

DONAUREGIONEN: THE SPATIAL DEVELOPMENT CONCEPT OF INTERREGIONAL COOPERATION IN THE DANUBE SPACE

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ABSTRACT - Between 2006 and 2008, the National Research and Development Institute for Urban and Regional Planning URBANPROIECT Bucharest participated - within the framework of EU programme INTERREG IIIB - at the **DONAUREGIONEN** Project: The Spatial Development Concept of Interregional Cooperation in the Danube Space.

The aim of the project was to create a complex assemblage of knowledge about the potential possibilities of development in the Danube regions and the related interregional relations, to initiate common steps when choosing the regional development centres and to encourage cross-border cooperation. This action should help to overcome the existing information barriers and also the local authorities in the stage of planning the regional and city development.

The project was **structured** by a summary evaluation of the development potential on the Danube area – analyses of problems, interests, and conflicts. The elaboration of the summary documents was based on the general answers to the four thematic fields representing the basic functional complex:

1. Natural resources, environmental protection, and creation;
2. Human resources, urban structure, and quality of life;
3. Transport and technical infrastructure;
4. Economic structure.

On the basis of this summary evaluation, a concept of development and arrangement of the territory of the Danube area and a typology of regions will be developed and, finally, proposals and recommendations will be elaborated for regional and local authorities dealing with the regional and city development planning.

The **result** of the project will be mainly to outline:

- the conditions for the optimization of technical, territorial, socio-economic, and environmental relations in the Danube river corridor;
- the existence of mutually linked and balanced urban and economic development centres, which will have positive influence on the development of their regions, and
- the conditions for the constitution of a development corridor that will act as a stabilization agent balancing the regional disparities in the different member countries.

The Geographical information system supporting the elaboration of the Donauregionen project system was conceived as a working GIS storing all the geographical data necessary for the processing of project outputs. All the geographical data were distributed in the WGS-84 system of coordinates.

The project area of interest includes a territory within 5 countries of the Danube region (Slovakia, Hungary, Serbia, Bulgaria, and Romania).

Keywords: spatial planning, development centre, GIS, Danube region, regional development

1. Preliminary Results

The Danube is the second largest river in Europe. The Danube River flows across 10 countries and the Danube river basin is the world's most international river basin as it includes territories of 19 countries. **General scheme Natural Conditions** is focused on the overall characterization of the area of interest from the environmental and ecological point of view. The main objective is to define the natural potential and stress factors by means of indicators concerning the natural richness and biodiversity of the area as a whole on the one hand and the state of the environment expressed by the stress factors in the field of atmosphere pollution, water pollution, and

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waste management on the other hand. The Romanian partner described the Romanian Danube region, together with its *landscape structure* (according to CORINE Land Use/Land Cover). The natural conditions of Danube region were also presented as text and GIS maps: *Nature conservation and landscape protection*. In Romania, the natural areas were identified and represented according to Law no.5/2000 “Law on the approval of the spatial arrangement of national territory – the 3rd Section – Protected Areas”. The riparian Danube area is very good represented in Romania from this point of view. According to this Law, in the studied region, 177 reserves and natural monuments are identified. According to the Government Decision 2 151/2004 regarding the regime of protected natural area for new zones, in the studied Danube area 63 new sites were added. The Protected Areas from the Romanian Danube region were represented in GIS maps as national parks, national nature reserves, national natural monuments, nature reserves, natural monuments, protected sites, special protection areas, important bird areas, Ramsar convention sites, sites inscribed on the World Heritage list, scientific reserves, special areas of conservation, biosphere reserves, scientific reserves, karsts and, ultimately, Natura2000 sites. Concerning the *Water Management*, maps regarding the drinking water resources, utilized water sources, water supply reservoirs, and water pollution sources were created. The *State of Environment* in Romanian Danube area presented the main atmosphere pollution sources, waste incinerators, landfills, water and soil pollution sources in the area.

