
THE DANUBE STRATEGY AND THE ENERGY SECURITY OF THE DANUBE MACRO REGION

SVETLA BONEVA

MACROREGIONS: THEORETICAL CONTEXT AND POLICY DEVELOPMENTS IN THE DANUBIAN PERSPECTIVE

The concept 'Macro-region' belongs to economic and political geography and spatial planning. The term has been widely used in a range of contexts, and in the present volume different authors approach it from various angles. After the adoption of the EU macro-regional strategies for the Baltic Sea Region (European Commission, 2009), the Danube Region (European Commission, 2010) and, having in mind the idea of the establishment of other potential macro-regional strategies concerning the Mediterranean, the Alpine and the Black Sea areas, the concept of macro-regions has increased its prominence in contemporary European policy debates.

Evolution in regional economic development and territorial integration theories evolution has introduced new concepts. The experience gained from the past and present European territorial cooperation programs resulted in the introduction of the term "macro-region" in current European policy making. The term "macro-region" is a descriptive term concerning a geopolitical subdivision that encompasses several politically defined regions.

Since the 1990s, interest in *European territorial cooperation* has increased, mainly due to *cross-border cooperation* (between adjacent regions), *transnational cooperation* (involving regional and local authorities) and *interregional cooperation* (involving large-scale information exchange and sharing of experience). All forms of European territorial cooperation stimulate integration of markets and trade. Thus borders have gradually transformed from barriers to "bridges" between the countries (regions) involved. Common problems and challenges, such as climate change, pollution, flooding, loss of bio-diversity, energy supply problems, economic problems, etc., demand joint coordinated actions. Undertaking common coordinated actions and effective territorial cooperation can be a major social resource as well, providing new

opportunities for regions, nations and companies. European territorial cooperation is considered to be a major factor of economic growth, creating jobs and improving the quality of life (Gorzelak, 2010:7).

The spatial configuration of crossborder links requires a rethinking of the geography of economic development. Schamp (1995) defines the “*functional regions*” – interdependent territories that do not necessarily coincide with the political and the administrative territorial units outlined by national borders. Functional regions clearly illustrate the link between territorial cooperation and territorial development. Border regions are usually located in geographical peripheries of their state and are often more underdeveloped than the central regions. Cooperation across borders stimulates development and synergy by encouraging mutual business between regional firms and contacts among local NGOs. Apart from cross-border cooperation, other forms of territorial cooperation (transnational and interregional) also contribute to the development of cooperating areas and create networking opportunities between regions across the EU.

Place-based policy approaches are based on specific resources and growth potential of regions. These approaches stem from efforts to support the development in a country's regions. The same idea is applied to functional regions for cooperation among regions of different countries. These regions should try to identify and exploit their territorial capital, i.e. those of their comparative advantages that allow them and the whole region to grow. This approach requires clear understanding of the local strengths, weaknesses, opportunities and threats in the process of planning and implementation of policy measures (and could lead to adapting interventions to fit regional contexts). The creating of cooperative links, potential synergies and learning opportunities is an asset contributing to a region's capital. The assumption that cooperation helps regions to identify their endogenous growth potential has rarely been subject to empirical studies, and the precise role of territorial cooperation in regional development has rarely been examined in depth. The ESPON program-funded project, “Territorial cooperation in transnational areas, between regions and across internal/external borders” (ESPON applied research project 2013/1/9, 2009:7) partly fills this research gap.

The objective of territorially coordinated interventions is familiar in spatial planning. Since the 1970s, there has been an awareness of the growing disparities at regional, national and European levels, as well as a perception that the Union is divided into a highly developed geographical core and developing peripheries. The

efforts to erase these disparities resulted in the need to provide some sort of “spatial justice” European level.

In analysing the European spatial planning development, several important documents are worth mention. In 1991 the European Commission published “Europe 2000”, an analysis of the European territory (Commission of the European Communities, 1991), highlighting existing disparities and outlining future trends. The follow-up document “Europe 2000+” demonstrated a growing acceptance of spatial planning at EU-level and presented policy options to promote territorial equity (Commission of the European Communities, 1994). In particular, the report observed that Member States were increasingly taking cross-border and transnational issues into account in their territorial development planning. Highlighting past experiences of transnational coordination between Member States, the report argued that planning coordination between countries was necessary to promote balanced development.

