for the sustainable development of tourism

The main objective of this type of action is to implement cross-border tourism strategies and to improve the development of sustainable tourism.

Design of activities:

- *studies on the sustainable and efficient appreciation of cultural and natural heritage in tourism,*
- *initiatives coordinating cultural and natural heritage development plans, e.g. joint preparation of exhibitions, joint research initiatives,*
- *action plans for the development of quality labels in services and products,*
- *development of new innovative mediation/digital formats,*
- *common approaches to valorising prospective sites and attractions, promotional activities or educating the public and volunteers,*
- *development of common thematic hiking trails and offers based on natural and cultural heritage (e.g. wine, cycling, architecture, history, etc.).*

4. Implementation of joint solutions, including small investments in natural and cultural heritage sites and joint tourism services

The main objective of this type of action is to support projects that can contribute to the diversity of tourism supply and products with a more strategic approach that achieves synergies between them.

Design of activities:

- *cross-border destination management and marketing activities such as promotions of natural or cultural heritage sites (joint tour guides, information boards, tourist tours),*
- *implementation of thematic offers such as routes on common themes (e.g. Aristocratic Path, Iron Curtain Road, Water Trails, Geopark Malé Karpaty, Historical Park Route),*
- *preservation and maintenance of cultural heritage sites, sites and monuments, including investments in tourist infrastructure, e.g. visitor centres,*
- *activities related to the mobility of cross-border tourism, including small investments,*
- *educational activities for the competent authorities/owners of historical sites or volunteers,*
- *activities to raise the general public's awareness of the natural and cultural heritage,*
- *exchange of know-how, improving cooperation and promoting culture, arts and artists.*

5. Infrastructure investments to improve the accessibility of cross-border regions and locations for citizens and tourists

The main objective of this type of action is to improve the local and regional level of cross-border accessibility.

Design of activities:

- *planning process and implementation of sustainable cross-border connections (e.g. Angern – Záhorská Ves, Dürnkrut – Gajary),*
- *filling gaps in cycle paths anchored in tourism projects.*

Contribution to macro-regional strategies

Actions shall contribute to priority area 3 of the EU Strategy for the Danube Region (EUSDR) "Promoting culture and tourism, people-to-people contacts", in particular:

- *developing sustainable forms of tourism (green tourism products and sustainable mobility solutions) and ensuring sustainable preservation, protection, socialisation and simultaneous interpretation of cultural heritage and natural values,*
- *promoting science, research and new technologies in culture, tourism and people's contacts with people by supporting the implementation of a harmonised monitoring system dedicated to sustainable tourism and cultural/natural heritage and promoting the exchange of practices and networking in the arts, further promoting the creation of links and synergies between the cultural and creative sectors and the tourism sector,*
- *the appreciation, promotion and protection of cultural heritage, inter alia through the creation of the Danube region as an important European tourist destination, by supporting the development of quality products, infrastructure and innovative forms of tourism and culture by SMEs and public-private partnerships.*

All implemented projects will take into account related strategies and action plans at regional, national and EU level, such as the Masterplan of Tourism (Plan T – Masterplan für Tourismus, 2019) and the Strategy for Tourism Development in Slovakia up to 2020 (2013), the Marketing Strategy of the Slovak Tourism Agency 2014-2020 (2013) at national level. Furthermore at regional level Tourism Strategy (Tourismusstrategie Burgenland 2022+, 2018), Cultural Strategy (Strategie für Kunst und Kultur des Landes Niederösterreich, 2016), Tourism Strategy 2020 (Tourismusstrategie 2020, 2017), Shaping Vienna – Visitor Economy 2016-2020, Strategy for tourism development in the Bratislava Self-Governing Region (2015) and Strategy for tourism development in trnava self-governing region (2015).

Intervention:

Output and result indicators are acceptable, target groups corresponding to the types of actions. The allocation of resources is proportional.

<u>Opinion of the report processor:</u>

Strengthening the role of culture and sustainable tourism in the areas of economic development, social inclusion and social innovation is well declared in order to achieve the objective and specific objective and can be considered as an important contribution to priority area 3 of the EU Strategy for the Danube Region (EUSDR) "Promoting culture and tourism, people-to-people contacts".
The design of actions of the specific objective 'to assess the tourist assets and locations of the regions in a coordinated and sustainable manner and to improve their accessibility' is precisely detailed in the design of actions at all points and the actions also cover the scope of the priority objective.

The main target groups are acceptable:

- *the population in the programme area directly benefiting from improved offers of culture and tourism and mobility,*
- *local tourism service providers,*
- *local entrepreneurs actively participating in tourism services,*
- *owners of local cultural sites,*
- *public, regional and local authorities in the programme area,*
- *NGOs active/providing tourism and culture services.*

Priority 4: Cooperation between border institutions and residents

Objective 1:
Enhancing the efficiency of public administration by promoting legal and administrative cooperation and cooperation between citizens, civil society actors and institutions, in particular with a view to addressing legal and other obstacles in border regions

Specific objective of the activity:
is to remove obstacles to cross-border cooperation and to promote institutional cooperation and to improve the development of a common strategy in areas of cross-border relevance.

Types of actions:
The types of actions referred to in this Part contribute to the specific objective, in particular by enabling stakeholders at all levels to address cross-border aspects, remove obstacles to cross-border cooperation for the long-term development of the programme area and improve data exchange and know-how.
Particular emphasis could be placed on strengthening the functional area of the Twin-City region and its background by promoting institutional cooperation and improving a common development strategy in areas of cross-border relevance. Joint administrative cooperation should address the needs and dynamics evolving in the Twin-City region. This is particularly important in thematic areas such as mobility, housing, the labour market, health and social services.

Related action types can be included:

1. Know-how and data exchange to improve the development of the strategy in the cross-border region

The objective of this type of action is to improve the cross-border exchange of information and data in support of joint administrative and legal activities dealing, for example, with obstacles at borders.

Activity suggestions:

- *exchanging experience to share solutions and increase their impact,*
- *studies to understand cross-border barriers, processes and acquire expertise,*
- *data collection and harmonisation for the establishment of a solid database,*
- *development of the strategy (e.g. transport and mobility, housing, labour market, demographic changes in business development, RTI, emergency services, health education, regional development).*

2. Joint pilot actions aimed at removing border barriers

The objective of this type of action is to promote common cross-border solutions in order to reduce barriers and obstacles caused by different legal and administrative systems.

Activity suggestions:

- *joint activities and exchange of know-how between public actors in relevant thematic areas, e.g. housing, mobility, environmental protection or tourism, etc.*

3. Strengthening the institutional capacity of public authorities/organisations

The objective of this type of action is to improve institutional capacity towards information on cross-border cooperation and skills development in order to better understand each other.

Activity suggestions:

- *joint actions supporting the development of the skills of public authorities,*
- *training, mutual evaluations, language training and staff exchanges.*

Contribution to macro-regional strategies

Actions will contribute to initiatives in priority area 10 of the EU Danube Strategy under the EUSDR Action Plan (2020), for example by harmonising the regulatory framework and strengthening cross-border governance, promoting more effective cooperation between administrations, providing support for actions that contribute to strengthening institutional capacity to improve decision-making and administrative performance in the border region in specified topics, and increasing the involvement of civil society; actors for more effective policy-making and implementation at regional level in the programme area.

The actions will also contribute to the 4th objective of the EU Strategy for the Alpine Region of EUSALP ***"Improving cooperation and coordination of action in the Alpine region"****.*

Intervention:
The output indicators are adequate, the numbers of organisations, action plans, solutions and participants are adequate with the financial plan.
The result indicators are also adequate, the number of organisations, action plans, solutions and participants adequate with the financial plan. The indicative allocation of resources shall be proportional to the funds provided.