In 2006, the population of the transnational Danube region was of 19,8 million inhabitants, the Romanian part of the region having about 37% of it. The Romanian contribution in the **General Scheme Human Resources, Settlement Structure and Quality of life** was materialized by text part and GIS maps and tables regarding these aspects. For the **Human Resources** chapter it was described *the basic demographic situation in the region* (population number, trend 1991-2006, dynamics of the population growth 1991-2006, population density, differences at NUTS 3 region level, process of depopulation or population concentration in the region, age structure and dependency ratios), *educational structure, description of labour market capacity* (share of economically active population, employment rate, unemployment rate), and a *prognosis*. As for the **settlement structure**, it was described the situation of the Romanian part of the Danube region, in the respect of the *localization and distribution of the settlements, ranking and dynamics of the different types of settlements in the period 1991-2005, according to their size and population, tourism, roles of the towns’ importance in the analyzed region in the European, national, and regional context, main elements of the regional urban system: agglomeration areas and development axes, territorial polarization, interregional and cross-border cooperation*. Regarding the **living standards**, the housing standard in the Romanian part of the region was presented, expressed in *number of dwellings per 1,000 inhabitants, localities having drinking water installations, dwellings connected to sewerage networks*.

Being navigable on 87.1% (2,488 km) of its course, the main qualifications of the Danube, in relation to the **General Scheme: Transport and Technical Infrastructure**, are: the Main Inland Waterway of International Importance E-80, the Pan-European Transport Corridor VII and the TEN-T Priority axes No 18 (Rhine/Meuse–Main–Danube inland waterway axis). Romania presented for the **Transport Infrastructure**, in GIS and text files, the situation regarding the *Road infrastructure* (European roads crossing the Romanian part of the Danube region, pan-European corridors, state of the public roads at NUTS 2 and NUTS 3 level, policies and projects to improve the road network in the Danube region), the *Railway network* (pan-European corridors, operating railway lines, railway network at NUTS 2 and NUTS 3 level, strategies and objectives for the development of rail infrastructure), *waterways and ports, air transport, multimodal transportation systems and terminals*. Concerning the **Technical infrastructure**, the GIS maps and text files described the *electric power networks and installations, gas and oil supply and distribution, telecommunication network, and water protection and management*.

The economic development is quite different among the Danube regions. In the chapter **Evaluation of the economic level and the development potential of the region**, the level of GDP in the Danube regions was analyzed on different territorial areas. The level of GDP in million euros, on per capita values and on purchasing power parity (PPP) was compared.

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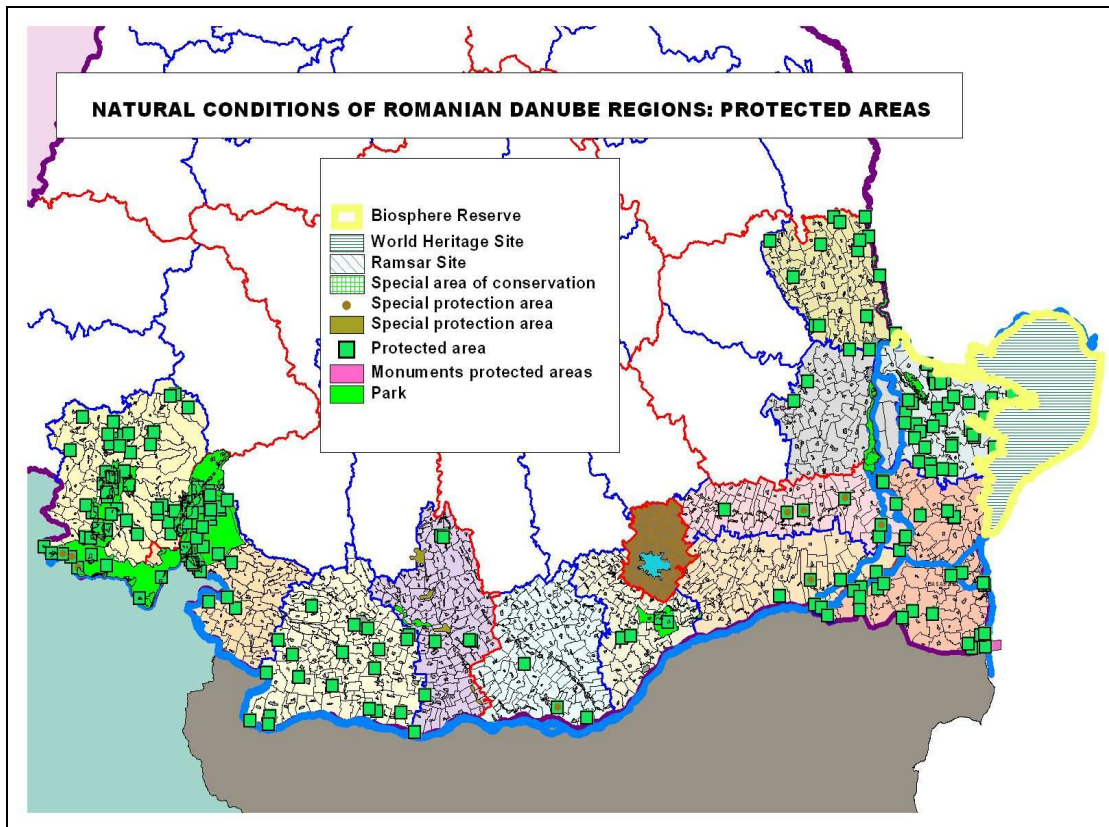