The “European Spatial Development Perspective” (ESDP) was the first step to the coordination of planning at EU-level in the field of spatial development (Commission of the European Communities, 1999). Agreed by the ministers of regional development and spatial planning in Potsdam in May 1999, the European Spatial Development Perspective was a non-binding framework document streamlining the policies that have a spatial impact on European cities and regions. The basic objective of the European Spatial Development Perspective was to achieve ‘balanced and sustainable development of the territory of the EU’. The document points out that territorial cooperation could be a tool for the coordination of sectoral policies and for ensuring consistency in planning between different countries. Spatial planning coordination in the macro regions of the Baltic Sea and the Danube river can be considered a way of reaching this goal. Before the adoption of the European Spatial Development Perspective the spatial planning debate at European level was led mainly by the Member States. The ESDP itself was a result of an intergovernmental process that did not envisage a leading role for the European Commission. The intergovernmental process however stalled soon after the completion of the ESDP. Then the European Commission published its “Second Report on Economic and Social Cohesion”, which has been followed by more Commission activities in the field. Territorial cooperation across regions is the focal point of the European Commission’s *objective of “Territorial Cohesion”*. Both the Constitutional Treaty and the Lisbon Treaty set the triple goal of social, economic and territorial cohesion.

The European commission adopted the *European Union Strategy for the Danube Region* (EUSDR, the Strategy) on 8 December 2010. The EUSDR covers eight EU member states and six non EU member states falling within the Danube river basin. The Strategy is a comprehensive macro-regional strategy, covering several EU policies. The policies concerned by the Strategy are included in two EUSDR plans: *the Communication Plan* and *the Action Plan*. The implementation of the strategy started in 2011 after its official endorsement by the EU Member States at the 2011 EU Council under the Hungarian presidency of the European Union.

Figure 1: Territorial span of the European Union Strategy for the Danube Region



The Strategy follows the principles of the previously adopted EU strategy for the Baltic Sea: it relies on existing policies and structures. Since no new legislation, financial instruments (funds) or institutions will be created to secure its implementation, the Strategy has met great criticism and skeptical voices concerning its outcomes have been heard. Criticisms of the Strategy state that no one should expect too much because of the so called three “NOs” accompanying the strategy—NO legal framework, NO new financing and NO new institutions.

The EUSDR involves *six key areas*:

- I) ENVIRONMENTAL PROTECTION, covering three priority areas:
 - 1) restoration and maintenance of water quality;
 - 2) management of environmental risks; and
 - 3) preservation of biodiversity, landscapes and the quality of air and soil.
- II) MOBILITY, concerning the untapped shipping potential and the poor condition of road and rail transport connections
- III) ENERGY CONNECTIONS
- IV) Uneven SOCIO-ECONOMIC DEVELOPMENT
- V) Uncoordinated EDUCATION, RESEARCH AND EDUCATION SYSTEMS
- VI) Shortcomings on SAFETY AND SECURITY

To tackle the challenges in these six priority areas the strategy proposes an *Action plan*, elaborated by the European Commission in partnership with the member states, regions and other stakeholders. The Action Plan comprises four pillars covering 11 priority areas as follows:

Table 1: The Four pillars of the EUSDR Action plan and their priority areas.

I. Connecting the Danube Region	II. Protecting the environment in the Danube Region	III. Building prosperity in the Danube Region	IV. Strengthening the Danube Region
Priority areas:	Priority areas:	Priority areas:	Priority areas:
1.To improve mobility and multimodality in terms of: a) inland waterways; b) road, rail and air links	1. To restore and maintain the quality of waters	1. To develop the knowledge society through research, education and information technologies	1. To set up institutional capacity and cooperation
2.To encourage more sustainable energy	2. To manage environmental risks	2. to support competitiveness of enterprises, including cluster development	2. To work together to promote security and tackle organized and serious crime
3.To encourage culture, tourism and people to people contacts	3. To preserve biodiversity, landscapes and the quality of air and soils	3. To invest in people and skills	

Source: European Commission, COM (2010) 715 final, European Union Strategy for the Danube Region, p. 6., Brussels, 8 December 2010

The Action Plan is an indicative framework that is supposed to evolve as work on the Strategy progresses. Its *basic objective* is to promote territorial cohesion within the Danube macro-region, creating good links between urban and rural areas, better access to infrastructure and services and comparable living conditions. This objective will be fulfilled through the implementation of projects and actions that should:

- demonstrate immediate and visible benefits for the people in the region;
- have an impact on the whole macro-region or a significant part of it. Projects should therefore promote sustainable development and cover several regions and countries;
- are coherent and mutually supportive, creating win-win solutions;
- are realistic (technically feasible and with credible funding).