Opinion of the Report processor:

- *The main target groups are sensitively selected, including mainly: local, regional and national public authorities / institutions, intermediary organizations, EZÚS and non-governmental organizations in the program area.*
- *The general public, which benefits from cross-border successes, such as better coordinated approaches to effectively address major societal challenges and obstacles in the program area and to provide services of general interest in a more efficient way.*

No use of ITI, CLLD or other territorial tools is planned.

Objective 2:
*Building mutual trust, in particular by promoting “****people to people”*** actions.

Specific objective:
The specific objective is to deepen citizens cooperation in the programme area.

Types of actions:
The types of actions listed in this section contribute to the achievement of a specific objective, in particular by promoting bottom-up cooperation between citizens in the programme area and by reducing negative thinking and bringing people together across borders.

Related types of actions:
1. Joint actions to build mutual trust and promote citizens' cooperation
The aim of this type of action is to improve local interaction between citizens across borders and to reduce negative thinking and improve communication between people in the border area.

Design of activities:

- *networking activities to improve cultural, social and economic relations with a clear cross-border focus, in particular by promoting trust and capacity building in the programme area (e.g. exchanges of educational visits, cultural events, conferences, tourist trips/excursions, etc.),*

- *jointly explore and develop solutions at local level, e.g. to overcome obstacles in areas of public administration, or to facilitate exchanges between associations, e.g. in the fields of education, natural and cultural heritage, etc.*

Contribution to macro, regional strategies

Actions will contribute to initiatives in priority area 3 of the EU Strategy for the Danube Region under the EUSDR Action Plan (2020) by supporting local initiatives related to culture and tourism and related societal activities.

Intervention:

The output indicators are adequate, the numbers of organisations, action plans, solutions and participants are adequate with the financial plan.

The result indicators are also adequate, the number of organisations, action plans, solutions and participants adequate with the financial plan. The indicative allocation of resources shall be proportional to the funds provided.

Opinion of the Report processor:

The main target groups are selected sensitively, including in particular:

The main target group is, inter alia, citizens of the cross-border region, local public authorities/institutions, bodies *governed by ererie law, intermediary organisations, EZÚS who can contribute to a common understanding and a common identity in the border region.*

The whole programme area is focused. No use of ITI, CLLD or other territorial instruments is planned.

6 (VI.) Reasons for the choice of alternatives under consideration, taking into account the objectives and geographical dimension of the strategy paper and a description of how the evaluation was carried out, including difficulties in providing the necessary information, such as technical deficiencies or uncertainties

The programme relies primarily on the Interreg Programme submitted to the European Commission on: 09.2021, and on the consensual definition of priorities for the implementation of the 2030 Agenda in the process of a broad participatory process and is open as a document that will be updated and detailed in the implementation of individual Priorities in the affected regions. Alternatives Priorities follow the current Commission Explanatory Note EGESIF 21-0025.00 EUROPAN COMISSION so that INTERREG projects do not cause significant damage in the context of the fight against climate change within the meaning of the Regulation of Article 17 of DNSH on taxonomy. In particular, it is necessary to monitor possible cumulative impacts in greenhouse gas emissions on humans, nature and property, pollution of bodies of water, also marine waters, waste disposal and activities detrimental to the protection and restoration of biodiversity and ecosystems.

Individual Priorities are defined by objectives, expected changes, priority actions, interventions and actions without defining the details of implementation, therefore the assessment was marked by a high degree of uncertainty both in the position of identification of the content of individual activities and their geographical location. Therefore, the assessment focused on assessing priority actions and interventions and identifying their benefits in terms of sustainability of development and meeting the objectives of the 2030 Agenda (OSN, 2015).

The difficulties in drawing up the evaluation report consisted primarily of how to fit specific requirements into the structure of the report on the evaluation of the strategy paper according to Annex 4, to Act No. 24/2006 Coll. The problem was also where and how to classify the status of environment and NATURA 2000 in the affected regions.

In the devolved meaning, the data in Chapter 3 (III.) 3.1. consider this Report to be a "nultý variant- zero variant" and Chap. III. 3. “as a variant, if implemented” after its adoption, as a strategy document and the implementation of its Priorities.

7 (VII.) Proposal for Monitoring Environmental Impacts, including Health Impacts

On the basis of the environmental health analyses carried out, it is possible to determine the environmental criteria for monitoring the environment that projects implemented under the Interreg programme should meet.

Meeting the criteria should ensure that projects implemented under the Programme are pro-ecological, set up to minimise impacts with negative impacts on the environment and human health or projects that have a direct positive impact on the environment.

When defining environmental criteria for projects implemented under the Slovakia-Austria Programme 2021-2027, e.g. the general principles of "zelené obstarávanie/green procurement", which have been defined in recent years at European and national level, apply.

Another important issue is maintaining compliance with the priorities and national programmes implemented or proposed so far in the field of environmental protection, aimed at:

- *joint actions to adapt to the impacts of climate change in the region, in particular as regards floods and droughts, and to support cross-border measures to prevent climate change,*
- *climate change measurements in urban areas,*
- *joint actions to preserve rich biodiversity and combat invasive species that harm the environment,*
- *joint strategies for the protection of natural heritage, Natura 2000 parts and other protected areas,*
- *joint efforts to protect green infrastructure in the partner city region and throughout cross-border territory,*
- *joint actions to combat pollution (e.g. river pollution),*
- *joint efforts to improve the accessibility of green infrastructure, natural heritage for recreational purposes,*
- *measures to preserve biodiversity and protect/protect nature in urban areas.*

The environmental criteria proposed for the application of the monitoring of Actions in individual Priorities under the Programme can be divided into two groups:

- *general monitoring criteria,*
- *detailed monitoring criteria - defined for the given type of Actions.*

General monitoring criteria

Formal - legal criteria:

- *carrying out screening for Actions included among activities that may potentially have a significant impact on the environment or Natura 2000,*
- *carrying out an impact Assessment of Natura 2000 priorities where there is a possibility of potentially significant impact in order to protect the area,*

- *carrying out a full environmental impact assessment procedure in cases where the Activity (investment plan) is subject to such a procedure,*
- *compliance with environmental quality standards during the implementation phase of the Action - Project and after its completion,*
- *monitoring compliance with emission standards in the event of emissions to the environment.*

Planning and strategic criteria:

- *consistency with existing environmental protection strategies and national projects (at the time of evaluation of the Action - Project),*
- *compliance with the existing territorial plans of the municipalities concerned and the territorial plans of the large territorial units of the Slovak self-governing regions concerned/ principles of territorial development of the Czech self-governing regions concerned (at the time of the evaluation of the Action - Project),*
- *in the case of projects related to water use and those that may affect the state of the waters: compliance with river basin management plans and the concept of water policy of the Slovak Republic (which is in the process of assessing the impacts on the environment),*
- *in the case of water-related projects and those likely to affect the condition of the waters: compliance with the conditions of use of the river basin waters (if such exist at the time of evaluation of the Action - Project),*
- *in the case of Actions - projects related to water use: an assessment of cumulated action with other projects with a similar impact within one river basin; the assessment is also subject to an impact on the conditions of use of water by other entities,*
- *in the case of Actions - projects located in areas particularly at risk of flooding, it is necessary to evaluate their impact on increasing the risk of floods and their vulnerability to flooding.*

Technical and technological criteria:

- *the use of best available techniques, where the project involves the construction or upgrading of installations, which may have a significant impact on the environment as a whole;*
- *application of eco-innovations,*
- *the use of solutions guaranteeing energy and raw material savings, including water saving;*
- *the application of low and non-waste technologies,*
- *adherence to the hierarchy of waste management methods and waste reduction principles,*
- *long life cycle (life span) of objects and installations created (upgraded) within the project implementation,*

- *the use of appropriate methods of drainage of sewage, in particular ensuring their correct condition and composition before being taken into the environment,*
- *in the case of Activities - projects the implementation of which leads to a reduction in river basin retention capabilities, the use of appropriate compensatory solutions. Withdrawal from this principle must be well justified. It should be borne in mind that the reduction in the retention capacity of the upper part of the river basin poses a risk to the lower areas,*
- *in the case of Activities - projects related to construction works - use of works technologies ensuring the protection of water against pollution,*
- *preferred projects in the field of education containing elements of civics doctrine.*

Social and health criteria:

- *providing the public with complete information on the environmental impact of the project - during the implementation stage and after the completion of the project,*
- *no (minimized)cross-border ecological and societal conflicts associated with the implementation of the Action - Project,*
- *limiting the size of the population exposed to harmful factors (air pollution, noise) generated by the Action - Project,*
- *limiting emissions of pollutants to air (PM_{10}, $PM_{2,5}$, B and P),*
- *the use of non-toxic building materials and insulations obtained and produced sustainably,*
- *taking into account adaptations of climate change proposals (e.g. increased intensity of natural phenomena) in the activities covered by the Programme,*
- *the application of measures limiting emissions to the environment during possible investment (construction) works.*

Natural criteria:

- *a positive impact on protected areas,*
- *minimising problems in ecosystems (e.g. crossing ecological corridors),*
- *conservation of landscape values for projects which may give rise to conflicts with nature and landscape conservation interests,*
- *taking into account the need to make compensations in accordance with the wording of the Nature Conservation Act,*
- *taking into account the need for monitoring before and after implementation in Actions - projects conflicting with the needs for the protection of species and natural habitats.*

Environmental management criteria:

- *the application of a systemic approach in environmental management during the construction and operation of the structures financed under the Programme,*
- *correct identification of environmental aspects related to the construction and operation of the abovementioned buildings,*

- *the application of the principle of continuous reduction of environmental and human health impacts in premises and processes which have received financial support from the Programme,*
- *preferred integrated Actions - projects taking into account several of the objectives of the Programme.*

DETAILED MONITORING CRITERIA

Use of renewables:

- *the use of renewable energy sources, where possible, installations with high technical parameters limiting the emissions of pollutants into the air,*
- *ensuring high energy efficiency standards in relation to the installation of heating, cooling, ventilation, hot water provision and electronic equipment,*
- *the application of an energy-efficiency contract with energy service providers,*
- *take into account in the Actions the consequences of possible climate change, such as floods, floods, landslides, strong winds, etc.,*
- *the use of local plans and flood hazard maps in the design of the risk assessment of climate change,*
- *taking into account climate trends in object design,*
- *minimising the impact on protected areas,*
- *the application of appropriate mitigation measures, e.g. noise walls or special road surfaces in noise-sensitive areas,*
- *the use of means of protecting against the run-off of polluted waters into streams and soils,*
- *taking into account the consequences of possible climate change, such as floods, floods, landslides, etc. in projects,*
- *the use of flood hazard maps and other available materials to identify possible hazards associated with climate change in design,*
- *taking into account climatic trends and the associated risk in the design of objects,*
- *demonstration that actions compensating for the reduction of river basin retention capabilities will be carried out; abandonment of compensatory activities must be justified, with a comprehensive approach to the risk of flooding occurring in the cross-border river basin being necessary.*

Criteria for educational projects:

- *taking into account environmental issues in all training programmes, with a particular focus on the need to conserve resources, including ecosystems, water, energy, etc.,*
- *taking into account raising awareness of climate change and minimising their consequences in educational projects.*

Follow the current Commission Explanatory Note EGESIF 21-0025.00 EUROPAN COMISSION so that the projects in INTERREG Programme do not cause significant damage in the context of the fight against climate change within the meaning of the Regulation of Article 17 of DNSH on taxonomy. In particular, it is necessary to monitor possible cumulative impacts in greenhouse gas emissions on humans, nature and property, pollution of bodies of water , also marine waters, waste disposal and activities detrimental to the protection and restoration of biodiversity and ecosystems.

8 (VIII.) Probably significant transboundary environmental impacts, including health impacts

As a strategy document and its implementation, the Programme has directly identifiable partial cross-border environmental impacts, including health impacts.

Of the possible current environmental impacts and risks for cross-border impacts, it can be specified:

- *Direction of prevailing winds Slovakia - Austria,*
- *Traffic intensity Slovakia - Austria,*
- *Floods at the Slovakia-Austria border,*
- *Transmission of infections (COVID-19, etc.).*

Identification of cross-border environmental impacts, including health impacts

On the basis of the analyses carried out during the elaboration of the Report, the *following general conclusions can be summarised in the environmental impact assessment:*

- *It is assessed that the Program as a whole has a positive effect on the environment and supports the resolution of some problems related to environmental improvement, but some areas of support will also have a negative impact on individual environmental components. Detailed conclusions in this area are presented in the relevant chapters of the evaluation report.*
- *The general formulation of the Programme and the non-indication of the specific projects that will be supported within it does not allow for a more detailed assessment of its potential environmental impact, including health impacts, therefore the evaluation report has been reversed in a similar general way to the Program.*
- *In view of the previously limited funds earmarked for the programme and its objectives, its significant impact on solving all environmental problems in the territory included in the Program cannot be expected. Activities in this area should be understood as complementary to other projects. The internal integrity analysis carried out showed the overall consistency of the programme. A large part of the investment priorities of each axis are complementary and/or strengthened.*
- *On the basis of an analysis of the objectives of the EU's strategic externalities, it is claimed that the Program reflects the objectives of these documents, in particular the protection of environment, including health impacts.*
- *Due to the general nature of the Program, it is not possible to make a probable assessment. However, it may turn out that during the life impact assessment phase carried out for a particular Action - Project (e.g. from the field of construction of cycle paths) such an action will occur. Since the operation of the Program in this area will be limited to the construction of cross-border routes between Slovakia and Austria, there is unlikely to be any cross-border effects that could potentially affect other countries.*

Brief conclusions and recommendations on priorities' impacts are presented in the following Tab.

Tab. 41 Priorities of the Programme - conclusions and recommendations

Priority	Conclusions	Justification	Recommendation
1. More innovative border crossings	• Priority projects, • Cross-border impacts.	• Sustainable development, • Level improvement.	• Monitoring • Exchange of students.
2. Greener borders	• Natura 2000.	• Protection.	• Status security.
3. More social borders	• The European Pillar, social rights.	• EU policy objectives, • Support for socially weaker groups.	• Strengthening culture and tourism.
4. Cooperation between the institutions and the inhabitants of the border	• Increase of projects, • Involvement of citizens' associations, • Exchange of experience.	• Health • Mutual effect, • A wide range of options.	• De-bureaucraticisation, • Increase in finances.

9 (IX.) Non - technical summary of the information provided

The Interreg Slovakia - Austria - 2021-2027 cross-border cooperation programme is based on the transnational Interreg Programme submitted to the European Commission on: 09.2021, Agenda 2030 and is a welcome tool in ensuring sustainable development in Slovakia and Austria, it also fulfils the role of added value for regional and territorial development strategies of the Slovak Republic in accordance with resolution of the Government of the Slovak Republic and Act 539/2008 Coll. it also builds on the processing of previous strategy papers such as the National Regional Development Strategy and a number of sectoral strategies, but they could not be anticipated when formulating them.