Figure 1. Natural conditions of Romanian Danube regions: protected areas

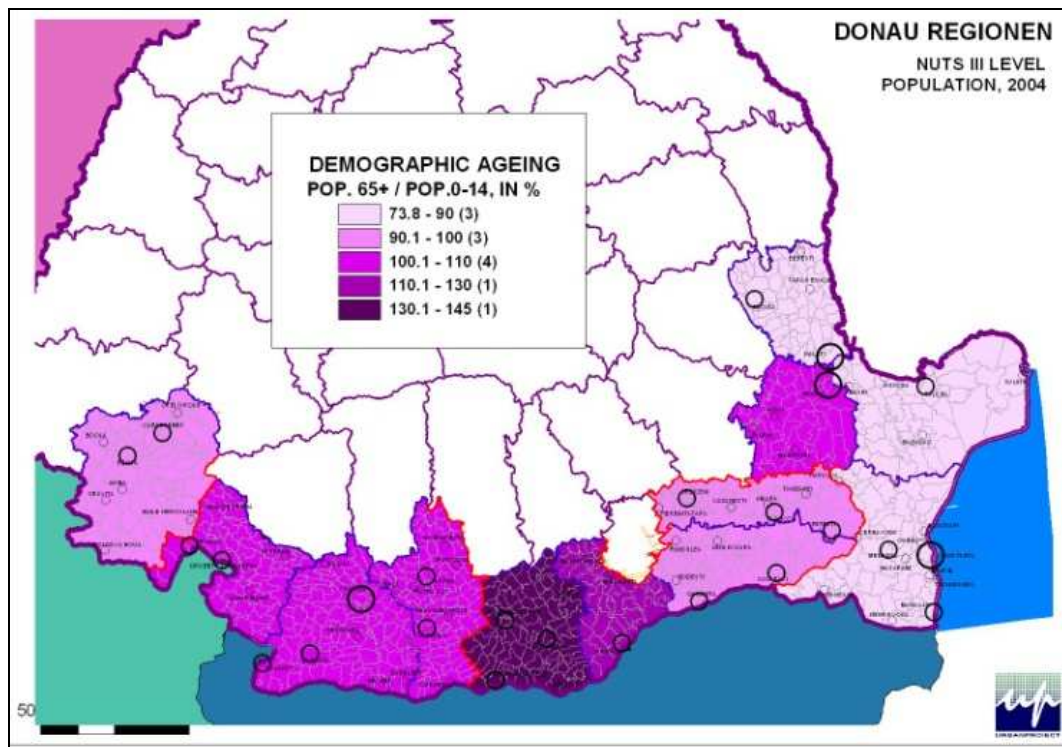


Figure 2. Romanian Danube regions: demographic ageing.

