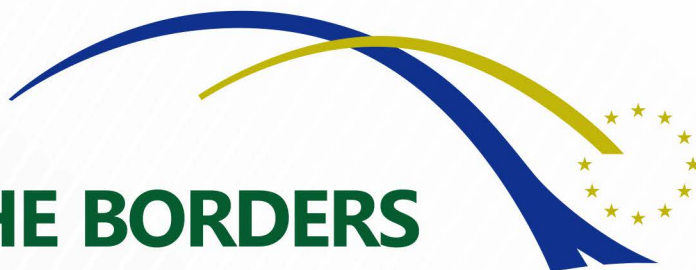


Central European Service for Cross-Border Initiatives
European Institute of Cross-Border Studies



CROSSING THE BORDERS

Studies on cross-border cooperation within the Danube Region

Case Study

Resources Pilot Centre for Cross-Border
Preservation of the Aquatic Biodiversity of
Prut River

Written by

**Institute of Geography,
Romanian Academy (Romania)**

Bianca Mitrică, Monica Dumitrașcu,
Gheorghe Kucsicsa, Diana Dogaru





Contents

1. The Euroregions from Romania’s Eastern border. The socio-economic potential of the cross-border cooperation.....	3
1.1 The homogeneity of the ethnic element – key-factor of the cross-border cooperation	3
1.2 The Euroregions on Romania’s Eastern border	6
1.2.1 The Lower Danube Euroregion	11
1.2.2 The Upper Prut Euroregion	11
1.2.3 The Siret-Prut-Nistru Euroregion	12
2. Resources Pilot Centre for Cross-Border Preservation of the Aquatic Biodiversity of Prut River	22
3. The development of the cross-border cooperation.....	24
3.1 Development of cross-border cooperation: a general overview	24
3.2 Cooperation and the Prut River basin	28
4. Determination of geographical confines	32
4.1 Geographical context	32
4.2 Social and territorial characteristics	32
Ukraine	32
The Republic of Moldova	33
Romania	33
4.3 Prut River’s ecological services.....	34
4.4 Protected areas	35
5. Organisational and institutional structure, operation (level of institutionalisation).....	37
5.1 Partners of the project.....	37
Alexandru Ioan Cuza University of Iași.....	37
The Academy of Sciences of Moldova, Institute of Zoology – Partner.....	38
National Administration “Romanian Waters” Prut Directorate – Associate no. 1	38
Environmental Protection Agency Iași County – Associate no. 2	38
The Inspectorate for Ecology of the Republic of Moldova – Associate no. 3.....	39
5.2 Roles of the institutions in the project.....	39
6. Composition of the working group.....	44
GA1: Project management, coordination and communication activities	44
GA2: Public procurement	45
GA3: Cross-border institutional capacity	45
GA4 Prut River investigation	46
GA5: Information, awareness and dissemination	47
7. Main activity areas/profile	49



8. Management (incomes/expenses)	56
9. SWOT-analysis (specifically with a cooperation base, instead of a territorial base)	57
10. Future plans and goals of the cooperation	62
11. Summary.....	64
Acknowledgements:.....	65
12. Bibliography	66
Publications	66
Websites	71



1. The Euroregions from Romania's Eastern border. The socio-economic potential of the cross-border cooperation

1.1 The homogeneity of the ethnic element – key-factor of the cross-border cooperation

For more than seven decades, the Prut River has been acting as a discontinuity axis due to arbitrary political decisions, by attributing a border function to it. A border was relatively hard to be permeated, especially in the '50s - '60s of the last century, and it caused a breakup of the natural relations existing between the human settlements' system in Bessarabia and that of the rest of Moldavia which remained within the boundaries of Romania.

The political openness at the beginning of the 1990s was immediately followed by an opening of inter-human relations. Actions of "restitutio in integrum", the „Flower bridges" ("podurile de flori") reunited families and destinies on both side of the Prut River, which had been broken in June 1940. New custom points were opened, generated by the favorability potential of the coupled settlements, periodical local road connections as well as exchanges of wares and people were intensified, thus setting up the bases for the first actions of establishing Euroregions. The economic difficulties, the War in Transnistria, the secessional tendencies of the Gagauz people, as well as the fear of part of the Russian-speaking population about a possible union with Romania gradually hindered this momentary impetus.

The Prut is a border river; it originates in the Ukrainian Carpathian Mountains and enters Romania downstream of Noua Suliță, approximately in the locality of Oroftiana. It forms the border between Romania and Ukraine on a length of about 36 km, passing through an area with a high homogeneity of the Romanian ethnic element, present both on its right handside and on its left handside.

This fact is sustained by historical antecedents as well as by the 2001 Ukrainian census data, or by the evidence of geographic names which were preserved up to present. The Herța Region, an old Romanian ground which entered the USSR on June 29th 1940 as a consequence of the second Soviet ultimatum-note sent during the night of June 27th/28th 1940 was mentioned neither in the Ribbentrop-Molotov treaty nor in the Soviet ultimatum of 1940 ([Lupan, cited in Stamate, 1997, p. 88](#)).