The EUSDR is intended to make the best use of existing EU policies and funding in order to produce results. To provide this, the European Commission has established a framework for cooperation comprising all complementary actions and stakeholders at national, regional and other levels. *The European Commission* is responsible for the *policy-level coordination* in the process of the Strategy's implementation, supported by a High Level Group (HLG) representing all EU member states and non-member states falling within the Danube River basin. To facilitate the practical aspects of the strategy implementation, National Contact Points (NCPs) assist the European Commission.

The EU member states coordinate the priority areas in consultation with the European Commission, the neighboring non-member states and other regional or European relevant bodies. Priority areas coordinators have trans-national, inter-sectoral and inter-institutional approaches to the work; they should demonstrate Danube-wide commitment and expertise and ensure the implementation of the respective projects.

Implementation of all actions of the Strategy is the responsibility of all actors at national, regional or local level. Implementation of the Strategy's actions requires the transformation of the respective actions into concrete projects. Funding for the implementation of the Strategy's actions comes from the existing EU financial instruments available for the region that amount to 100 billion euro for the period 2007 -2013 and come mainly from the structural funds, IPA and ENPI.

Reporting and evaluation of the Strategy implementation are carried out by the European Commission in partnership with the Priority Area Coordinators. The latter

identify the progress in their priority area related to the achievement of targets as a result of the implemented projects.

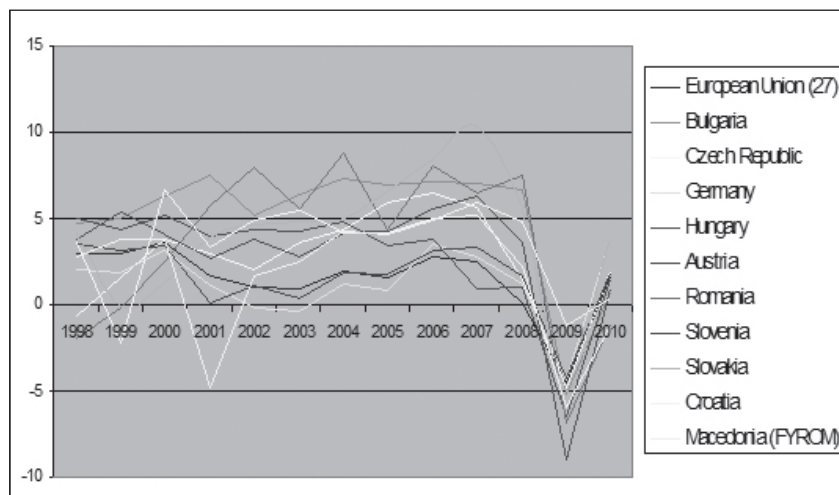
The EUSDR reinforces the achievement of the “Europe 2020” strategy goals. It supports *sustainable growth*, because it is aimed at reducing the energy consumption and increasing the usage of renewable energy sources as well as introducing more economically friendly transport and promoting “green” tourism.

Table 2: Real GDP per capita in the EUSDR countries, growth rate
(Percentage change on previous year, Euro per inhabitant)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EU (27)	2,9	2,9	3,6	1,7	1	0,9	2	1,5	2,8	2,5	0,1	-4,6	1,6
Bulgaria	4,7	5	6,3	7,5	5,2	6,4	7,3	6,9	7,1	7	6,7	-5,2	0,7
Czech Republic	-0,7	1,5	3,8	2,9	2,1	3,6	4,4	6	6,5	5,6	1,4	-4,9	2
Germany	2,1	1,9	3,1	1,1	-0,2	-0,3	1,2	0,8	3,5	2,8	1,2	-4,4	3,8
Hungary	5	4,4	5,2	4	4,4	4,3	4,8	3,4	3,8	0,9	1	-6,5	1,4
Austria	3,5	3,1	3,4	0,1	1,1	0,4	1,9	1,8	3,1	3,3	1,7	-4,2	1,9
Romania	-1,9	-0,2	2,5	5,8	8	5,5	8,8	4,4	8,1	6,5	7,5	-6,9	-1,1
Slovenia	3,8	5,3	4,1	2,7	3,8	2,8	4,2	4,3	5,5	6,3	3,6	-9	0,9
Slovakia	4,2	-0,1	1,3	3,9	4,6	4,8	5	6,6	8,4	10,4	5,6	-5	3,8
Croatia	3,6	-2,2	6,7	3,3	4,9	5,4	4,2	4,2	5	5,2	2,2	-5,9	-1,2
Macedonia (FYROM)	2,8	3,8	3,8	-4,9	1,6	2,5	4,3	4,1	4,9	6	4,8	-1,2	0,4

Source: Eurostat, 2010.