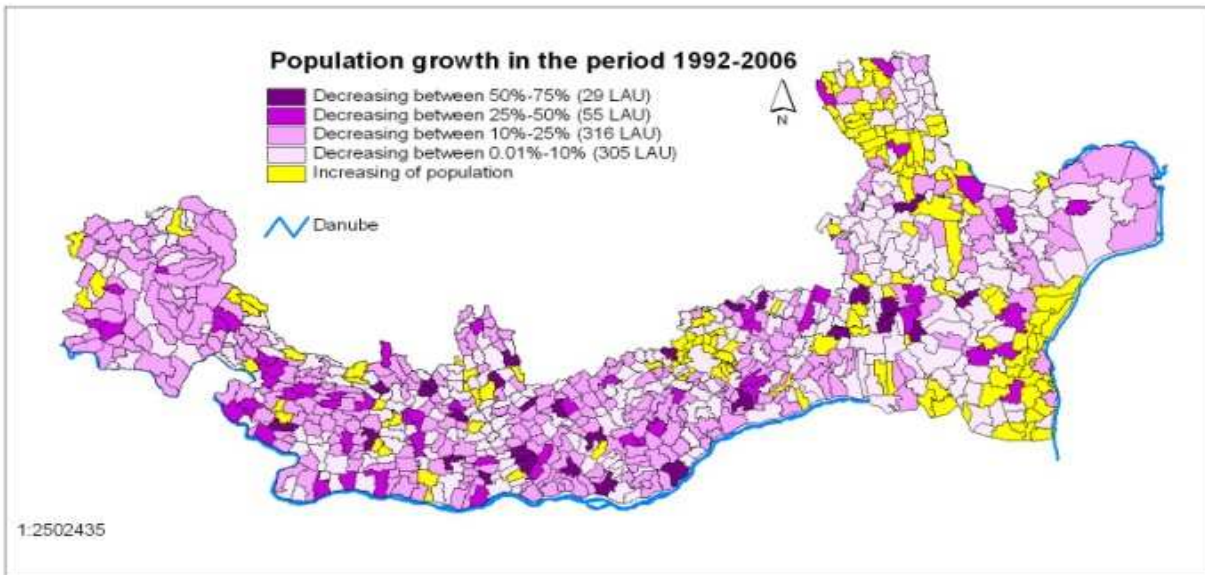


Figure 3. Romanian Danube regions: population growth.