In the preparatory phase of programming, a detailed socio-economic analysis of the programme area was carried out summarising the relevant data, the main results of strategic studies and analyses, such as the preliminary evaluation report of Interreg V-A SK-AT and relevant strategies at European, national and, where appropriate, regional level. The main conclusions and findings were subsequently discussed by the Programme Group (hereinafter referred to as 'PG'). The proposed description of the main challenges and needs of the border region closely follows the EU's policy objectives.

The aim of the Programme is the protection and sustainable development of natural and human resources, as well as cultural potential, so that they are preserved for future generations and can be used for further development of society in the cross-border cooperation of Slovakia and Austria. A key priority for achieving the desired situation is the climate-neutral use of natural resources, while respecting the ability to restore ecosystems. Conditions will be created for the self-realization of the inhabitants of the regions concerned in Slovakia and Austria and for maintaining the cohesion of families and cultural identity in these regions, including through local initiatives.

Summary of non-technical information, and non-technical effects:

- *exploiting the internal potentials of regions and diversifying economic activities,*
- *improving the quality of life for all social groups in individual cross-border regions and ensuring the availability and quality of public services, work and equal opportunities to exploit the potential of each individual, regardless of their socio-economic background or disadvantage,*
- *gives opportunities to streamline and bring public governance closer to citizens through the establishment of multi-level integrated management at regional and local level,*
- *gives opportunities to exploit the territorial potential of regions effectively,*
- *the challenge is the creation of a mutually harmonised public policy management system to ensure joint intervention of all levels of government (from municipalities to VÚC) in the territory of strategic-planning regions, which represent new opportunities for managing economic and social development between the regional and local levels, with the participation of all stakeholders,*
- *added value by linking the academic, industrial and public sectors to the development of innovation in the region,*

- *intensifying the regional economy and changing access to waste, assessing the life cycle of products and activities supporting the circular economy.*

As far as information is concerned, the strategic document under review is directly linked to the Sustainable Development Goals of the 2030 Agenda for Slovakia, thus defining the framework for Slovakia's development up to 2030, including global trends, positions and challenges for Slovakia and Sustainable AT 2030 for Austria, which define key strategies for achieving the priorities of the 2030 Agenda, looking for possibilities of effective use of all available resources based on integrated approaches in cooperation with the Austrian institutions.

However, in the next steps of its implementation, efforts need to be focused on actually achieving synergies within the investment packages following the integrated investment programmes and demonstrating their added value in terms of environmental, economic and social. It will therefore be necessary to develop specific Actions - Projects in the implementation of the Programme and the follow-up strategy papers, and to make specific use of environmentally oriented information within them.

10 (X.) Information on economic demands (if the nature and scope of the strategic document allow it)

The proposal for the Interreg Slovakia-Austria-2021-2027 cross-border cooperation programme specifies, in the content now published, the amount of funds earmarked for its successful implementation. It is clear from the strategy that the implementation of integrated cross-border programmes will bring not only environmental or social, but also economic benefits. The resources needed to implement public interventions to ensure the implementation of the strategy should be understood as investments with a high social return, provided for truly integrated and integrative approaches, including within the framework of the proposed funding system for the implementation of the Programme. The return on the funds contributed will be possible after the end of the Programme after 2027 and beyond, which will not be easy given the breadth of the project's priorities, but also distorting facts such as the pandemic, the deterioration of the standard of living of the inhabitants of the area concerned, etc. However, it is optimistic to believe in the overall benefit and good return on the funds used.

11 (XI.) Specific assessment requirements

The following requirements were set as specific evaluation requirements:

1. ***As part of the evaluation report, consider adding the list to other strategic documents with the following strategy document for the Slovak Republic: National Strategy for The Development of Cycling Transport and Cycling in the Slovak Republic.***

The relationship of the Programme to the document "National Strategy for the Development of Cycling and Cycling in the Slovak Republic" is sensitive in the border region slovakia - Austria, given the fact that even in the past there were reservations about routes near the PLA and private land.

The document has the main priorities:

- *improving mobility,*
- *improving the health of the population,*
- *environmental protection,*
- *development of tourism.*

Systematic support for the development of cycling can make Slovakia an attractive destination for an increasingly numerous target group of Europeans preferring to spend the holidays actively associated with exploring the countryside from the saddle of a bicycle. Cycling does not burden the natural environment or frequent tourist destinations with noise and exhalations. Moreover, the interest of cyclists is not so concentrated in the main tourist season, thus offering existing tourist destinations the chance to ensure better capacity utilisation even in the spring or autumn months (winter resorts, of course, also in summer).
In order to meet the stated objectives, it is necessary from the outset to cover and manage them by the national cycloco-ordinator in close cooperation with the municipalities/cyclo-coordinaters at regional level, the relevant professional departments of the regions and in cooperation with the individual sectors concerned.
The responsibility for fulfilling the individual proposed measures will lie with the National Cycloco-ordinator for the MDVRR SR. In this context, the proposed management and coordination of cycling and cycling activities will play an irreplaceable role.

We recommend that the document be supplemented as binding. We also propose to consider the use of cycle paths in winter for maintained cross-country skiing trails in cross-border mode.

2. ***In the framework of the evaluation report, evaluate the possibility of financing socio-economic and green projects using water transport and evaluating the possibility of water tourism.***

Shipping is one of the less-used forms of transport, given the limited availability of destinations. However, this transport is environmentally friendly for both freight and passenger transport and can be a tourist and holiday destination in the region.
The main transport route of water transport in the region is the Danube River. On it, several sailings take place daily on the stretch between Melk and Krems by the Wachau Valley. And several times a month they start from Vienna on Sundays for a day trip of the boat to and from Dürnstein Castle. As part of cross-border shipping, the companies offer daily shipping connections between Vienna, Budapest, Bratislava and Passau. Passenger transport to Austria is one of the key services of carriers. Transporters offer quality and luxurious transport of people to Vienna and its surroundings. Of course there are also other services that benefit the cohesion of the region.

Boat trips on Austrian rivers and lakes are also offered in the region, bringing a number of wonderful corners that are visible only from the ship's deck. Many Austrian rivers and lakes can take a variety of long cruises. On larger lakes, these are mainly sightseeing and cruise cruises, e.g. sightseeing and cruises. Lake Constance, Zeller am See, Wolfgangsee, Attersee, Traunsee, Ossiacher See, Wörthersee, Achensee. On the rivers you can experience cultural and sightseeing and relaxation cruises or adrenaline rafting on the wild water. The most common are cruises on the Danube to Vienna, Linz or to Passau in Bavaria, Germany (on the border with Austria). This way, the Danube is navigable. Cruise ships are also possible to higher altitudes depending on the state of the water in the river, these ships do not have too deep a dive.

In Slovakia, the southern connection of the Váh River to the Danube is the only one and therefore extremely important. Rafting of the Váh River will allow direct export of products to companies located near Vážskaj vodná cesta (the Váh Waterway) to the areas of interest by water transport. By connecting to the Danube, Slovakia is directly connected via Rýn-Mohan-Dunaj (the Rhine-Main-Danube) Canal to the international network of waterways of 15 European countries in terms of water transport. The southern link also directs transport to Greece, Turkey and the countries of the Middle and Far East.

