

CROSS-BORDER EURO-REGIONS IN THE LOWER DANUBE BASIN



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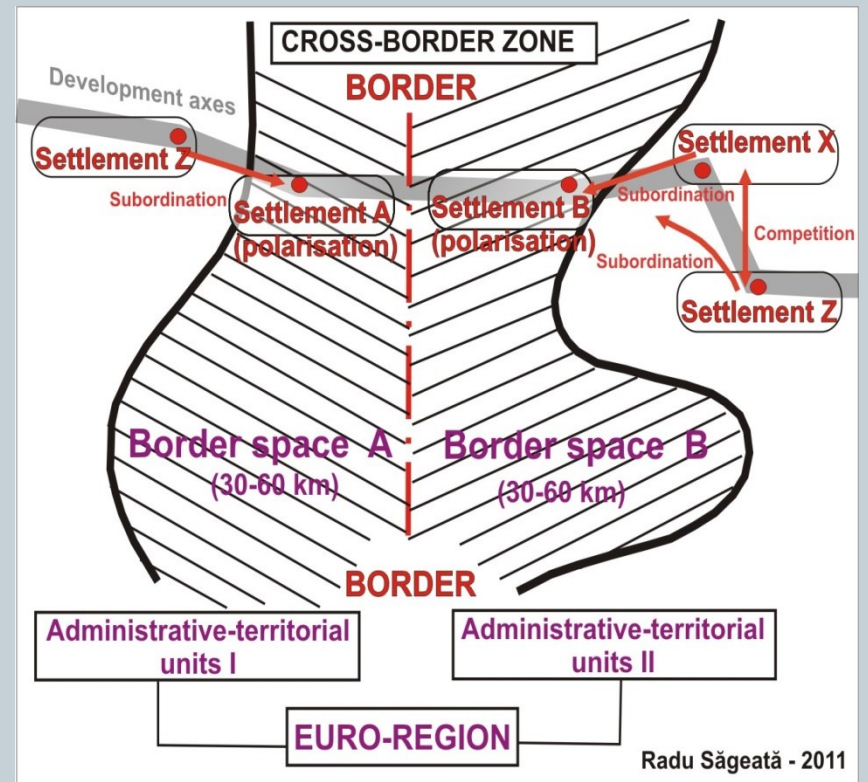
Theoretical & Methodological Considerations

Doublet settlements and their role in structuring the cross-border cooperation directions

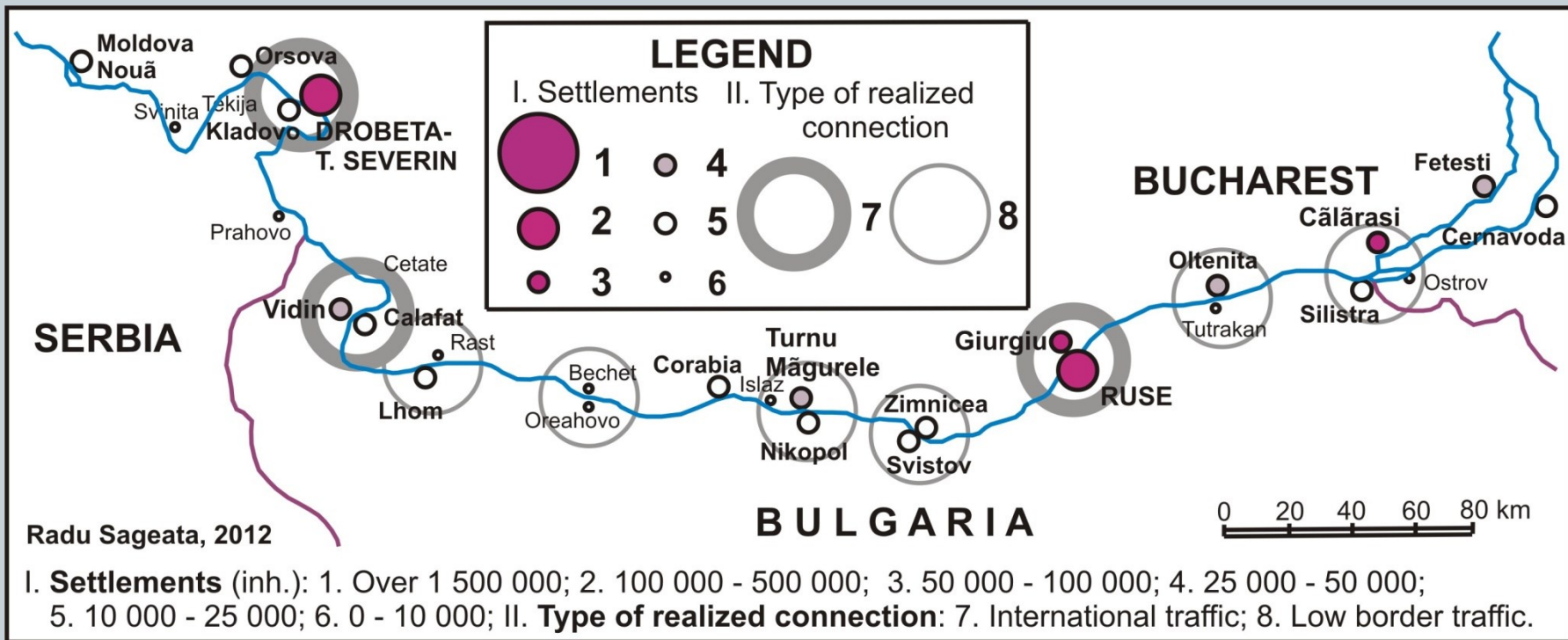
The separation caused by the hydrographical systems led to the individualisation of some nuclei of transversal fluxes concentration, as a result of the favourable local topographic conditions.

Thus, the presence of crossing fords has led to population concentration on both banks and gradually doublet settlements appeared, with local or even regional polarisation role.

The role of the human settlements in the Euroregion structure



The doublet settlements within the Danube-lined sector of the Romanian border and categories of connections materialized through them



Historical context after the Second World War

After the Second World War, the Romanian Sector of the Danube became an axis that attracted different industries:

- chemistry at Giurgiu, Drobeta-T. Severin, Turnu Măgurele, Brăila and Tulcea;
- hydro-electrical power stations at Porțile de Fier I and Porțile de Fier II,
- thermo-electrical power stations at Drobeta-T. Severin, Brăila and Galați;
- integrated metallurgical complexes at Galați and Călărași;
- nuclear-power stations at Cernavodă.

The consequence:

ecological problems with cross-border implications favored by northeast and northwest winds, tensioning cross-border relationships several times.



Following the structural changes that took place after 1989, the economic evolution of settlements in the Romanian sector of the Danube took up a negative course.



The causes behind this process are:

- the general decline of the Romanian economy, with direct effects on the depleted volume of goods transited on the Danube and the industrial production capacity of units located in industrial-harbor centers;
- the dismemberment of COMECON resulting in the loss of some important markets, a situation that affected especially the export-oriented industrial branches, mainly metallurgy;
- the dramatic decrease of investments in industry hindered the development and modernization of this sector, and maintained low labor productivity levels;
- the intensification of environmental protection was pressure element for the polluting industries (chemistry, metallurgy) forcing them to limit production in order to respect acceptable pollution standards.

The present socio-economic situation



The analyzed space, although greatly transformed during the last 20-th century decades, is extremely **rural**, urban areas being fewer and scattered.

The share of the **active population** and its professional structure shows employment to stand between 29% and 76%, but most of the times the percentage is lower than the all-country average value with lowest values in the highly rural countryside.

Moreover, the low percentage of industrial population in the village area supports this assertion.