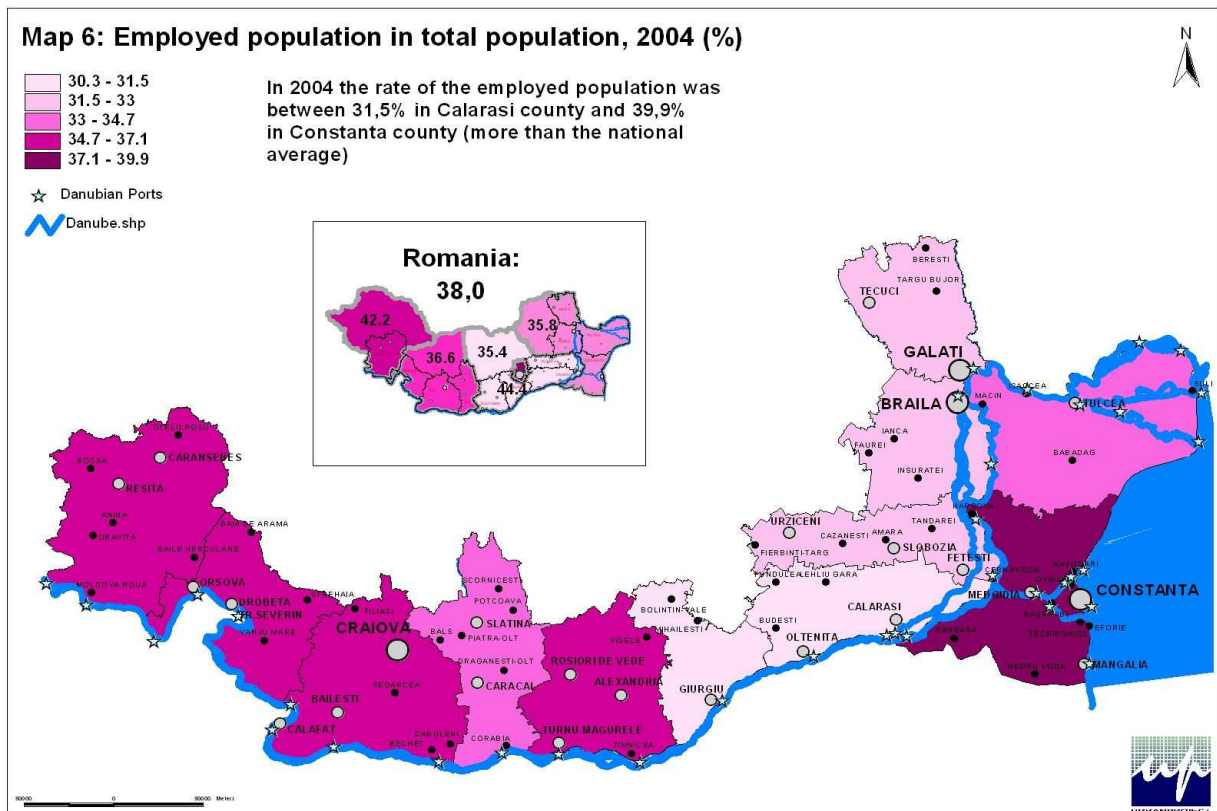


Figure 4. Employed population in total population, 2004.