Figure 2: Real GDP per capita in the EUSDR countries, growth rate
(Percentage change on previous year, Euro per inhabitant)



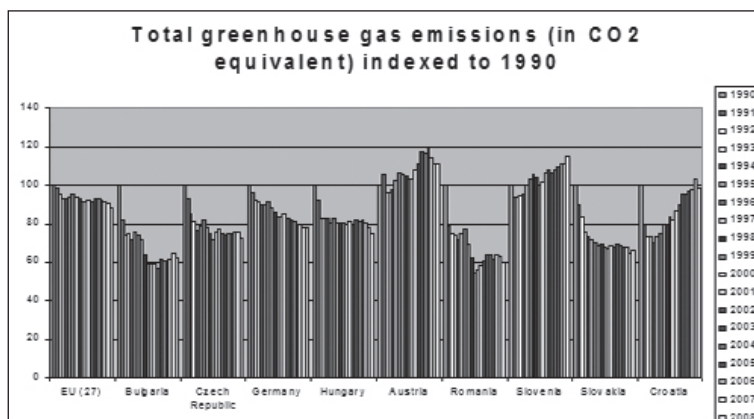
Source: Eurostat, 2010.

Table 3: Total Greenhouse gas emissions in the EUSDR countries
(in CO₂ equivalent) indexed to 1990, index base year = 100

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU (27)	100	98.2	94.8	93.2	92.7	93.7	95.6	93.7	93.9	90.9	90.9	91.9	91.1	92.5	92.5	91.9	91.6	90.5	88.7
Bulgaria	100	81.7	73.7	74.3	72.2	75.7	74	71.4	61.7	59.2	59	59.3	56.7	61.2	60.6	60.3	61.4	64.7	62.6
Czech Republic	100	93.1	84.6	81.5	76.3	78.7	82.1	78.5	74.4	72.2	75.6	76.7	74.5	74	74.8	74.5	75.3	75.6	72.5
Germany	100	96.3	92.1	91.2	89.7	89.4	91.1	88	86.1	83.4	83.2	84.5	82.8	82.3	81.2	79.4	79.8	77.7	77.8
Hungary	100	91.8	82.6	82.9	82.5	80.8	82.9	80.9	80.6	81	79.2	81.3	79.1	82.2	81.2	82	80.3	77.8	75.1
Austria	100	105.2	96.6	96.6	97.7	102	106	105.5	105	103	103	108	110.4	117.6	116	119	115	111	111
Romania	100	79	74.7	73.8	71.7	74.5	77	69.4	62	54.8	56.3	58.2	60.8	63.5	64.2	61.8	63.7	63.1	60.3
Slovenia	100	94	93.4	94.4	95.3	99.9	103	105.3	104	101	102	107	108	106.3	108	109	111	111	115
Slovakia	100	89.6	83.3	76	73.6	72.1	70.1	68.5	69.1	68.2	66.6	68.5	67.5	69	68.7	67.8	67.4	64.6	66.1
Croatia	100	79.1	73.5	73.5	70.5	73	74.7	79.1	79.4	83.1	82.4	86.4	89.4	94.8	94.9	96.7	98.1	103	99.1

Source: Eurostat, 2008.

Figure 3: Total Greenhouse gas emissions in the EUSDR countries
(in CO₂ equivalent) indexed to 1990, index base year = 100



Source: Eurostat, 2008.

It supports *inclusive growth*, because investment in people and their skills is one of the basic priority areas of the EUSDR. The support of competitiveness of enterprises, including cluster development, represents the main field of action in another basic Priority Area of the Strategy. The strategy is also aimed at improving the environment in the Danube macro-region as well as the further removal of the internal market bottlenecks.

The EUSDR supports *intelligent growth*, because one of its four basic pillars (pillar III: “Building prosperity in the Danube region”) is supported by priority areas focused

on developing the knowledge society through research, education and information technologies. The implementation of the EU strategy for the Danube region is not supported by a special EU financial instrument. All potential projects falling within the scope of the eleven priority areas identified by the strategy will be funded by the existing European financial instruments. These instruments include all national operational programs in the region's EU member states (cumulative funding for these programs amounts to 100 bn. EUR coming from the ERDF, ECF and the CF) as well as the cross-border, trans-national, IPA – CBC (the cross-border cooperation programs funded by the Instrument for pre-accession) and the ENPI programs (the European Neighborhood Partnership Instrument programs). Thus the available financial support should be used to stimulate macro-regional cooperation and tackle the region's problems.