The present socio-economic situation

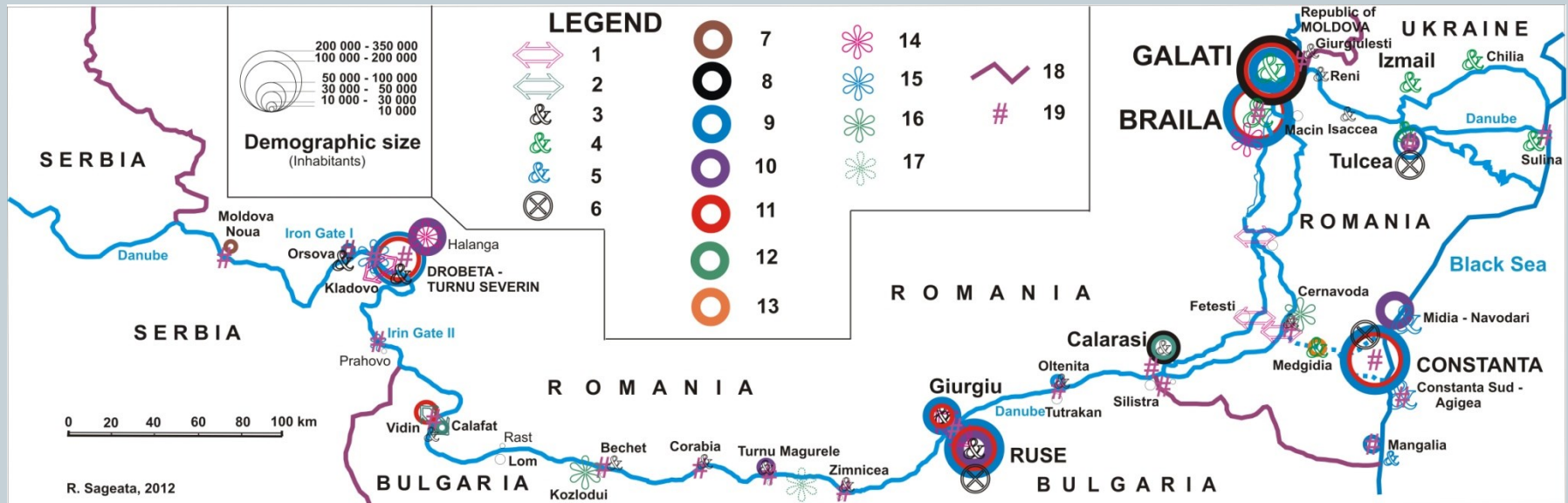


Taking into account **the structure of the active population**, some functional types of settlements in terms of development and location can be outlined:

- **ship-building**: Orșova, Drobeta-T. Severin, Giurgiu, Oltenița, Galați, Brăila and Tulcea;
- **iron-and-steel industry**: Zimnicea, Călărași and Galați
- **chemical industry**: Turnu Măgurele, Oltenița and Tulcea;
- **agriculture**.

The urban system in the Lower Sector of the Danube

- 1, Bridge; 2, Bridge under construction; 3, River harbor; 4, River-maritime harbor; 5, Maritime harbor; 6, Airport; 7, Copper ore extraction centre; 8, Iron-and-steel estates; 9, Ship-yards; 10, Chemical and petro-chemical industry; 11, Building-materials industry; 12, Paper and cellulose industry; 13, Cement factory; 14, Thermal-power stations; 15, Hydroelectric power stations; 16, Nuclear-electric station; 17, Nuclear-electric station under construction; 18, Terrestrial borders; 19, Cross-border connections.



Cross-border cooperation euroregions in the Romanian border space within the Danube sector



The topographic peculiarities, preferential directionalization and the intensity of the cross-border fluxes are the factors that establish the individualization and characteristics of a cross-border area.

The delimitation of the Romanian sector of the cross-border area depends on two essential elements:

- the closed character of the border, which imposes its narrowness;
- the preferential orientation of the transversal circulation axes, which causes the width in some specific sectors of maximum intensity of the cross-border fluxes.

These are given by the exchange vectors caused by the doublet settlements, location and type of the customs points (low frontier traffic, international traffic) and not least by the specific of the bound axis (bridge or ferry-boat), which determines the intensity of cross-border fluxes.

Middle Danube – Iron Gates Euroregion

Romania: Caras-Severin County and Mehedinti County

Republic of Serbia: Branicevski District and Borski District

Set-up Year : 2005

Surface : 20 824 sq km

- RO: 64.6 %

- SRB: 35.4 %

Population: 953 000 inh.

- RO: 66.3 %

- SRB: 33.7 %

Polarizing cores : Resita, Drobeta-Turnu Severin, Orsova, Požarevac, Bor.



Middle Danube – Iron Gates Euroregion

Main Industrial Units

- **Iron Gate I Hydroelectric Power Station** (Romania – Serbia): 2192 MW – is the largest dam of the Danube river and one of the largest hydro power plants in Europe
- **Iron Gate II Hydroelectric Power Station** (Romania – Serbia): 432 MW
- **Copper Mining in Bor** (Serbia): is the key basis of Bor's economy
- **Heavy Water Plant at Halânga** (Drobeta – Turnu Severin, Romania)
- **TMK Resita Iron and Steel Works** (Romania)
- **Drobeta – Turnu Severin and Orsova Shipyards** (Romania)

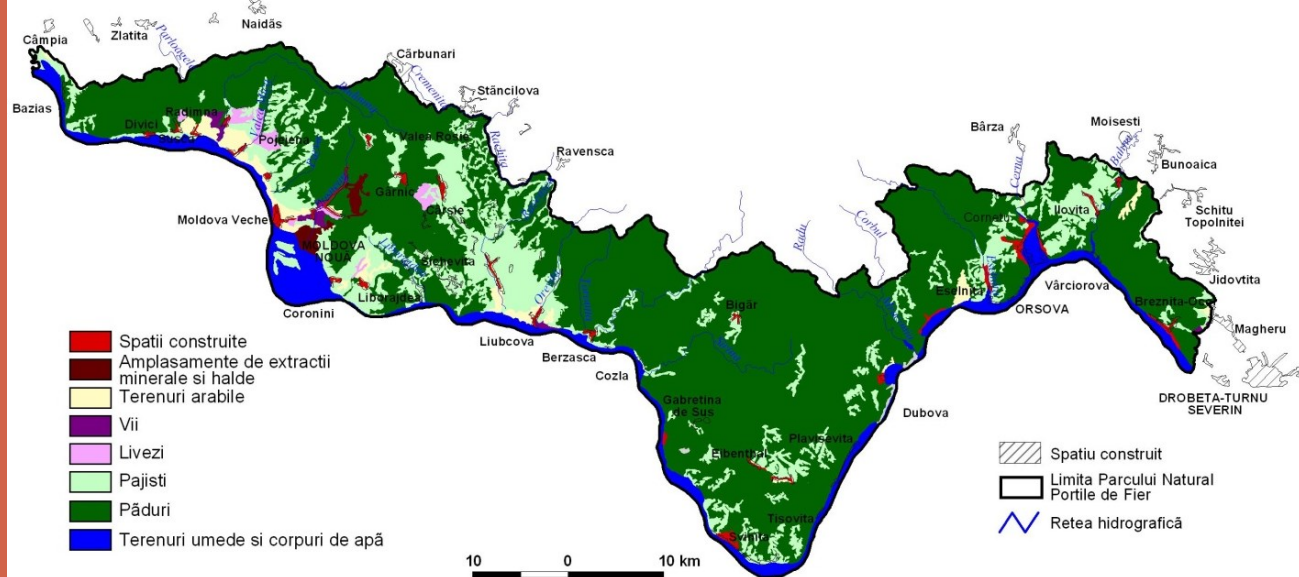




- The Iron Gates Natural Park (Romania): is the second largest environmentally protected area in Romania (115 655 ha), the first being the Danube Delta.

- The Danube Hollows (Romania-Serbia): represent the most spectacular part of the Iron Gates Natural Park. Before building the Iron Gates Dam, the place was very dangerous for navigation because of the rocks hidden close to the water surface.

Passing through a narrow corridor, the Danube seemed to boil as in a cauldron.



Middle Danube – Iron Gates Euroregion

Case Study: **Touristic Potential**



- **King of Decebal's** statue: situated in the middle of the Little Hollows, it is the biggest monument of this type in Europe.

- **The Ruins of Tri Kule fortress.** Built by the Austrians in the 14th Century AD in order to defend the crossing of the river, the fortress was under the Austrians and Ottoman domination.

Vodița Monastery
(1370-1372)

- **Mraconia Monastery**
(1553, 1993-95)



Middle Danube – Iron Gates Euroregion
Touristic Potential



- **Djerdap National Park (Serbia):** 63 608 ha (1974, UNESCO Heritage List – 2002)

- **Golubac Fortress (Serbia)** is a medieval fortress (XIV century) was built by Serbian masons and it has eight towers.