The possibility of financing socio-economic and green projects using water transport in the Programme is the way of issuing calls for Actions 2.2.1.1. in Priority 2 Greener Borders:

- *the establishment of shipyards and piers in the region,*
- *the establishment of boat rentals and rafts,*
- *establishment of refreshment stations along water corridors.*

The above actions shall fulfil ***the contribution to the achievement of the objective of the*** *Programme:*

- *supporting the identification of climate risks and the development of appropriate measures to adapt to and mitigate climate change, focusing on particularly affected areas such as forestry, agriculture, urban development, water management and tourism in the Sk-AT border region,*

- *supporting the prevention of natural dangers caused by climate change, such as floods and forest fires, assistance in mitigating threats to settlements, infrastructure, livelihoods and human lives,*
- *supporting climate-resilient cities and communities by finding optimal, cost-effective, science-based and consistent solutions for sustainable, future-oriented communities and by informing authorities and stakeholders, as well as the general public, of the measures they can take to proactively adapt to climate change.*

3. ***Carefully evaluate the possible impacts of the strategy paper, in particular in relation to the system of protected areas.***

The possible impacts of the strategy paper, especially in relation to the system of protected areas, need to be assessed when approving actions in these locations.

Large-scale protected areas

In Slovakia, 4 large-scale protected areas - protected landscape area Záhorie, Protected Landscape Area of the Little Carpathians and Protected Landscape Area of the Danube Luhy and Protected Landscape Area of the White Carpathians and in Austria Donau-Auen National Park (Danube Flood Areas), Thayatal National Park, Steinfeld Region, Nordöstliche Randalpen Region, Hundsheimer Berge Region, Feuchte Ebene Region - Leithaauen, Ötscher-Dürrenstein Region, Strudengau-Nibelungengau Region, Bernickenbach Region Lockenhaus - Rechnitz, Region Lange Leitn Neckenmarkt, Region and National Park Donau-Auen, Region Landschaftsschutzgebiet Liesing, Region Leopoldsberg.

CHKO Záhorie

It is the first declared lowland protected landscape area in Slovakia. It consists of two separate parts – North - East and West.

The North - Eastern (pine) part is affected by wind processes related to sand transfer. Relief consists of spill walls, wind-wavy poker trees, bachrans, rounded spills and crescent-shaped dunes. Thanks to its location, Záhorská nížina (the Záhorská Lowland) crosses mountain units on the North-South route, creating an important migration route for seasonal bird movements. The current temperature contrast between cold interdections and heated sand deposits conditiones the rich species diversity of plants, where mountain species alternate, remnants from colder periods, with species typical of warm and dry habitats. Animals are mainly represented by species bound to warm and dry habitats, such as ants and duds. Pine plantations with a wealth of insect predators are a food base for lelakes, tree scorpions and bats. The western (floodplain) part represents a landscape modelled on the activity of a large river with river terraces and a wide river niva. Flooded flooded flooded meadows with a well-preserved rich flower are currently unprecedented in Slovakia. Meadows are harmoniously spread out in the neighborhood with floodplain forests, which are woody composition close to the original forests. The rugged boundaries of forests with meadows are densely interwoven

with a network of old arms, river lakes and seasonal wetlands. Together, these three main elements of the landscape structure create a varied and regular flooding environment and suitable living conditions for a large range of plant and animal species. From the plantation very impressively, several square kilometers a large carpet of flamingo sounds whole-leafed. Of the animals, the most characteristic groups are water-bound, such as relict crustaceans, molluscs, fish, amphibians and many species of waterfowl. Recently, a new characteristic character of the coastal floodplain forest also gives the returning beaver.

CHKO Small Carpathians

CHKO Malé Karpaty (the Little Carpatians) intervenes in the solved territory with the outpouring of the massif of the Little Carpathians, which takes place in the direction of South-West and North- East in the districts of Bratislava III, Bratislava IV and Pezinok. It is the only large-scale protected area of a viticulture character. The Little Carpathians represent the peripheral mountains of the inner Carpathians, decomposing at their southwestern tip. They are nuclear mountain ranges with the specific development of crystalline, with packaging and attic units. In the territory, granitoid rocks, limestones, slates, phylithes, amphibolites and other rocks of nuclear mountains stand out.

CHKO Dunajské luhy

The CHKO Dunajské luhy extends into the solved territory in its southwestern part along the Danube stream. The territory of the CHKO is situated on the Danube Plain in the geomorphological unit podunajská rovina, next to the Slovak and Slovak-Hungarian section of the Danube from Bratislava to the Grand Island in the district of Komárno. It consists of five separate parts. This unique area is all located on the recent agradation wall of the Danube. The system of agradation rollers and storage depressions with a dense network of river arms with the predominance of sedimentation accumulation was created even before the interventions in the natural hydrological regime of the Danube. The shoulder system thus created was preserved partly in the section from Dobrohošte to Sap, but nevertheless belongs to the largest inland river deltas in Europe.

CHKO White Carpathians

The area is situated in the Slovak part of Biele Karpaty (the White Carpathians), which are part of the Carpathians, in western Slovakia. The area extends from skalica district in the South-West towards the district of Púchov in the North- Eeast, copying the border between Slovakia and the Czech Republic for a length of about 80 km.

The types of shares (2.2.1.1.) listed in section (2.2.1) have the possible effects of the strategy paper in relation to the system of protected areas, which can be eliminated:

- *supporting the identification of climate risks and the development of appropriate measures to adapt to and mitigate climate change, focusing on particularly affected areas such as forestry, agriculture, urban development, water management and tourism in the Sk-AT border region,*

- *supporting the prevention of natural dangers caused by climate change, such as floods and forest fires, assistance in mitigating threats to settlements, infrastructure, livelihoods and human lives,*
- *supporting climate-resilient cities and communities by finding optimal, cost-effective, science-based and consistent solutions for future-oriented sustainable communities and by informing authorities and stakeholders, as well as the general public, of the measures they can take to proactively adapt to climate change.*

4. ***Specify the proposed projects and display their territorial projection.***

It is not possible to specify the proposed projects and to display their territorial projection at the SEA assessment stage, it can only focus on the lessons learned in the 2014-2020 programming period.

In line with the conclusions of the SK-AT Interim Evaluation Report of the 2014-2020 Programme, it is appropriate to also take into account intra-regional disparities within the cross-border programme area. On the Austrian side in particular, we are grappling with the problem of population loss in more remote rural areas and the lagging behind of these areas, which is closely linked to the "brain drain" of young people and the demographic problems caused by an ageing population. The Programme should therefore place greater emphasis on balanced territorial development throughout the programme area. In this sense, it can, for example, contribute to the strengthening of regional centres such as the European Union. Eisenstadt or St. Pölten and to promote access to services of general economic interest in rural areas located outside the Danube development corridor.

5. ***In the evaluation report, evaluate ways of achieving the objectives of the Health Protocol****.*

In November 2021, the Ministry of Health of the Slovak Republic, the Ministry of Environment of the Slovak Republic, the Ministry of Environment of the Slovak Republic and the Public Health Authority of the Slovak Republic published ***Information on the fulfilment of the National Goals of the Slovak Republic III to the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes.***

The Protocol on Water and Health was established on the basis of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992) and was approved by 36 Member States of the World Health Organisation at the 3rd Ministerial Conference on Environment and Health in London, 1999. After its ratification in 17 countries of the European region, it entered into force on 4th August 2005 and by this act it became legally binding for these countries, among them the Slovak Republic. Once the Protocol has been ratified, countries have two years to determine and publish their national targets and to

set deadlines for achieving them. The main objective of the Protocol is to promote health protection at all levels of decision-making in the national and international context, both at individual and collective level, implemented through the improvement of water management, the protection of aquatic ecosystems, water quality and quantity, as well as through the control and reduction of water-related diseases.

The modalities for achieving the objectives of the Health Protocol are partially covered in the Programme in:

1.1 Priority 3: A more social border

1.1.1. (iv) Ensuring equal access to healthcare and making healthcare systems more resilient, including primary care, and supporting the transition from institutional to family and community-based care

The specific objective aims to improve the cross-border accessibility of healthcare and social services.