The importance of the Danube region for the development of the EU is indispensable and largely supported by public finance: out of the 52 EU *cross-border cooperation programs* along the internal borders of the Union (amounting to a total of 5,6 bn. EUR) 18 programs cover member states situated in the region. Out of the 13 EU funded *trans-national cooperation programs* that cover larger areas of cooperation and amount in total to 1,8 bn. EUR, 3 programs (the Alpine space program, the Central Europe program and the South East Europe Program) encompass EU members. Moreover, 6 IPA CBC programs between the EU and accession countries include countries of the region. Besides these, 3 ENPI CBC programs between EU and third countries cover the area (the ENPI-CBC Black Sea Basin Program, the ENPI-CBC Romania-Hungary-Slovakia-Ukraine Program and the ENPI-CBC Romania-Moldava-Ukraine Program) out of a total of 15 ENPI-CBC programs¹ funded by the EU.

The *interregional cooperation program* (INTERREG IVC) and the 3 networking programs (Urbact II, Interact II and ESPON) cover all 27 Member States of the EU and some other countries. Therefore all EU member states falling within the territory covered by the Danube strategy can benefit from it. The interregional cooperation programs provide a framework for exchanging experience between regional and local bodies in different countries and receive ERDF contributions amounting to 445 million EUR. Interregional cooperation builds networks to develop good practice and facilitate the exchange and transfer of experience by successful regions. It showcases

¹ The 15 EU funded ENPI-CBC programs are divided into three major categories: 9 land-border programs, 3 sea basin programs and 3 sea crossing programs. Information for these programs is available at: http://ec.europa.eu/europeaid/where/neighbourhood/regional-cooperation/enpi-cross-border/programmes/index_en.htm

what regions do well, to the benefit of those still investing. The INTERREG IV C program enables EU regions to work together and is structured around two priorities: innovation and the knowledge economy and protection of the environment, and risk prevention. The ERDF contribution to this program is 321 million EUR. The program covers the territory of the EU-27 countries, Norway and Switzerland.

The 3 *networking programs* from which the Danube Basin countries can benefit are the URBACT II program, the INTERACT II program and the ESPON program. *The URBACT II program* brings together actors at local and regional level to exchange experience and to facilitate learning on urban policy themes. The program supports thematic networks and working groups between cities, conferences and development of tools. The ERDF contribution to this program is 53 million EUR. The program covers the territory of the EU-27 countries, Norway and Switzerland. Jointly with the URBACT II program and the INTERREG IVC program are the driving forces for the EU initiative “Regions for Economic Change”, which is designed to support regional and urban networks in developing and spreading best practice in economic modernization. The most innovative projects in this field can compete for the annual RegioStars award. *The INTERACT II program* provides training, services and tools to program managers and administrators of co-operation programs in order to improve the management of these programs. The ERDF contribution to this program is 34 million EUR. The program covers only the territory of the EU-27 countries.

The “*European Spatial Planning Observation Network*” (ESPON) program provides scientific information for the development of regions and larger territories through applied research, analysis and tools. The ERDF contribution to this program is 34 million EUR. The program covers the territory of the EU-27 countries, Norway, Switzerland, Iceland and Liechtenstein.

The *European Grouping for Territorial Cooperation (EGTC)* is also to be mentioned as an option for the Danube Basin countries. Unlike the structures which governed this kind of cooperation before 2007, this new European legal instrument, designed to facilitate and promote cross-border, transnational and interregional cooperation, is a legal entity and as such enables regional and local authorities and other public bodies from various member states to set up cooperation groupings on a legal basis.

Is the funding for all these programs enough for the implementation of the Danube strategy? The budget of these programs comes from the the European Territorial Co-operation objective, financed by the European Regional Development Fund (ERDF)

and amounts to 8.7 billion EUR. Thus the objective European Territorial Cooperation accounts for 2.5% of the total 2007–13 allocation for cohesion policy, including the allocation for Member States to participate in EU external border co-operation programs supported by the IPA and ENPI instruments. Given this information, we could conclude that sufficient funding exists that could be used for the implementation of the European Union Strategy for the Danube River.

THE DANUBE STRATEGY AND THE ENERGY SECURITY OF THE DANUBE REGION

Energy has been pointed out as a priority in all of the Danube strategy countries' position papers² sent to the European Commission. Energy is not only a part of the connectivity and communication pillar of the future strategy—without a sustainable energy sector in the region, none of the four strategic pillars can be implemented.