- **Viminacium** is an archaeological site at the confluence of Morava River with the Danube. It used to be the Roman capital of Moesia superior dating from the second century AD.



**Middle Danube – Iron Gates Euroregion
Touristic Potential**

Middle Danube – Iron Gates Euroregion

Cities in the Romanian Danubian Sector: Drobeta – Turnu Severin

Drobeta – Turnu Severin: 109 000 inh is the capital of Mehedinti County.

Known since ancient times under the name of *Drobeta*, the town has become an important place that links Central Europe to the Middle East.

Tourist attractions:

The Iron Gates Museum: Its historical and archaeological collection contains relics of the old cultures in the area.

Ruins of the Roman Camp Drobeta (103-105 AD) built by emperor Trajan and rebuilt under Justinian the Great.

Ruins of the Trajan's Bridge was built by the architect Apollodor of Damascus (103-105 AD)

Ruins of the Mediaeval Severin Fortress (1230), gave it strategic importance

The Water Castle (1914)

Drobeta – Turnu Severin

Historical & Archaeological Sites



Middle Danube – Iron Gates Euroregion

Towns in the Romanian Danubian Sector: Orsova

Orsova : 13 353 inh.

Situated at the confluence of the river Cerna with the Danube, the harbor town Orsova, named in the Roman times *Dierna*, is an altogether new town.

The old town disappeared under the Danube waters when the Iron Gates dam was built, in 1964.

The new town lies on the shore of a small gulf.

The Roman-Catholic Cathedral is a modern construction, built between 1972-1977, unique by its architecture, considered the most beautiful building in Orsova.

Saint Ana Monastery (1936-39). From it one can admire Cerna Gulf and the whole panoramic view of Orsova. Its architecture is in keeping with the old Romanian churches style, utterly traditional.



Middle Danube – Iron Gates Euroregion

Towns in the Serbian Danubian Sector: Kladovo

Kladovo: 8 900 inh. Due to its many ruins dating back to the Roman Empire and Ottoman Empire and to its proximity to the Iron Gates I Dam, Kladovo has become an important attraction for the tourists.

The Iron Gates Archaeology Museum was inaugurated in 1996. Its exhibits present over ten millennia.

Pontes and Diana Roman Camps. Pontes Roman camps the counterpart of Drobeta Roman camp, on the Romanian bank of the Danube situated in the vicinity of Trajan's Bridge. Diana fortress is one of the biggest and oldest Roman auxiliary forts on the Danube.

The Roman Road and Trajan's Tablet (Tabula Traiana) is a reminder of the ancient Roman road, now under water.

The Turkish Fortress Fetishlam has two parts: the smaller fortress was built by Suleiman the Magnificent in 1524; the bigger fortress was erected in the 18th century.



Middle Danube – Iron Gates Euroregion

Cities in the Serbian Danubian Sector: Veliko Gradište

Veliko Gradište: 5 860 inh. is town located on the right bank of the Danube river and left bank of Pek river.

The Silver Lake.

Located near Veliko Gradiste it has 14 km in length and 300 m in width. Meandering in amazing natural surroundings, the lake was created by damming one of Danube's rivulets.

Tourists can relax on the two gorgeous beaches or swim in the clear waters.



Middle Danube – Iron Gates Euroregion

Touristic attractions in Cerna & Mehedinti Mts (Romanian Carpathians)

Herculane Baths Resort

Situated in the Cerna Valley – Domogled National Park, is the oldest resort in Romania and one of the oldest in the world.

Is the one of the most efficient in the world in treating several conditions: inflammatory and degenerative rheumatism, affections of the locomotory apparatus, the peripheral nervous system, the respiratory system, in gynaecology, and in incipient diabetes, intoxications with heavy metals, digestive disorders and eye diseases.

The karst complex in Ponoarele

- The natural bridge Ponoarele is the best known natural monument in the entire area, also being called “God’s Bridge” it represents the sole natural bridge in Romania and the only one of that kind, opened to car traffic in Europe.
- Zaton Lake (is a karst lake)
- The lapies fields
- The Mehedinti Plateau – the diversity of the landscape and the spectacular forms of relief are the pre-requisites for lots of tourism activities.



“Danube 21” Cross-border Cooperation Association

Romania: 1 town (Calafat) and 4 communes: Cetate, Ciupercenii Noi, Desa and Poiana Mare

Bulgaria: 8 municipalities (Belogradgic, Dimovo, Kula, Lom, Mokres, Novo – Selo, Rujniti and Vidin)

Serbia: 8 municipalities (Bolivat, Bor, Kladovo, Kniajevat, Majdanpek, Negotin, Sokobanja and Zajecar)

Set-up year: 2002

Surface: 9,500 sq km

Population: 484 000 inhabitants

- **RO:** 10,0 %

- **BG:** 31,3 %

- **SRB:** 58,7 %



“Danube 21” Cross-border Cooperation Association

Polarising Cores:

- **Calafat (RO): 18 000 inh.** - port town on the northern bank of the Danube
- **Vidin (BG): 47 000 inh.** - port town on the southern bank of the Danube
 - Orthodox cathedral Saint Dimitar
 - The Vidin Synagogue (deserted after Jewish immigration to Israel)
 - Baba Vida Castle
 - Konaka Museum
- **Zajecar (SRB): 42 900 inh** - a main town in the Timocka Krajna Region
 - Memorial Complex Gamzigrad – Romuliana (Felix Romuliana)
 - Rock Music Festival “Gitarijada”



“Danube 21” Cross-border Cooperation Association

Calafat-Vidin Bridge (New Europe Bridge, Danube Bridge 2)

- Road and Rail Bridge
- It is the second bridge on the shared section of the Danube between Romania and Bulgaria
- Total length: 1,971 m
- The bridge is part of Pan-European corridor IV.
- Construction officially begin on 13 May 2007
- The bridge opened at 14 June 2013
- Daily traffic : 1,360 vehicles/day



Danubius Euroregion

Romania: 1 county: Giurgiu

Bulgaria: 8 municipalities: Borovo, Byala, Dve Mogli, Ivanovo, Ruse, Slivo Pole, Tsenovo and Vetovo

Set-up Year: 2002

Surface: 6,310 sq km

- RO: 55.88 %

- BG: 44.12 %

Population: 564 000 inhabitants

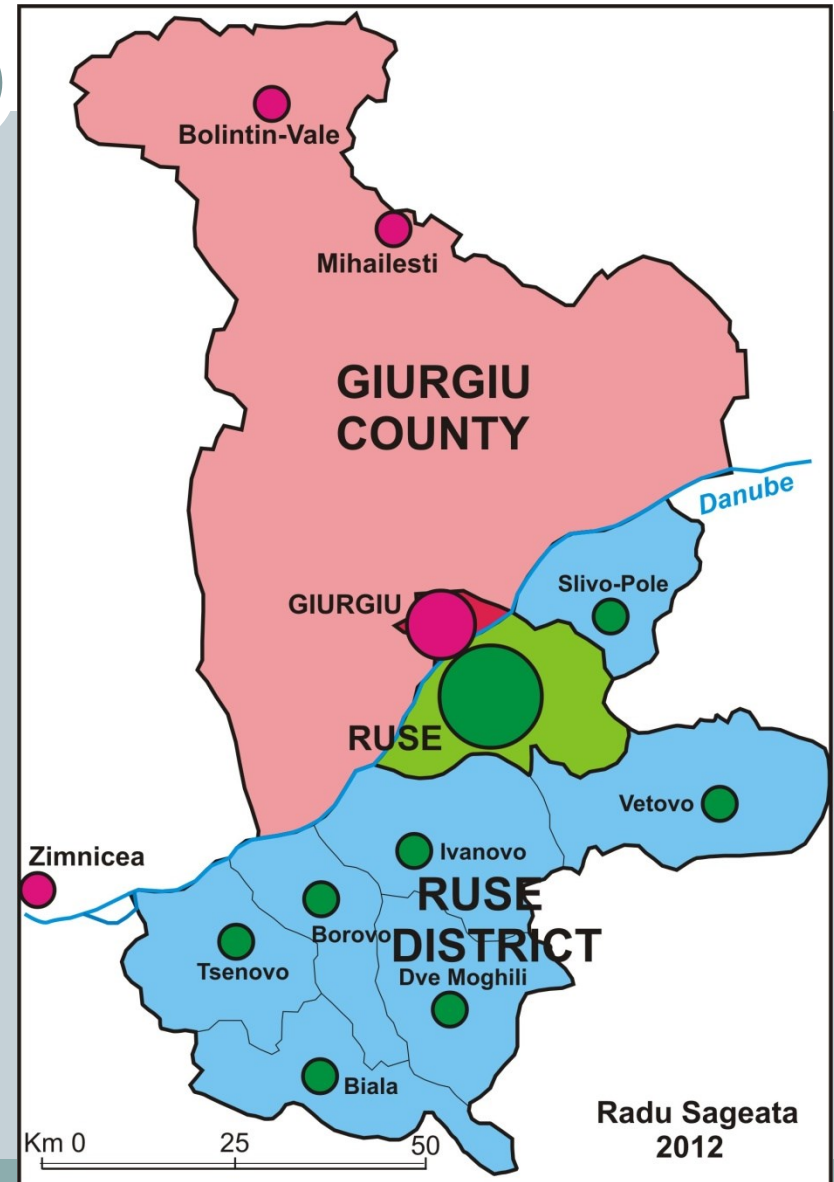
- RO: 52.8 %

- BG: 47.2 %

Polarising cores:

- RO: **Giurgiu** – 53 200 inh.