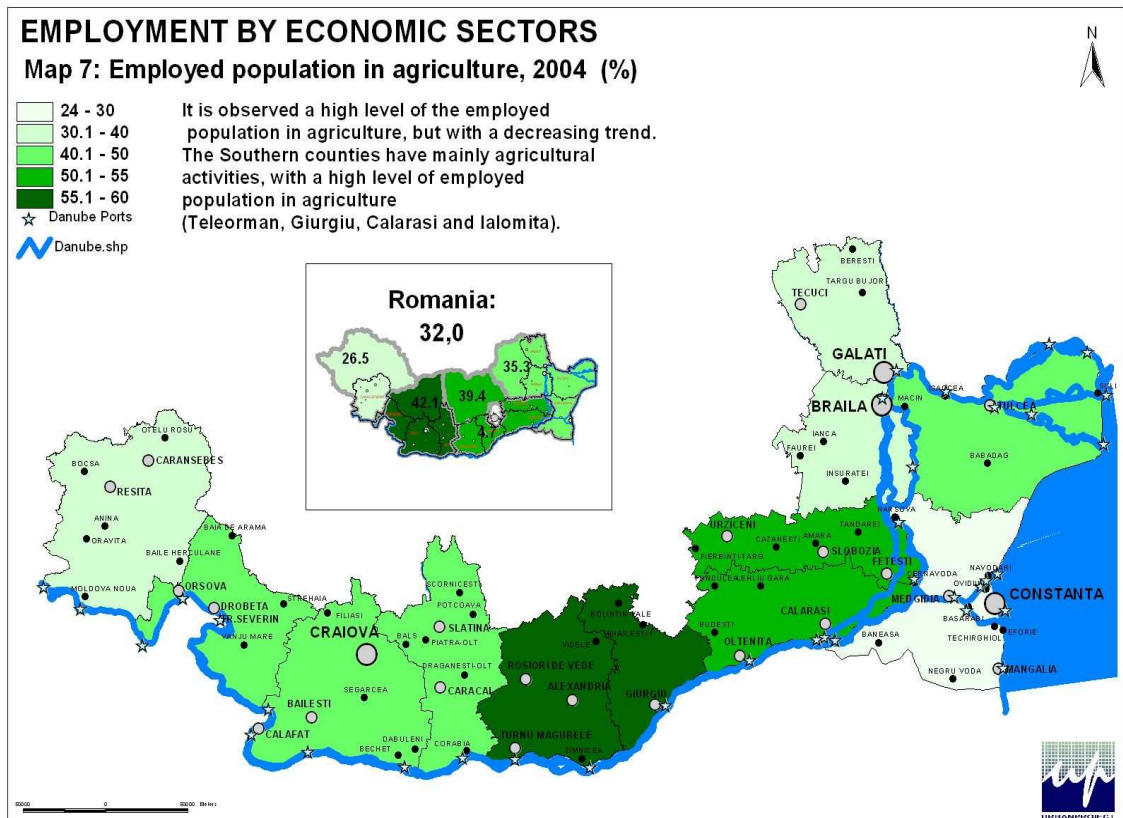


Figure 5. Employed population in agriculture, 2004.

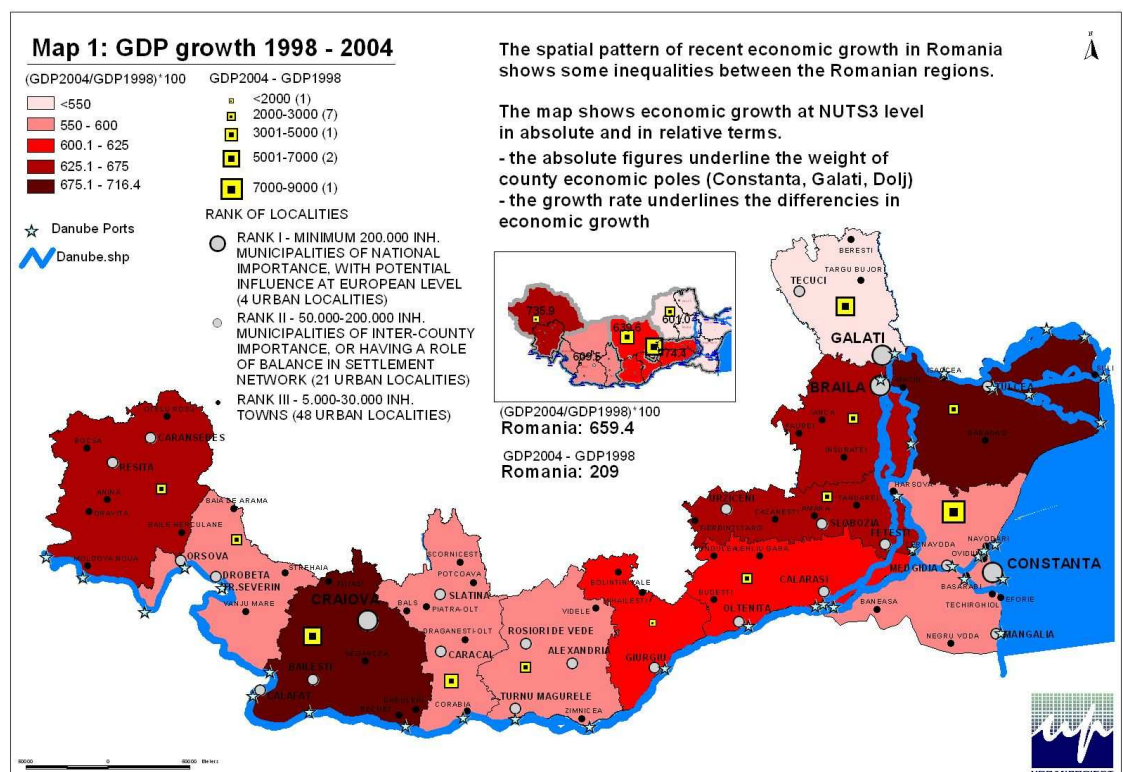


Figure 6. GDP growth 1998-2004.