The energy sector of the Danube region strategy member countries reveals a diverse landscape, resulting from the economic diversity of the region, technological and cultural divergence and the different historical evolutions of the Danube countries. Nevertheless there is a common feature of the Danube strategy member countries (both EU member states and non-members): all of them are increasingly dependent on the import of primary energy sources—mainly gas and oil—and these imports are often imported exclusively from one source.

Domestic production of fossil fuels (oil, gas, coal, uranium) coming from conventional sources is insufficient and in decline, while the development of renewable energy resources is generally still underdeveloped (with the exception of Austria).

² The EU member states position papers are available at the web site of the DG Regional policy of the European Commission: http://ec.europa.eu/regional_policy/cooperation/danube/documents_en.htm

*Table 4: Share of renewable energy in gross final energy consumption (%)
in the EUSDR countries*

	2006	2007	2008	2020
EU (27)	8,9	9,7	10,3	20
Bulgaria	9,3	9,1	9,4	16
Czech Republic	6,4	7,3	7,2	13
Germany	7	9,1	9,1	18
Hungary	5,1	6	6,6	13
Austria	24,8	26,6	28,5	34
Romania	17,5	18,7	20,4	24
Slovenia	15,5	15,6	15,1	25
Slovakia	6,2	7,4	8,4	14

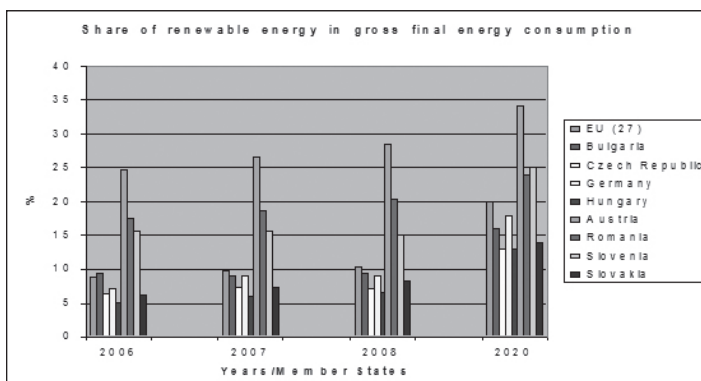
Note: This indicator is calculated on the basis of energy statistics covered by the Energy Statistics Regulation.

It may be considered an estimate of the indicator described in Directive 2009/28/EC, as the statistical system for some renewable energy technologies is not yet fully developed to meet the requirements of this Directive.

At the same time, the contribution of these technologies is still very small. The renewable energy shares calculation methodology and Eurostat's annual energy statistics can be found in the Renewable Energy Directive 2009/28/EC, the Energy Statistics Regulation 1099/2008 and at: http://ec.europa.eu/energy/renewables/index_en.htm>DG ENERGY transparency platform

Source: Eurostat, <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdcc110>

*Figure 4: Share of renewable energy in gross final energy consumption (%)
in the EUSDR countries*



Source: Eurostat, <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdcc110>

Most of the power and heat generation facilities in the region were built four decades ago and are obsolete, inefficient and highly pollutant (Table 5, Fig. 5). A large part of the region's energy transportation and distribution infrastructure (pipelines, power lines, etc.) have reached and even exceeded their life expectancy and need major replacement.

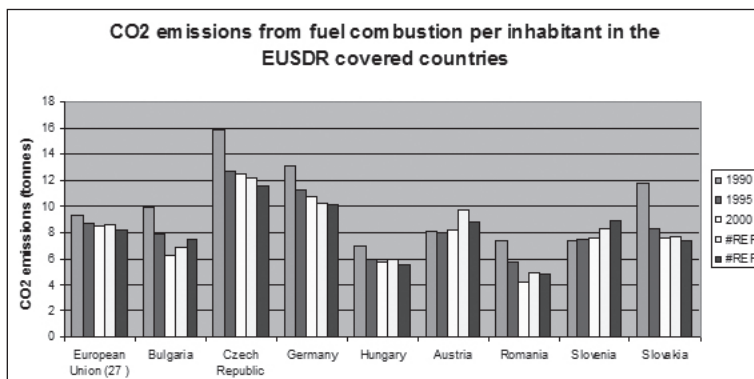
Table 5: CO₂ emissions per inhabitant in the EUSDR countries (Tonnes)

	1990	1995	2000	2005	2008
European Union (27)	9,3	8,7	8,5	8,6	8,2
Bulgaria	9,9	7,9	6,2	6,9	7,5
Czech Republic	15,9	12,7	12,4	12,2	11,6
Germany	13,1	11,3	10,8	10,3	10,1
Hungary	7	5,9	5,7	6	5,6
Austria	8,1	8	8,2	9,7	8,8
Romania	7,4	5,7	4,2	4,9	4,8
Slovenia	7,4	7,5	7,6	8,3	8,9
Slovakia	11,8	8,3	7,6	7,7	7,4

Note: The indicator compares the level of CO₂ emissions from fuel combustion in the EU.