- BG: **Ruse** – 146 600 inh.



Giurgiu – Ruse Euroregion

Romania: 1 town (Giurgiu) and 14 communes: Baneasa, Daia, Fratesti, Gaujani, Gogosari, Gostinu, Izvoarele, Mihai Bravu, Oinacu, Prundu, Putineiu, Slobozia, Stanesti and Vedeia.

Bulgaria: 7 municipalities: Borovo, Dve Moghili, Pargovo, Ruse, Slivo Pole, Tar Kaloian and Vetovo.

Set-up Year: 2001

Surface: 2,784 sq km

Population: 353 400 inhabitants

- RO: 34.0 %

- BG: 66.0 %

Polarising cores:

- **RO: Giurgiu** – 53 200 inh.

- **BG: Ruse** – 146 600 inh.



Polarising Cores: Giurgiu and Ruse

GIURGIU: 53 200 inhabitants

Town situated on the left bank of the Danube facing the Bulgarian town Ruse on the opposite bank.

Three small islands face the city and a large one shelters its port, Smarda.

The rich grain-growing land to the north is traversed by a railway to Bucharest, the first line opened in Romania, which was built in 1869. Giurgiu exports timber, grain, salt and petroleum, and imports coal, iron, textiles.

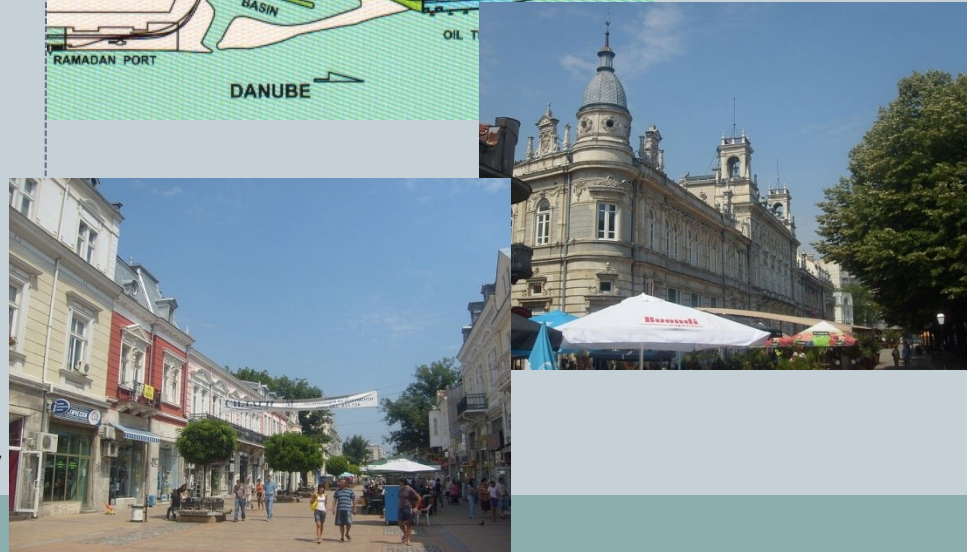
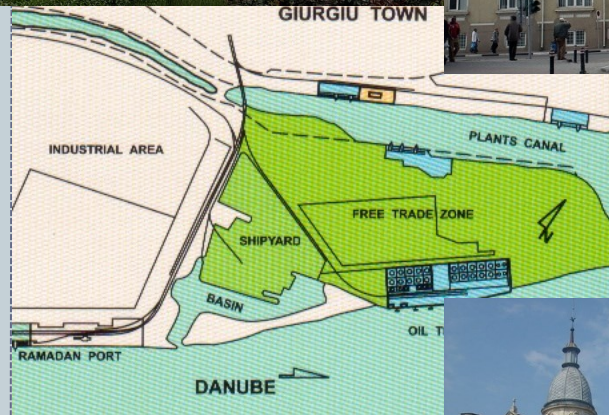
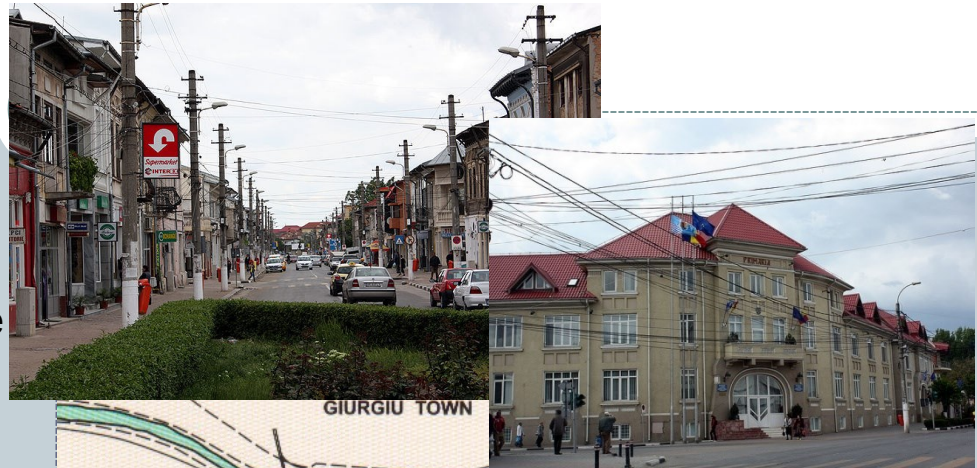
RUSE: 146 600 inhabitants

Town located in the northeastern part of the country, on the right bank of the Danube, opposite the Giurgiu, 300 km from the Sofia and 200 km from the Black Sea Coast.

The most significant Bulgarian river port, serving an important part of the international trade of the country.

Ruse is a big industrial centre. It has a duty-free zone and 2 industrial zones- East and West. Ruse Iztok Power Plant has an energy producing capacity of 400 MW and the Ruse West Power Plant - 41 MW.

The city's economy is dominated by light industry - tailoring, textiles and food processing.



Giurgiu-Ruse Bridge

(Danube Bridge 1, Friendship Bridge)

Is a steel truss bridge over the Danube River connecting the Bulgarian bank to the south with the Romanian bank to the north and the cities of Giurgiu and Ruse respectively at river kilometre 488.7.

Construction: 1952-1954

Opened: 20 June 1954

Total length: 2,223.5 m

Traffic: Road (two lanes) and railway

The central part of the bridge (85 m) is mobile and can be lifted for oversized boats passage.