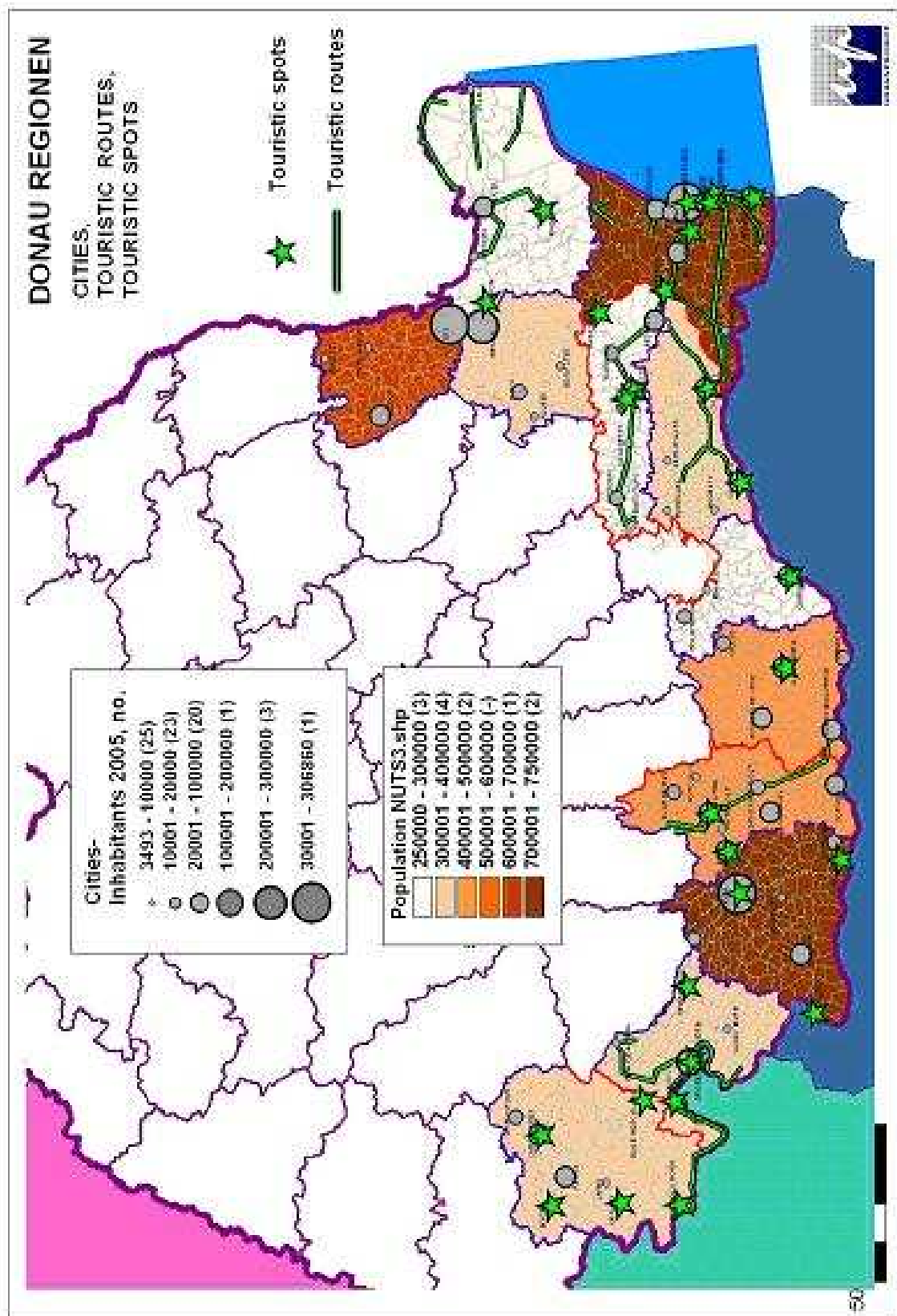


Figure 7. Romanian Danube regions: cities, tourist routes, tourist spots.