1.1.1.1. Related types of actions and their expected contribution to those specific objectives and, where relevant, to macro-regional and marine strategy strategies

Contribution to the achievement of a specific objective

The types of actions referred to in this section contribute to the specific objective, in particular through closer and systemic cooperation for better accessibility of healthcare and social services in the cross-border region.

Related types of actions

Type of action 2.4.1 Development and implementation of cross-border strategies and action plans to strengthen cooperation between healthcare providers and social services

The aim of this type of action is to develop joint strategies and action plans to overcome the different legislative framework and provide quality health and social services.

Design of activities:

- *data collection and joint research projects, e.g. digital health, etc.,*
- *development of joint strategies and action plans for cooperation between healthcare providers and educational/research institutions, cooperation between social care providers or between client-oriented health and social services,*
- *innovative concepts for regional health care structures or the transition from institutional to family and community-based care.*

Type of action 2.4.2 Implementation of solutions, including small investments, to facilitate cross-border cooperation in the provision of healthcare and social services

The aim of this type of action is to strengthen cooperation and ensure better access for health and social service providers across borders.
Design of actions:

- *joint actions for better access to emergency health services across borders,*
- *pilot actions for the cooperation of relevant actors providing health care and social services,*
- *activities towards common standards for health care and social services joint cross-border awareness-raising campaigns.*

Contribution to macro-regional strategies
There is no direct link between the actions and the EUSDR; However, actions under the priority will be guided by the Commission's priority for 2019-2024 (2019), which focuses on "An economy that works for people with a focus, inter alia, on social Europe (social protection and inclusion)" and on "Promoting our European way of life focused, inter alia, on health protection".
All projects implemented take into account related strategies and action plans at eu regional, national and EU level, such as Health Targets Austria (Gesundheitsziele Österreich, 2017), Masterplan Care Services - Proposal (Masterplan Pflege - Entwurf, 2018), Smart City Vienna Framework Strategy 2019 -2050 (Smart City Rahmenstrategie 2019-2050, 2050, 2050, Slovakia (2019) on the Slovak side.

Any Member State which has become a Contracting Party to the Protocol may set national targets in such a way as to meet the current need to address water and health problems. Systemic cooperation for better accessibility of healthcare and social services in the cross-border region does not meet the requirements for the protection of all types of water - surface and groundwater, closed bodies of water, bathing waters, drinking water supply, sewerage and wastewater treatment*.*

6. ***Add information on the common cross-border UNESCO World Heritage site " UNESCO „Hranice Rímskej ríše - Dunajský limes (západná časť), Nemecko, Rakúsko, Slovensko a Maďarsko“ (Borders of the Roman Empire - Danube Limes (Western Part), Germany, Austria, Slovakia and Hungary) as part of the evaluation report.***

Take advantage of the fact that the nomination project for the registration of Dunajský Limes on the prestigious UNESCO World Heritage List was registered as the International Archaeological Site ***of the Borders of the Roman Empire - Dunajský Limes*** *(30 July 2021 in the UNESCO World Heritage List) for more than 14 years of cooperation between Slovakia and Austria.*

This was decided by the World Heritage Committee at its 44th meeting, which took place from 16th to 30th July 2021 online from the Chinese city of Fuzhou. The nomination for registration

of this site was submitted by Slovakia together with Germany and Austria. On the territory of Slovakia, two national cultural monuments are part of the new UNESCO World Heritage Site - the Roman Military Camp (kastel) gerulata in Bratislava-Rusovce and the Roman military camp (kastel) in Iža. Kastel Gerulata lay on the territory of Pannonia in the line Carnuntum - Ad Flexum on the right bank of the Danube and formed an integral part of the border fortifications of the former Roman Empire. The Roman camp in Iža was an extended fortress on the left bank of the Danube, the only one of its kind on this stretch of the border, and formed the suburbs of the Legionnaires' fortress Brigetio. Both are evidence of a long-term, roughly 400-year-old, Roman presence on the territory of present-day Slovakia. The Danube Limes is an strength system along the Danube in Bavaria, Austria and Slovakia and forms after Hadrian and Antonin Vale in Great Britain and the Hornogermania-Raet Limit in Germany, the third section of the large project "Frontiers ofthe Roman Empire" (Borders of the Roman Empire). The 360 km long Austrian section of the Danube Limit was provided by 4 Legion camps, 14 support units camps and 20 known watchtowers (burgi). The actual number of watchtowers was probably higher. The most famous legion camps on Austrian territory were Lauriacum (Enns), Vindobona (Wien) and Carnuntum. In the case of uncontrolled border crossings by Germanic military tribes, the perfect signal chain between the watchtowers and the camps allowed for a rapid response from the Roman army.

To its greatest extent, during the 2nd century AD, the outer boundary of the Roman Empire affected three continents and was an expression of the extraordinary military and organisational capabilities of the Roman Empire. The unique world value of the Borders of the Roman Empire was recognised by the World Heritage Committee as early as 1987, when Hadrian's Val (England) was included in the World Heritage List, as well as the addition of this site to The Hornogerm-Rhetoric Limes (Germany) in 2005 and Antonin val (Scotland) in 2008.

This historical fact gives space for mutual contacts, knowledge of mutual history, promotion of these facts (leaflets, brochures) as well as sightseeing tours and lecture, guide information.

7. Complement a more detailed specification of the priorities and strategic objectives of the strategy paper.

1. Priorities

1.1 Priority 1: More innovative borders

1.1.1. (i) Development and expansion of research and innovation capacities and use of advanced technologies

The specific objective aims to promote cross-border cooperation in research and innovation in line with national smart specialisation strategies.

1.1.1.1. Related types of actions and their expected contribution to those specific objectives and, where relevant, to macro-regional and marine strategy strategies

Contribution to the achievement of a specific objective

The types of actions referred to in this Part shall contribute to the achievement of a specific objective, in particular by following the following approaches:

- *support for cross-, multi- and interdisciplinary cooperation activities, i.e. cooperation between several sectors in line with smart specialisation strategies in Slovakia and Austria - focus on energy saving,*
- *sharing and transferring research and innovation results into practice,*
- *raising awareness among the professional and wider public about cross-border research and innovation.*

Related types of actions

Type of action 1.1.1 Interdisciplinary cross-border cooperation in research and innovation

The objective of this type of action is to strengthen cross-border research and development in areas of common interest, such as life sciences (including biomedical and biotechnology), (digital) health (including an ageing society, food and nutrition), sustainability and the environment. (including eco-innovation, waste management, climate change and sustainable energy), creative industries and digital transformation (including smart technologies and services and industry 4.0).

Design of activities:

- *joint research and innovation activities in areas of common interest,* ***new environmental energy sources****,*
- *university cooperation activities with SMEs/private sector to transfer research technologies and knowledge into practice* ***in the use of wind farms,***
- *cross-border mobility of researchers, for example through post-doctoral scholarships and staff exchanges.*

Type of action 1.1.2 Implementation of actions in joint research facilities, including smaller-scale investments

The objective of this type of action is to develop or improve shared (digital) research and transmission infrastructure and services.

Design of activities:

- *investments in new or improved joint research and innovation facilities and services of cross-border* ***interest in the field of PV power plants****,*
- *the development of common transfer and technological facilities, including social innovation, such as clusters, high-quality R&D centres or cross-border incubators,*
- *support for (digital) social innovation, e.g. setting up digital innovation centres, accelerators or co-working & technopreneur campus.*

Type of action 1.1.3 Scientific education and awareness-raising activities

The aim of this type of action is to raise awareness of research and innovation among local and regional actors and the general public.