“Friendship” Bridge



South Danube Euroregion

Romania: Discontinuous area: 4 towns:

**Alexandria, Rosiori de Vede,
Turnu Magurele and Zimnicea**

(in Teleorman County)

Bulgaria: 3 municipalities:

- **Belene, Nikopol** (in Pleven Province)

- **Svistov** (in Veliko-Tarnovo Province)

Set-up Year: 2002

Surface: 1 646 sq km

- **RO: 19.9 %**

- **BG: 80.1 %**

Population: 201 800 inhabitants

- **RO: 63.5 %**

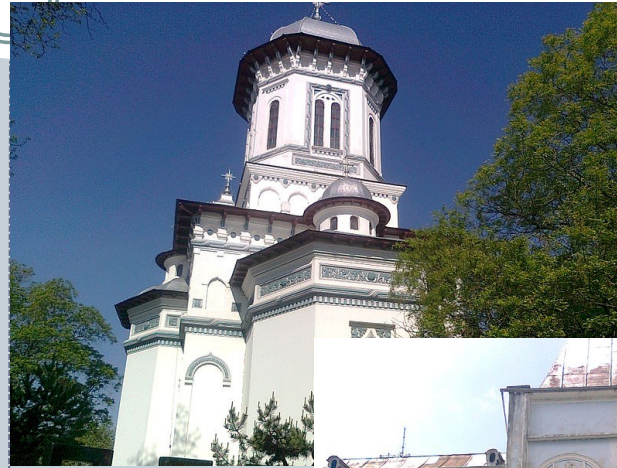
- **BG: 36.5 %**



South Danube Euroregion

Polarising Cores in Romania

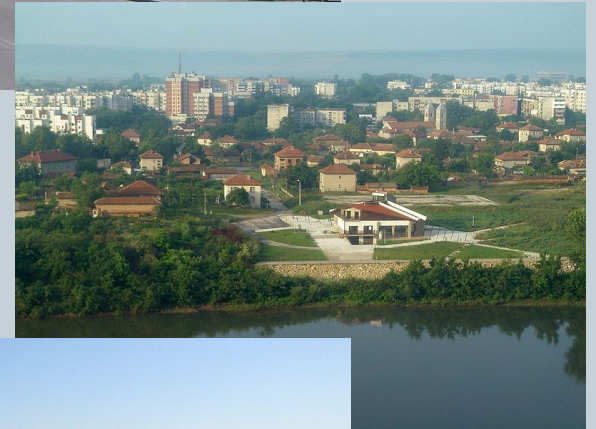
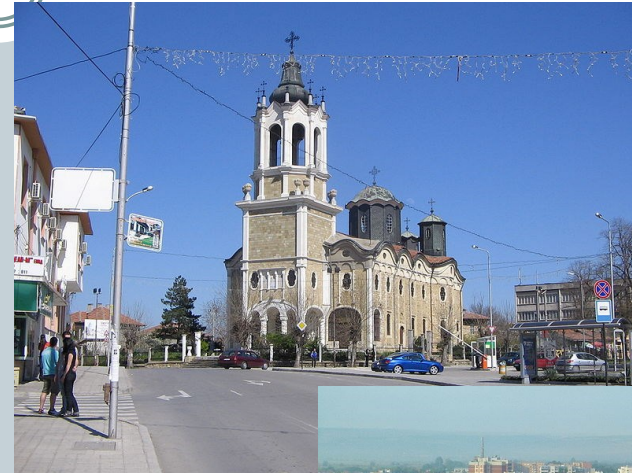
- **Alexandria** (50 000 inh.) the capital city of the Teleorman County
- **Rosiori de Vede** (24 000 inh.) one the oldest town in Romania (1385)
- **Turnu Magurele** (22 200 inh) is a chemical and textile industry center situated across the Danube to the Bulgarian city Nikopol. There are some vestiges of a Roman bridge across the Danube, built in 330 by Constantin the Great.
- **Zimnicea** (12 900 inh) is a port on the Danube opposite the Bulgarian city Svistov



South Danube Euroregion

Polarising Cores in Bulgaria

- **Svistov** (35 900 inh) is a town on the right bank of Danube. The main industries in the town of Svistov include imports and exports via the harbor, electronics
- **Belene** (8 900 inh) situated on the right bank of Danube River was proclaimed in 1964. There are plans to start construction again as a replacement for reactors 3 and 4 at Kozloduy Nuclear Power Plant, which Bulgaria has shut down as a condition for EU membership. The total capacity of the two reactors will be 2,000 MW
- **Nikopol** (3 200 inh) is a old town (first mentioned in 169) on the right bank of Danube River opposite the Romanian town Turnu Magurele



Danube – Dobrogea Euroregion

ROMANIA : 3 countries : Calarasi, Constanta and Ialomita

BULGARIA : 2 provinces : Dobrich and Silistra

Set-up Year: 2002

Surface: 24 177 sq km

- RO : 16 612 sq km (68.71 %)

- BG : 7 565 sq km (31.29 %)

Population: 1 693 522 inhabitants

- RO : 1 336 287 inh. (78.91 %)

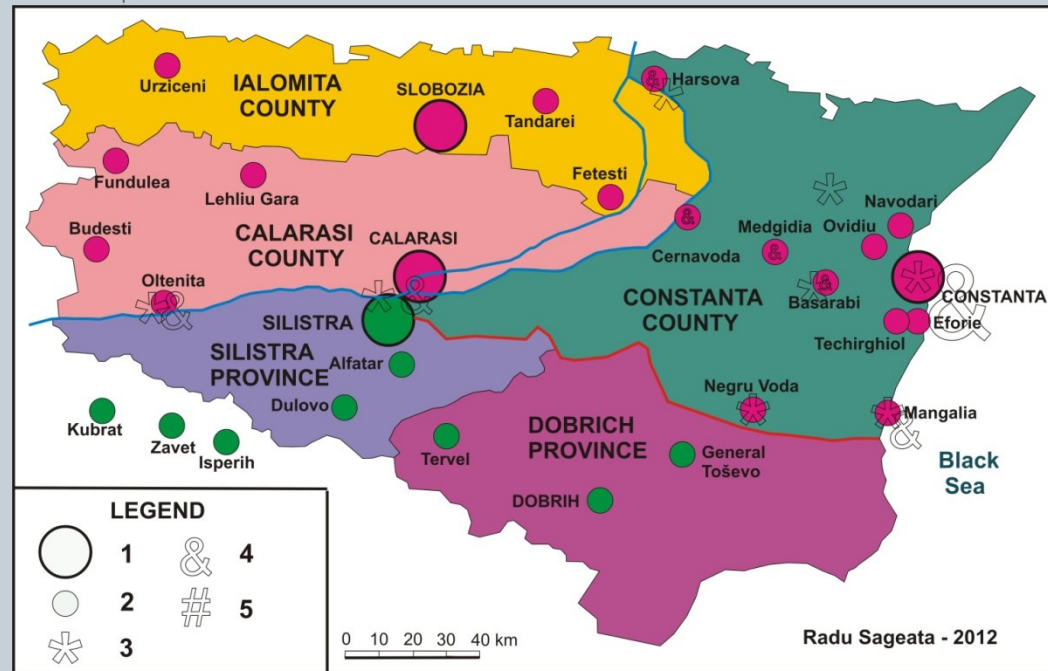
- BG : 357 235 inh. (21.09 %)

Polarising Cores:

- RO : Constanta, Calarasi, Slobozia

- BG : Silistra, Dobrich

Danube – Dobrogea Euroregion



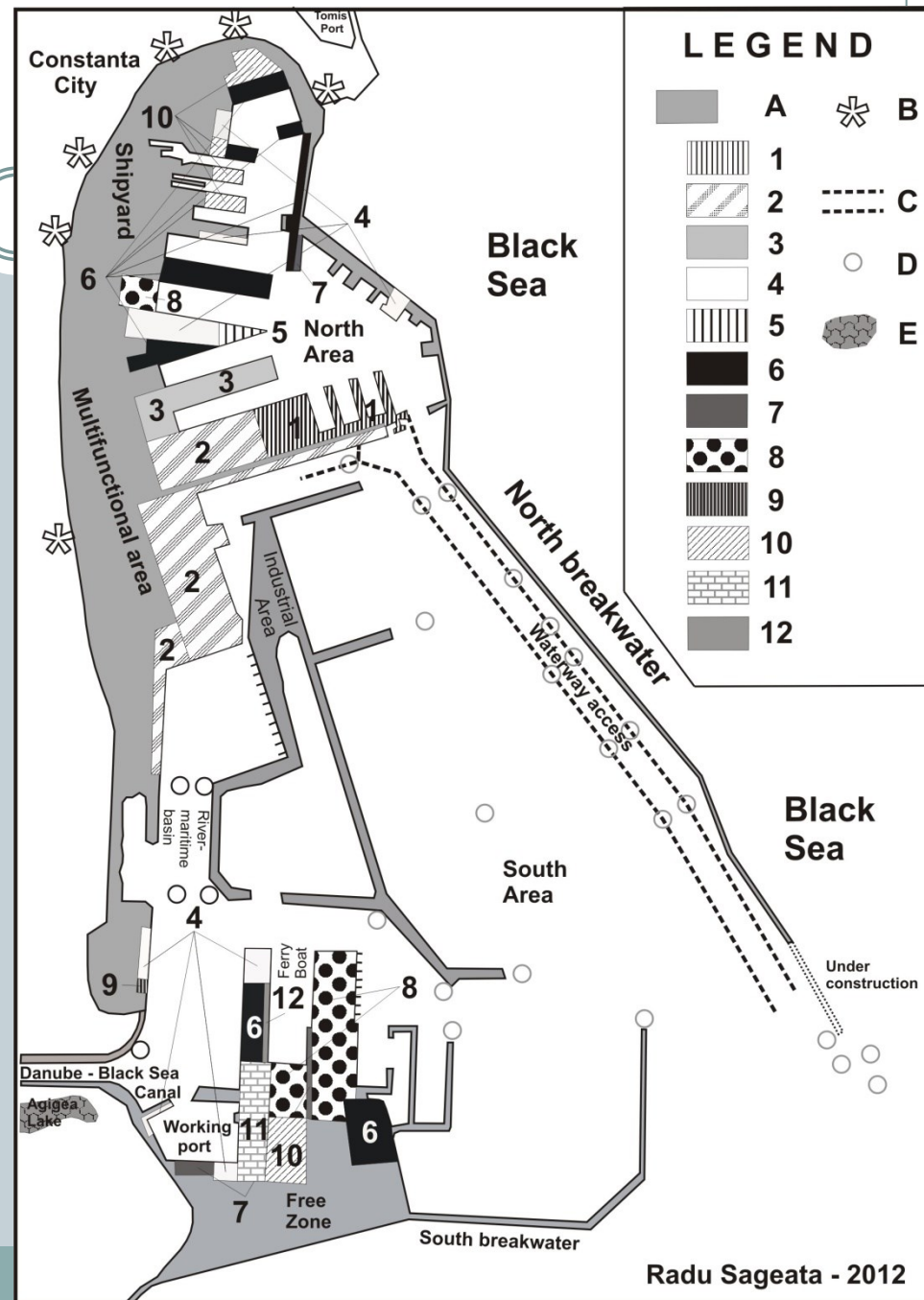
Danube – Dobrogea Euroregion

Polarising cores:

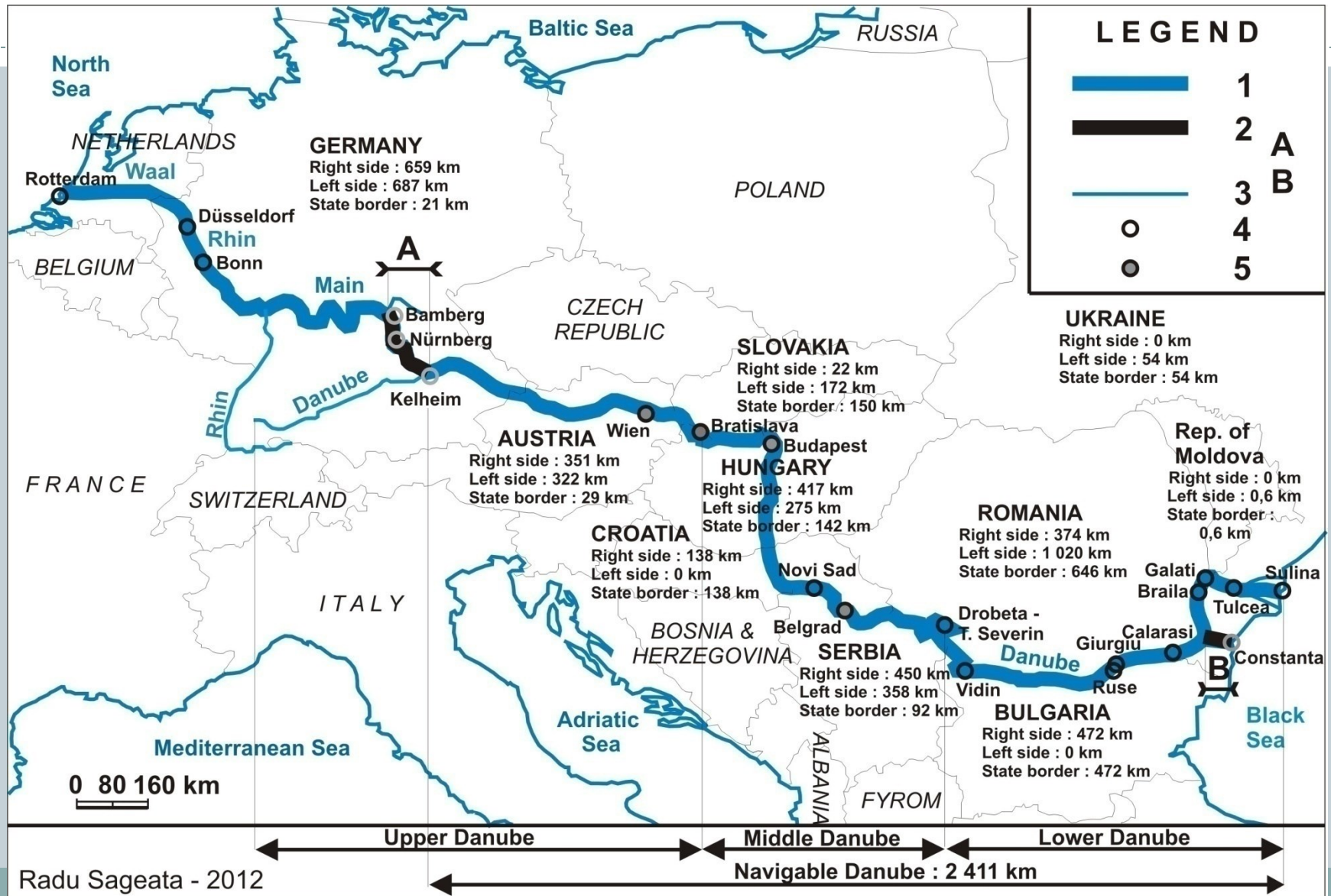
Constanța – 254 693 inh (2011)

Constanța can become a competitive actor at the Black Sea: it has a complex transport system – maritime, fluvial, railway and international airport. Ship entry to the Danube-Black Sea Canal being placed in the south of the harbour, facilitates direct reshipping from sea vessels to barges; it has a vast hinterland which includes both the Black Sea and the Danube basins; it has the biggest and modern most operation capacities in the region, receiving all types of vessels transiting the Suez Canal; it converges river and sea transport, and has important strategic facilities (shipyard and free-zone regime).

Works to upgrade port equipments, diversify services and integrate regional, European and global transport systems more efficiently are underway or scheduled to begin. As a result, Constanța will strengthen its position of Europe's eastern maritime gateway and principal Black Sea harbour.



Rhin - Main - Danube (Rotterdam – Constanta) transeuropean navigable axis



Danube – Dobrogea Euroregion

Secundar polarising cores

ROMANIA

CALARASI (73 800 inh)

Is the capital of Calarasi County is situated on the bank of Danube's Borcea branch at about 12 km from the Bulgarian border and 125 km from Bucharest. Is an industrial center for lumber and paper, food processing, glass manufacturing, textiles, medical equipment production and heavy industry, the last represented by the Calarasi steel works.

SLOBOZIA (52 700 inh)

Is the capital of Ialomita County on the banks of Ialomita River within 17 km of the Bucharest-Constanta A2 Motorway. The main activity in the area is agriculture, processing of the agricultural products and light industry.

BULGARIA

DOBRICH (91 000 inh) is located 30 km west of the Bulgarian Black Sea Coast, not far from resorts such as Albena, Balchik and Golden Sands.

SILISTRA (35 000 inh) is a city part on the right bank of the Danube River and one of the important cities of region of Southern Dobrogea. There are many historical landmarks including a Roman tomb (Durostorum), remains of the Mediaeval fortress, an Ottoman fort and an art gallery.