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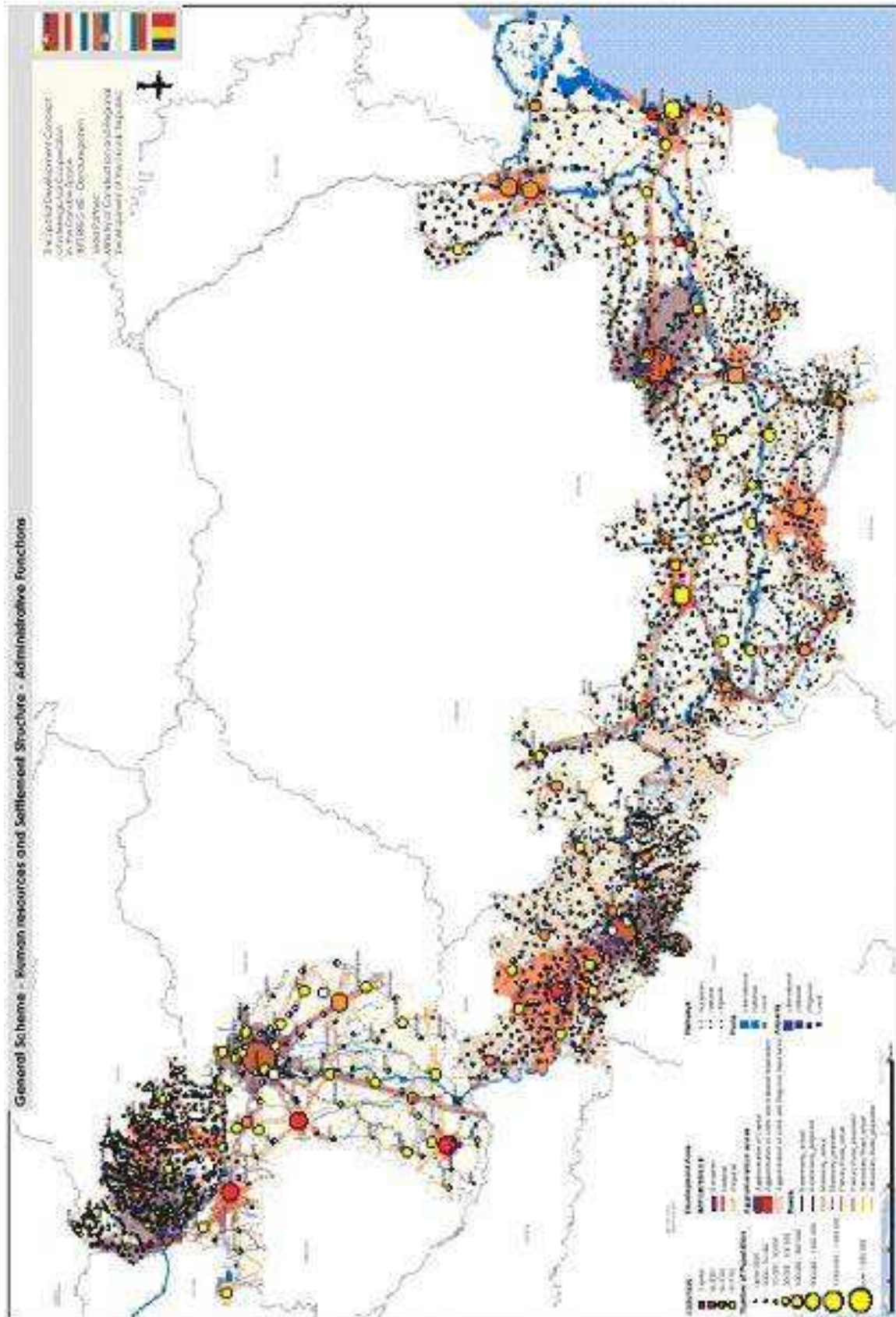


Figure 8. General Scheme: human resources and settlement structure.

The way in which the GDP has developed in each sector in the last years was also measured, based on NACE classification. Based on these indicators, it was possible to draw a picture of the analyzed area, to find out which are the similarities and the differences in the developed and problematic areas of the Danube region. In the Romanian part of the region, the activity structure, average monthly salary, and life expectancy at birth were also evaluated. ***The economic potential of the region*** was evaluated at the Romanian NUTS 2 and NUTS 3 level and consisted in the evaluation of the primary resources (natural potential - agricultural areas and the forests, and the oil, natural gas, and ferrous and non-ferrous ore raw materials) and of the secondary resources (potential created by human activity - working potential of the region - regional labour market, educational structure, structure of enterprises, development potential of the region: research and development, innovation).

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