Source: Eurostat, <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdgp410>

Figure 5: CO₂ emissions per inhabitant in the EUSDR countries (Tonnes)



Source: Eurostat, <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdgp410>

Most of the national energy transportation networks in the Danube region have few interconnections and most of them are not bi-directional (do not allow reversible energy flows), which makes them vulnerable to supply crises like the winter gas crisis

of 2009 caused by the Russian-Ukrainian gas transit conflict. The Balkan countries of the Danube region still have relatively low energy efficiency in all sectors of the economy: from industry to household energy consumption. Energy poverty, the lack of or insufficient access to affordable energy, is still a widespread phenomenon in the Balkan countries that has been caused mainly either by low levels of income that negatively impact the energy affordability or by the lack of power and heat distribution networks in certain areas. Other important issues are the general lack of cooperation in the energy field among the Danube region countries and the absence of functional regional energy markets.

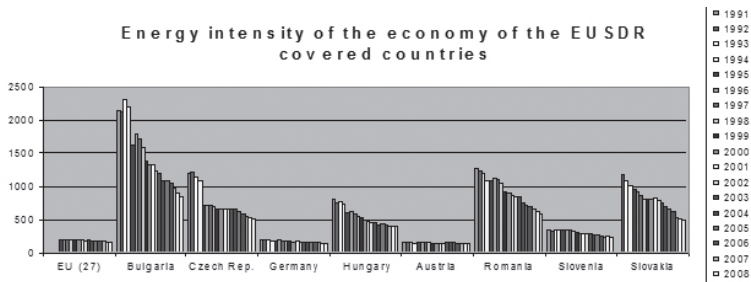
Table 6: Energy intensity of the economy in the EUSDR countries (Gross inland consumption of energy divided by GDP, kilogram of oil equivalent per 1000 Euro)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU (27)	208,96	212,25	204,76	200,22	192,99	187,29	187,74	184,88	186,68	184,06	181	175,5	168,7	167,4	165,2
Bulgaria	1638,77	1790,95	1712,4	1589,17	1378	1332,85	1332,38	1247,74	1207,91	1105,14	1095,63	1057,63	977,62	910,39	842,54
Czech Rep.	729,9	723,29	733,26	715,24	661,17	671,06	672,01	665,8	671,39	658,69	612,78	587,05	552,62	525,58	514,09
Germany	183,23	187,47	182,68	178,06	170,91	166,6	169,21	165,43	167,24	166,04	162,83	158,86	150,71	150,57	150,55
Hungary	611,51	621,87	588,17	554,86	528,91	492,21	485,61	466,87	458,07	434,08	444,72	425,73	414,3	408,61	413,48
Austria	152,32	158,66	154,61	151,77	145,67	140,67	146,95	146,43	153,26	151,19	153,69	147,79	140,4	138,56	136,24
Romania	1095,79	1128,9	1116,17	1037,95	924,41	906,05	869,24	857,74	847,43	786,7	732,99	704,78	659,09	612,76	576,9
Slovenia	350,1	352,46	348,94	330,81	313,04	299,77	306,06	298,51	293,7	290,19	284,27	269,65	252,55	257,31	252,28
Slovakia	962,41	913,9	876,02	814,51	818,05	815,4	824,64	795,12	754,62	708,24	681,63	622,67	532,93	517,89	496,57

Note: This indicator is the ratio between the gross inland consumption of energy and the gross domestic product (GDP) for a given calendar year. It measures the energy consumption of an economy and its overall energy efficiency. The gross inland consumption of energy is calculated as the sum of the gross inland consumption of five energy types: coal, electricity, oil, natural gas and renewable energy sources. The GDP figures are taken at chain linked volumes with reference year 2000. The energy intensity ratio is determined by dividing the gross inland consumption by the GDP. Since gross inland consumption is measured in kgoe (kilogram of oil equivalent) and GDP in 1 000 EUR, this ratio is measured in kgoe per 1 000 EUR.