Lower Danube Euroregion

Romania : 3 counties : Galati, Braila and Tulcea

Republic of Moldova : 2 rajons : Cahul and Cantemir

Ukraine : 1 region (oblast) : Odessa

Set-up Year: 1998

Surface: 53 468 Sqkm

- RO: 33.16%

- MD: 04.56%

- UK: 62.27%

Population: 3 909 000 inhabitants

- RO: 31.96%

- MD: 04.88%

- UK: 63.16%





Lower Danube Euroregion

Polarising cores : ODESSA (Ukraine)



ODESSA

Population: 1 003 700 inhabitants:

- 62 % ukrainians
- 29 % russians

Location: a major seaport on the north-western shore of the Black Sea approximately 31 km north of estuary of the Dniester River.

Economy: is largely based around its traditional role as a port city; during the Soviet period the city was home to the USSR's largest trading port, a role which it still retains today as independent Ukraine's busiest international port.

The port complex contains an oil and gas transfer and storage facility, a cargo handling area and a large passenger port.

The port of Odessa is also one of the Ukrainian Navy's most important bases on the Black Sea.



Lower Danube Euroregion

Polarising Cores: GALATI (Romania)

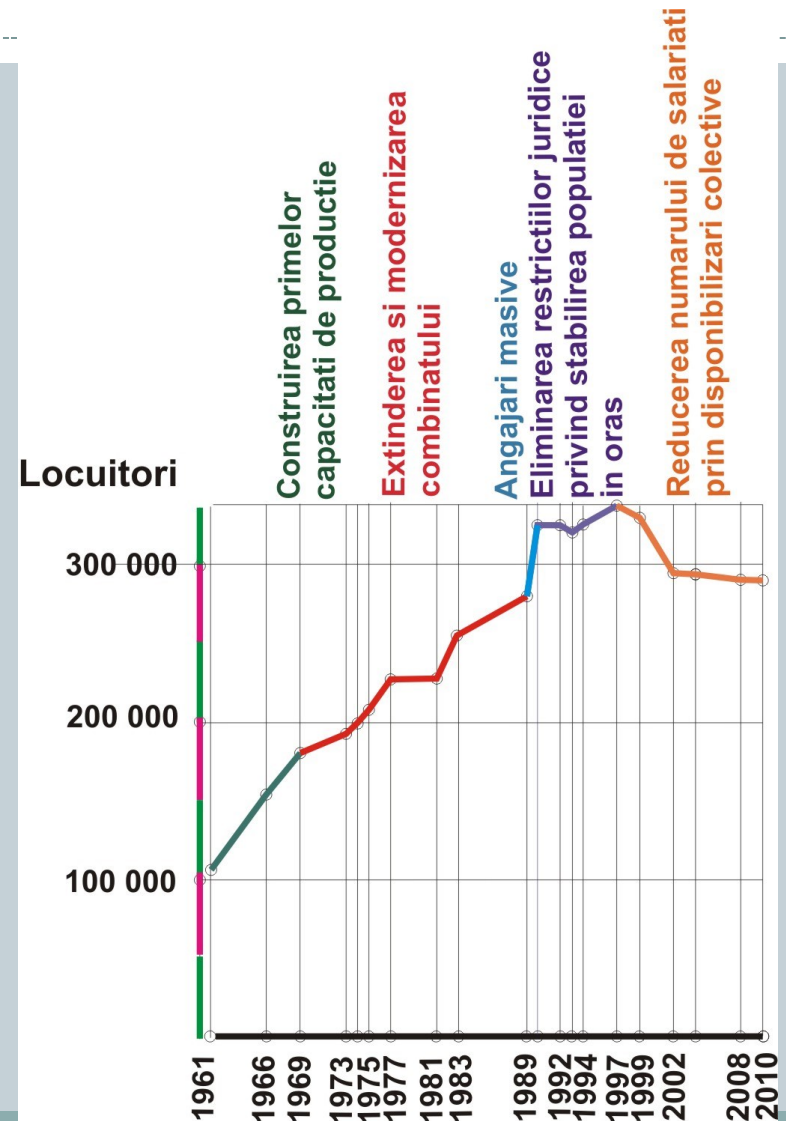
Population: 231 204 inhabitants (2011)
- 22 % (2002-2011)

Galati is a major economic centre based around the Port of Galati, naval shipyard, the ArcelorMittal steel plant and mineral exports.

Galati has the largest iron and steel plant in Romania (the ArcelorMittal) and the largest shipyard (Damen).

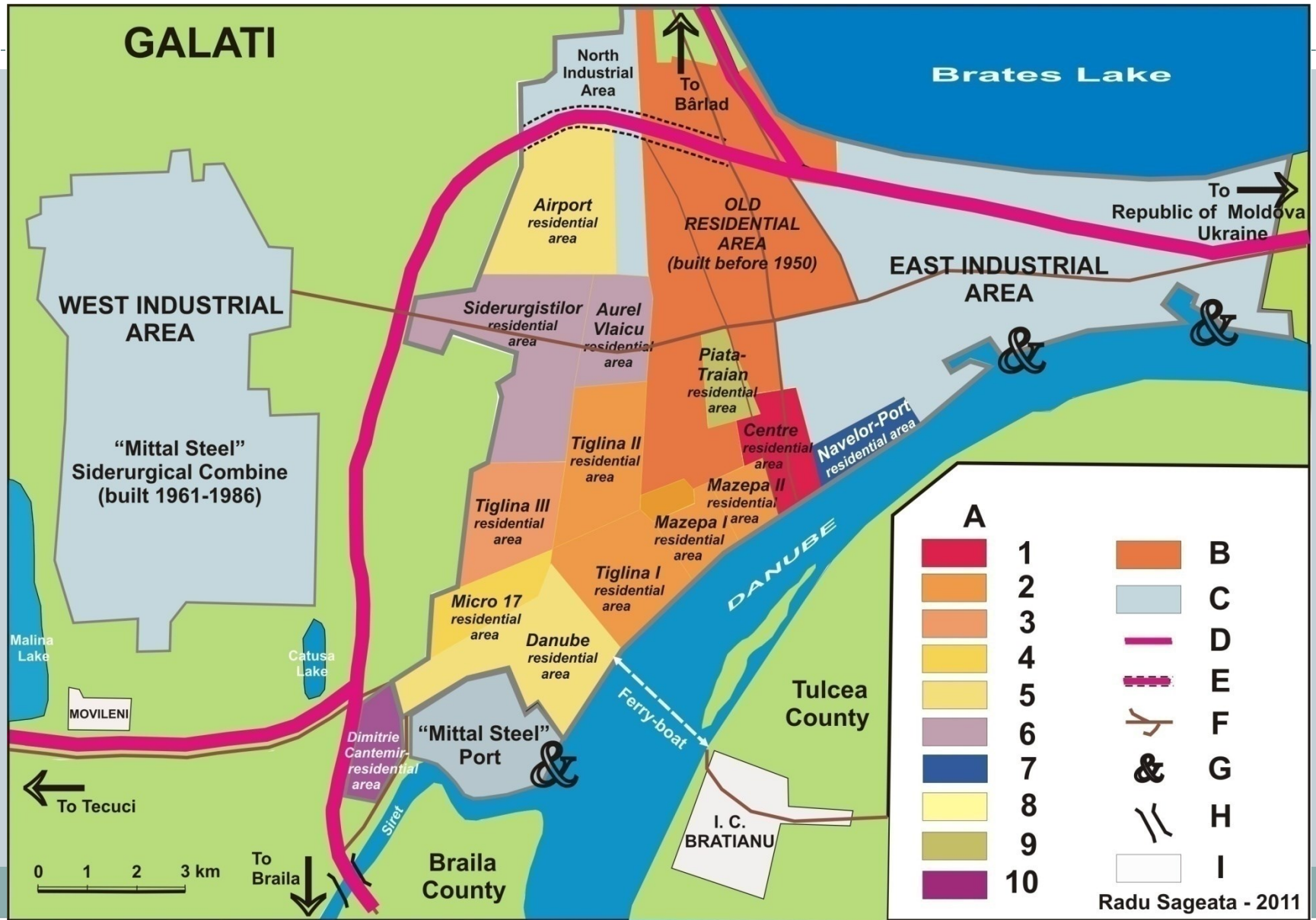
The building in Galati of the biggest industrial unit in Romania was really a turning point in the history of Galați, a town with 107,248 inhabitants in 1961. The steady enlargement of the Works with a 40,000 workforce in 1989-1990, had an overriding importance for the town's demographic evolution and the dynamics of its housing stock.