Design of activities:

- *awareness-raising and capacity-building activities at local and regional level, such as excursions, (digital) trainings or other information activities,*
- *science education in schools and other educational institutions, including the exchange of know-how.*

Contribution to macro-regional strategies

Actions will contribute to priority area 7 of the EU Danube Strategy under the EUSDR - Action Plan (2020), for example to improving the framework conditions for building a knowledge society, to increasing the level and quality of network activities. , to strengthen existing links and promote new cooperation in the Danube region, to strengthen the implementation of the European Research Area in the Danube region, to reverse the brain drain and to promote brain circulation, and to implement smart specialisation strategies in all Danube countries.

All implemented projects will take into account related strategies and action plans at regional, national and EU level, such as the Renewed European Agenda for Research and Innovation (2018), the Open Innovation Strategy for Austria (2016) or the Slovak Research and Innovation Strategy for Smart Specialisation (2013) as well as the Research and Innovation Strategy Action Plan for Smart Specialisation of the Slovak Republic (2015). Wherever possible, they will exploit synergies with related initiatives and projects, taking into account in particular the results from previous INTERREG V-A SK-AT projects and other EU programmes such as LIFE and Horizon 2020, Vision of Slovakia by 2030.

1.2 Priority 4: Cooperation between borders institutions and residents

1.2.1 b) Increasing the efficiency of public administration by promoting legal and administrative cooperation and cooperation between citizens, civil society actors and institutions, in particular with a view to addressing legal and other obstacles in border regions

The specific objective aims to remove obstacles to cross-border cooperation and to promote institutional cooperation and to improve the development of a common strategy in areas of cross-border relevance.

1.2.1.1. Related types of actions and their expected contribution to those specific objectives and, where relevant, to macro-regional and marine strategies

Contribution to the achievement of a specific objective

The types of actions referred to in this Part contribute to the specific objective, in particular by enabling stakeholders at all levels to address cross-border aspects, remove obstacles to cross-border cooperation for the long-term development of the programme area and improve data exchange and know-how.
*Particular emphasis could be placed on strengthening the functional area of the Twin-City region and its background by promoting institutional cooperation and improving a common development strategy in areas of cross-border relevance. Joint administrative cooperation should address the needs and dynamics evolving in the Twin-City region. This is particularly important in thematic areas such as mobility, housing, the labour market, health and social services**, with a view to mitigating the economic impact of inflation on socially weaker groups.***

Related types of actions
Type of action 6.1.1: Know-how and data exchange to improve strategy development in the cross-border region
The objective of this type of action is to improve the cross-border exchange of information and data in support of joint administrative and legal activities dealing, for example, with obstacles at borders.

Activity suggestions:

- *exchange of experience to share solutions and increase their impact **in support of marginal groups**,*
- *studies to understand cross-border barriers, processes and acquire expertise,*
- *data collection and harmonisation for the establishment of a solid database,*
- *development of the strategy (e.g. transport and mobility, housing, labour market, demographic change, business development, RTI, emergency services, health education, regional development).*

Type of action 6.1.2 Joint pilot actions aimed at removing border barriers
The objective of this type of action is to promote common cross-border solutions in order to reduce barriers and obstacles caused by different legal and administrative systems.

Activity suggestions:

- *joint activities and exchange of know-how between public actors in relevant thematic areas, e.g. housing, mobility, environmental protection or tourism, etc..*

Type of action 6.1.3 Strengthening the institutional capacity of public authorities/organisations
The objective of this type of action is to improve institutional capacity towards information on cross-border cooperation and skills development in order to better understand each other.

Activity suggestions:

- *joint actions supporting the development of the skills of public authorities,*
- *training, mutual evaluations, language training and staff exchanges.*

Contribution to macro-regional strategies

Actions will contribute to initiatives in priority area 10 of the EU Danube Strategy under the EUSDR Action Plan (2020), for example by harmonising the regulatory framework and strengthening cross-border governance, promoting more effective cooperation between administrations, providing support for actions that contribute to strengthening institutional capacity to improve decision-making and administrative performance in the border region in specified topics, and increasing the involvement of civil society; actors for more effective policy-making and implementation at regional level in the programme area.

The actions will contribute to the 4th objective of the EU Strategy for the Alpine Region of EUSALP "Improving cooperation and coordination of action in the Alpine region".

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Resources used

Documents of a general nature

- *REGULATION (EU) 2021/1060 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and the financial rules for those funds, as well as for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy.*
- *REGULATION (EU) 2021/1058 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL8 on the European Regional Development Fund and the Cohesion Fund.*
- *Regulation (EU) No 2021/1057 of the European Parliament and of the Council of 24 June 2021 establishing the European Social Fund Plus (ESF+) and repealing Regulation (EU) No 1296/2013.*
- *REGULATION 2021/1059 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on specific provisions relating to the European territorial cooperation (Interreg) objective supported by the European Regional Development Fund and external financial instruments.*
- *(Proposal) REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on a mechanism for addressing legal and administrative obstacles in a cross-border context, COM (2018) 373.*
- *REGULATION (EU) 2021/1056 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 June 2021 establishing a Just Transition Fund.*

European Union strategy papers

- *Interreg CENTRAL EUROPE 2021-2027 (on 24.06.2021).*
- *Europe 2020: A strategy for smart, sustainable and inclusive growth.*
- *Agenda 2030 for sustainable development - resolution adopted by the UN General Assembly on 25 September 2015.*
- *White Paper on the future of Europe and further developments. Reflections and scenarios for the EU-27 by 2025, COM (2017) 2025, 1 March 2017.*
- *European Green Deal, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, Brussels, 11 December 2019, COM (2019) 640 conclusion.*
- *The energy and climate package (including the 2030 Climate and Energy Framework).*
- *2030 Agenda for Sustainable Development (June 2021).*
- *EU Strategy for the Danube Region - Austria (2019).*
- *EU Urban Development Strategy (2016).*
- *ESPON Territorial Overview for Border Regions.*
- *Strengthening growth and cohesion in EU border regions (2017).*

- *Study of the needs of border regions: collection of relevant data to assess local needs (2016).*
- *Overcoming obstacles in border regions (2016).*

Slovak Strategic Documents

- *National Reform Programme of the Slovak Republic 2020.*
- *Vision and strategy for the development of Slovakia up to 2030.*
- *The starting points for the implementation of the 2030 Agenda for Sustainable Development (Government of the Slovak Republic, 2016).*
- *A low-carbon strategy for 2030, with a view to 2050 and its update (MŽP, 2018).*
- *Economic policy strategy for the Slovak Republic up to 2030.*
- *National Regional Development Strategy of the Slovak Republic.*
- *National Strategy for Sustainable Development of the Slovak Republic.*
- *Greener Slovakia - Environmental Policy Strategy of the Slovak Republic up to 2030 (Envirostratégia 2030).*
- *Research and innovation strategy for intelligent specialization of the Slovak Republic.*
- *Action Plan for smart industry of the Slovak Republic (with the National Investment Plan for 2018-2030).*
- *Strategic plan for the development of transport of the Slovak Republic up to 2030 - Phase II.*
- *National Programme for The Development of Education and Training.*
- *Trnava Region Regional Integrated Strategy (RIÚS TA).*
- *Regional Integrated Strategy of the Bratislava Region (RIÚS BA).*
- *Bratislava Region in numbers (2020).*
- *Program of economic development of social development BSK 2021 - 2027 (with a view to 2030).*
- *Report on the evaluation of the Economic Development Program of Social Development BSK 2021 - 2027 (with a view to 2030).*
- *Trnava Region in numbers (2020).*
- *Recovery plan and resilience of the Slovak Republic.*
- *National Investment Plan of the Slovak Republic for 2018-2030.*
- *National Strategy for the Development of Cycling transport and cycling in the Slovak Republic.*
- *Programme of Economic and Social Development of the Bratislava Self-Governing Region 2014 – 2020.*
- *Programme of Economic and Social Development of trnava self-governing region 2014 – 2020.*