Source: Eurostat

Figure 6: Energy intensity of the economy in the EUSDR countries (Gross inland consumption of energy divided by GDP, kilogram of oil equivalent per 1000 Euro)



Source: Eurostat

Although the EU Strategy for the Danube Region is budget-neutral (it uses only existing EU financing programs) and will not create new institutions, the strategy encourages coordination among the participating countries for the use of the existing financing schemes and creates momentum for the implementation of projects of regional importance in the energy sector. The Danube strategy countries have the chance to define and promote their priority energy projects that will be developed at national level or in cooperation with other countries.

The position papers³ of the Danube strategy countries, sent to the European Commission in the process of preparation of the strategy, highlight the priorities of the energy sector in this region. The Romanian contribution document lists priorities such as development and expansion of existing energy infrastructure; promotion of energy production from renewable sources; continuation of the Romanian nuclear energy program, and support for the thermal rehabilitation of buildings. Romania has expressed a special interest in the creation of a regional energy market. In this context, the country's proposal for including the Energy community in the EU Strategy for the Danube Region is very important.

Bulgaria is interested in jointly updating with Romania the assessment of hydro-power potential for the Danube segment that the two countries share; the development of energy network interconnections with the neighbor countries (currently a Bulgaria-Romania gas interconnection is under development) and regional energy transit infrastructure (Bulgaria is currently discussing its participation in the Nabucco South Stream and Burgas-Alexandroupolis regional pipeline projects; expanding the power

³ They are available at: http://ec.europa.eu/regional_policy/cooperation/danube/documents_en.htm

and gas distribution networks; and increased use of renewable energy sources, as well as improved energy efficiency.

The Serbian contribution documents list for example a series of energy projects such as the development of a new hydropower plant on the Danube: Djerdap III (Djerdap/Portile de Fier I and II have been built in cooperation with Romania); a new hydro-power plant in Novi Sad; the construction of the Banatski Dvor underground gas storage facility; the rehabilitation and development of the gas distribution network and the construction of a pipeline transportation network for oil products, as well as the construction of the regional Pan-European Oil Pipeline (PEOP).

Croatian energy priorities listed in the preliminary contribution document include: increasing the security of energy supply by developing the domestic production of primary energy; the development of interconnections with neighboring countries (such as the Ernestinovo-Pecs power transmission line and the Donji Miholjac-Dravaszerdahely gas pipeline, both of them connecting Croatia with Hungary); the use of renewable sources of energy, and increasing energy efficiency in the public sector.

CONCLUDING REMARKS

The next three years will be critical for the success of the new European Union initiative for the Danube region. For the Balkan countries, the strategy represents a unique opportunity to enhance regional cooperation between EU member countries and countries outside of the EU, and to promote the most important projects for the development of the regional energy sector.

With the implementation of some or all of the priority energy projects, significant short and long term business opportunities will be created in the Danube macro region, both for local companies and foreign investors.

REFERENCES

- Commission of the European Communities (1991). *Europe 2000: Outlook for the Development of the Community's Territory*, Office for Official Publications of the European Communities, Luxembourg.
- Commission of the European Communities (1994). *Europe 2000+: Cooperation for European territorial development*, Office for Official Publications of the European Communities, Luxembourg.

- Commission of the European Communities (1999). European Spatial Development Perspective: Towards Balanced and Sustainable Development of the Territory of the EU, Office for Official Publications of the European Communities, Luxembourg.
- Commission of the European Communities (2009). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the European Union Strategy for the Baltic Sea Region, Brussels, 10.6.2009, COM(2009) 248 final
- Commission of the European Communities (2010). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the European Union Strategy for the Danube Region, p. 6., Brussels, 8.12.2010, COM (2010) 715 final
- ESPON (2009). Applied Research Project 2013/1/9, Territorial cooperation in transnational areas, between regions and across internal/external borders, p. 6, p. 10. Project specification, available at: http://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/TERCO/Project_specification.pdf (08.09.2011)
- E.W. Schamp (1995). 'Die Bildung neuer grenzüberschreitender Regionen im östlichen Mitteleuropa – eine Einführung', in G. Gruber, H. Lamping and E.W. Schamp (eds.) *Neue grenzüberschreitende Regionen im östlichen Mitteleuropa*, Frankfurt (Main), Selbstverlag Institut für Wirtschafts- und Sozialgeografie der J.-W.-Goethe Universität.
- Gorzalak Gregorz et al. (2010). European Territorial Cooperation as a factor of Growth, Jobs and Quality of Life, TERCO inception report, a project funded under the ESPON program, 7. Available at: <http://docs.google.com/> (08.09.2011)