As the town's population trebled in a lapse of only 30 years, of its built-up perimeter suffered major disturbances especially the western half of the where new apartment-block districts.



Lower Danube Euroregion

Polarising Cores: **GALATI** (Romania)



Lower Danube Euroregion

Polarising Cores: BRAILA and TULCEA (Romania)

BRAILA

Population: 168 389 inhabitants (2011)

Location: is a city-port on the Danube and the capital of Braila County, in the close vicinity of Galati.

Economy: Accessible to small and medium-sized oceangoing ships, Brăila has large grain-handling and warehousing facilities. It is also an important industrial center, with metalworking, textile, food-processing, and other factories.



TULCEA

Population: 92 380 inhabitants (2007)

Location: is a city-port on the Danube and the capital of Tulcea County, in Dobrogea. Old town, was founded in the 7th century BC

Economy: is largely based around its traditional role as a port city; Aker Tulcea Shipyard SA and Alumina Plant Alumum are the largest industrial units in the city.



Cross-Border Cooperation Euroregions at the Pruth River Basin (Lower Danube Basin)

Siret – Pruth – Dniester Euroregion

Romania: 3 counties: Iasi, Vaslui, Neamt

Republic of Moldova: 19 rajons: Anenii Noi, Basarabesca, Calarasi, Cimislia, Criuleni, Dubasari, Floresti, Hancesti, Ialoveni, Leova, Nisporeni, Orhei, Rezina, Soroca, Straseni, Soldanesti, Telenesti, Ungheni and Chisinau Municipality

Set-up Year: 2002

Surface: 31 434 sq km

- RO: 16 690 sq km (53.8%)

- MD: 14 744 sq km (46.2%)

Population: 3 326 000 inhabitants

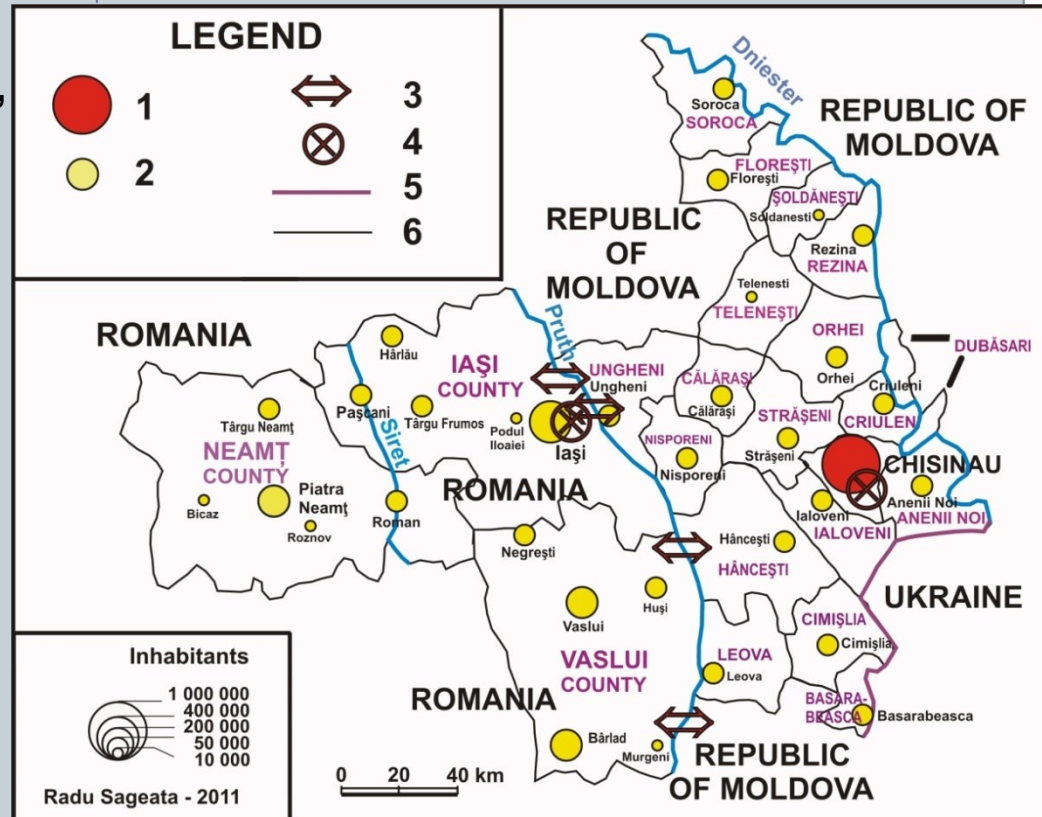
- RO: 1 831 000 inh (63.6%)

- MD: 1 495 000 inh (36.4%)

Polarising cores:

- RO: Iasi, Vaslui, Piatra Neamt

- MD: Chisinau



Cross-Border Cooperation Euroregions at the Pruth River Basin (Lower Danube Basin)

Upper Pruth Euroregion

Romania: 2 countries: Botosani, Suceava

Republic of Moldova: 6 rajons: Briceni, Edinet, Falesti, Glodeni, Ocnita and Rascani

Ukraine: 2 regions: Chernivtsi (Cernauti) and Ivano-Frankivsk

Set-up Year: 2000

Surface: 42 809 sq km

RO: 13 541 sq km (31.6%)

MD: 7 268 sq km (17.0%)

UK: 22 000 sq km (51.4%)

Population: 4 234 864 inhabitants

RO: 1 144 964 inh (27.0%)

MD: 780 000 inh (18.4%)

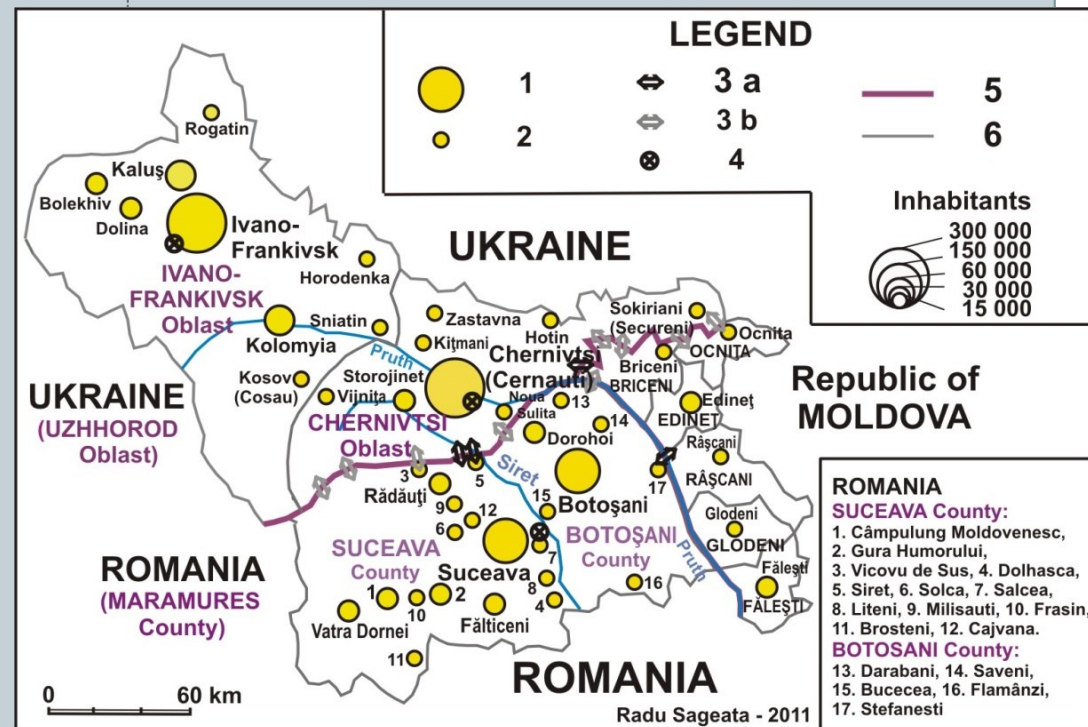
UK: 2 309 900 inh (54.6%)

Polarising cores:

RO: Botosani, Suceava

MD: Briceni, Edinet, Falesti, Glodeni, Ocnita, Rascani

UK: Chernivtsi (Cernauti) and Ivano-Frankivsk



Thank you for Yours attention



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