Austrian Strategy Documents

- *Amt der Niederösterreichischen Landesregierung (2021): Statistisches Handbuch des Landes Niederösterreich 2021*

- *European Comission (2022): Trans-European Transport Network – TENtec*
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- *Eurostat (2022): Regional Specification of National Accounts Main Aggregates*
- *Hlavný územný plán pre vidiecke oblasti (2017).*
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- *Plán regionálneho rozvoja (Burgenland. 2011 - 2012).*
- *Rámcová stratégia inteligentného mesta /Smart City) 2019 - 2050 (Viedeň).*
- *Statistik Austria (2022): Demographisches Jahrbuch 2020*
- *Statistik Austria (2022): Statistik des Bevölkerungsstandes*
- *Statistik Burgenland (2020): Jahrbuch Burgenland 2019*
- *Umweltbundesamt (2021): Bundesländer Luftschadstoff-Inventur 1990-2019*
- *Viadonau (2021): Annual report in Danube Navigation in Austria*
- *Master Territorial Plan for Rural Areas (2017).*
- *Regional Development Plan (Burgenland 2011-2012).*
- *Smart City Framework Strategy 2019-2050 (Vienna).*

Abbreviations and simplifications used

„Program” - *Interreg VI-A Slovakia - Austria - 2021-2027 cross-border cooperation programme.*

„The law” - *Act of the National Council of the Slovak Republic No. 24/2006 Coll. on Environmental Impact Assessment and on amendments to certain acts as amended.*

„Actions” - *Actions from the Interreg VI-A Slovakia - Austria Cross-border Cooperation Programme - Austria - 2021 - 2027.*

A - *Austria*
A1 - *Highway in Austriau*
A2 - *Highway in Austria*
A21 - *Highway in Austria*
A22 - *Highway in Austria*
A23 - *Highway in Austria*
A3 - *Highway in Austria*
A4 - *Highway in Austria*
A5 - *Highway in Austriau*
A6 - *Highway in Austria*
AGTC - *European Agreement on the most important international combined transport routes and related objects*
AUREX - *Studio for research and project activities in the field of architecture, territorial development, ecology and informatics GIS*
B 50 - *Federal road*
BAT - *Best available techniques*
BSK - *Biochemical oxygen demand*
BSK_5 - *Biochemical oxygen demand in five days*
CAT - *City Airport Train*
CBD - *Convention on Biological Diversity*
CLLD - *Community-led local development*
CO - *Certification body*
CO - *Carbon monoxide*
COVID-19 - *Coronavirus infectious disease SARS-CoV-2*
ČMS-P - *Partial monitoring system - Soil*
ČR - *Czech Republic*
ČSFR - *Czech and Slovak Federal Republic*
D1 - *Highway to Slovakiau*
D2 - *Highway to Slovakiau*
D4 - *Highway to Slovakiau*

DAC *- Austrian District Control*
DNSH *- Do not cause any significant damage*
DS *- Dunajská Streda*
EGESIF *- Expert Group on the European Structural Investment Funds*
EK *- European Commission*
ERA *- European Research Area*
ESF+ *- European Social Fund Plus*
ESPON *- Programme for the Harmonious Development of Europe*
EU *- European Union*
EUSALP *- Communication on an EU strategy for the Alpine region*
EUSDR *- EU Strategy for the Danube Region*
EZÚS *- European Grouping of Territorial Cooperation*
FFH *- Flora - fauna - habitat*
GA *- Galanta*
GIS *- Geographical information system*
HC *- Hawthorn*
HDP *- Gross domestic product*
CHA *- Protected area*
CHKO *- Protected Landscape Area*
$CHSK_{Cr}$ *- Chemical oxygen demand*
CHÚ *- Protected Areas*
CHVÚ *- Protected Bird Areas*
IIASA *- International Institute for Applied System Analysis*
IKT *- Information and communication technologies*
IST *- Austrian Institute for Science and Technology*
ITI *- Integrated territorial investments*
IÚI *- Integrated Territorial Investment*
KSG *- Climate Protection Act*
LIFE *- Environment and Climate Action Programme*
MPR Trnava *- Trnava Town Conservation Reserve*
MR *- Republic of Hungary*
MSP *- Small and medium-sized enterprises*
MÚSES *- Local territorial system of ecological stability*
MZ SR *- Health of the Slovak Republic*
MŽP SR *- Environment of the Slovak Republic - Ministry of Environment of the Slovak Republic*
MŽP *- Ministry of Environment*
NATURA *- Pan-European Network of Protected Areas*
NO_x *- Nitrogen oxides*
NPR *- National Nature Reserve*
NR SR *- Council of the Slovak Republic*
NRBc *- Transregional Biocentre*

NUTS *- Common nomenclature of territorial units*
OECD *- Organisation for Economic Cooperation and Development*
ORKO *- Air quality management areas*
OSN *- United Nations*
OZE *- Renewable energy sources*
PM_{10} *- Particulate matter*
$PM_{2,5}$ *- Fine dust particles in the air*
PN *- Piešťany*
POH SR *- Waste Management Programme of the Slovak Republic*
PP *- Natural monument*
PR *- Nature Reserve*
PRĽA *- Monuments Reserve of Folk Architecture Plavecký Peter*
PÚ *- Programme territories*
PZI *- Foreign direct investment*
R1 *- Expressway to Slovakiau*
RIÚS BA *- Regional Integrated Strategy of the Bratislava Region*
RIÚS TA *- Regional Integrated Strategy of trnava region*
S 31 *- Expressway in Austriau*
S1 *- Expressway in Austriau*
S5 *- Expressway in Austriau*
S6 *- Expressway in Austriau*
SAŽP *- Slovak Environment Agency*
SE *- Senica*
SEA *- Strategic environmental assessment*
SHMÚ *- Slovak Hydrometeorological Institute*
SI *- Skalica*
SK *- Slovakia*
SK-AT *- Slovakia - Austria*
SKCHVU *- Protected Bird Areas*
SKUEV *- Territories of European importance*
SO_2 *- Sulphur dioxide*
SODB *- Population, house and apartment census*
SR *- Slovak Republic*
STN *- Slovak Technical Standard*
SV *- Snina*
ŠGÚDŠ *- State Geological Institute of Dionysus Štúr*
SOP SR *- State Nature Protection of the Slovak Republic*
ŠVHB *- State water management balance*
ŠZ *- State List*
TEN-T *- Trans-European transport networks*
TFZ *- Wiener Neustadt Technology and Research Centre*
TT *- Trnava*

TZL *- Particulate matter*
TZWL *- Wieselburg-Land Technology Center*
ÚEV *- Territories of European importance*
UFT *- Tulln University and Research Center*
UNESCO *- United Nations Educational, Scientific and Cultural Organization*
ÚPN VUC *- Zoning plan of the region*
ÚSES *- Territorial system of ecological stability*
ÚVZ SR *- Public health of the Slovak Republic- Public Health Authority of the Slovak Republic*
VaV *- Science and research*
VD *- Waterworks*
VÚC *- Higher Territorial Unit*
VÚVH *- Water Management Research Institute*
WCL *- Wasser Cluster Lunz*
ZZO *- Sources of air pollution*
ŽP *- Environment*