Herța became a seat of an administrative division in Moldavia since the second half of the XVIIIth century, while the Herța Region, with an area of 304 km² was united in 1834 to the Dorohoi Region. At present, the Herța district, re-established as such in the administrative structure of the Cernăuți/Chernivtsi region in 1992, represents a compact Romanian ethnical area, having in its constitution only one Ukrainian village: Mamornița ucraineană ([Popescu, 2004](#)).



At the 1989 Soviet census, the Herța district had a total population of 29 611 inhabitants; the Romanian population constituted 27 517 persons, i.e. 92.93% of the total. Of these, 23 539 declared themselves Romanians and 3 978 Moldavians., the latter ones coming from the Ostrița, Țureni and Marmonița românească villages of the former Cernăuți rural district formed immediately after the war, where Romanians were arbitrarily recorded in their passports as “Moldavians” (“moldoveni”). 12 years later, the compactness of the ethnic element preserved itself unaltered, since the 2001 census recorded a total population of 32 316 inhabitants, of which 29 554 were Romanians (91.5%) and 756 Moldavians (2.34%), a large number of Moldavians declaring themselves as Romanians (Săgeată, 2014b).

Table 1: Transition points along the Prut sector of the border between Romania and the Republic of Moldova

No	Connected localities	Administrative units [NUTS III]	Transition regime	Characteristics
1	Stâncă – Costești	Botoșani - Bălți	International Small traffic	road (passengers, wares)
2	Sculeni – Sculeni	Iași - Ungheni	International	road (passengers, wares)
3	Cristești – Jijia - Ungheni	Iași - Ungheni	International	railway (passengers, goods)
4	Iași	Iași	International	airports
5	Albița – Leușeni	Vaslui - Lăpușna	International	road (passengers, wares)
6	Fălciu – Cantemir	Vaslui - Cahul	International	railway (wares)
7	Oancea – Cahul	Galați - Cahul	International	road (passengers, wares)
8	Galați	Galați	International Internal	fluvial harbour free zone
9	Galați – Giurgiulești – Reni, Galați port	Galați - Cahul	International International International	road (passengers, wares) fluvial harbours railway (wares)

Source: Ilieș, 2003, p. 67.

Human settlements like Mogoșești, Godinești or Molnița from the Herța district, or Mămăliga from the Noua Suliță district have names certifying the continuity of the Romanian ethnic element. In the Romanian sector, the Romanian-Ukrainian cross-border zone belonging to the Prut valley is composed of three communes and one town: Suharău, Hudești, Concești, and the Darabani town respectively. The cross-border zone, comprised between the two “Moldavias”, characterizes itself through the same continuity of the Romanian ethnic element, which varies between 90% and 100% of the total population. Its northern extremity is given by the villages *Cuzlău* (Romania) and *Criva* (the Republic of Moldova), while the southern one by *Galați* and *Giurgiulești*, the only Danubian harbour of the Republic of Moldova. Administratively, it brings together 11 districts from the left side of the Prut River (Briceni, Edineț, Râșcani, Glodeni, Fălești, Ungheni, Nisporeni, Hâncești, Leova, Cantemir and Cahul) and 4 counties from its right



side (Botoșani, Iași, Vaslui and Galați) (Săgeată, 2014b, p. 58). The cross-border connections are accomplished at present through 9 border transition points, placed according to the system of coupled settlements (Table 1).

The role of the system of coupled settlements and the cross-border co-operation Euroregions. The separation through the hydrographical axis, associated with high human pressure and with the existence of some passage fords on both sides of the Prut River, favoured the appearance of a well-defined system of coupled settlements, but which was annihilated by the closed character of the border during the communist period. This fact was emphasized also by the villages that form toponymic couples on both sides of the Prut River: Sculeni-Sculeni, Medeleni-Medeleni, Grozești-Grozești, Răducani-Tochil Răducan, Pogonești-Pogonești, etc. (Fig. 1) (Săgeată, 2014b).



Figure 1: The coupled settlements and the cross-border development axes along the border between Romania and the Republic of Moldova

1. Regional attraction centers, 2. Local attraction centers, 3. Towns, 4. Areas of periurban development, 5. Road custom points for international traffic, 6. Road custom points for small traffic, 7. Railroad custom points for international traffic, 8. Fluvial harbours, 9. Airports, 10. Free zones, 11. Connections: A. International road traffic, B. Small road traffic, C. International railroad traffic, 12. Ground border, 13. Fluvial arteries / Coasts, 14. Main development axes, 15. Local development axes.

(Source: Săgeată, 2014c, p. 60)

1.2 The Euroregions on Romania's Eastern border

The study area of the *Resources Pilot Centre for Cross-Border Preservation of the Aquatic Biodiversity of Prut River Project* - Prut River basin, is located in all three Euroregions from Romania's Eastern border: *Lower Danube Euroregion*, *Upper Prut Euroregion* and *Siret-Prut-Nistru Euroregion*. These Euroregions are characterized in this case study and their cross-border cooperation potential is analysed (e.g. in demographic, social, economic, environmental, management terms) (Figure 2).

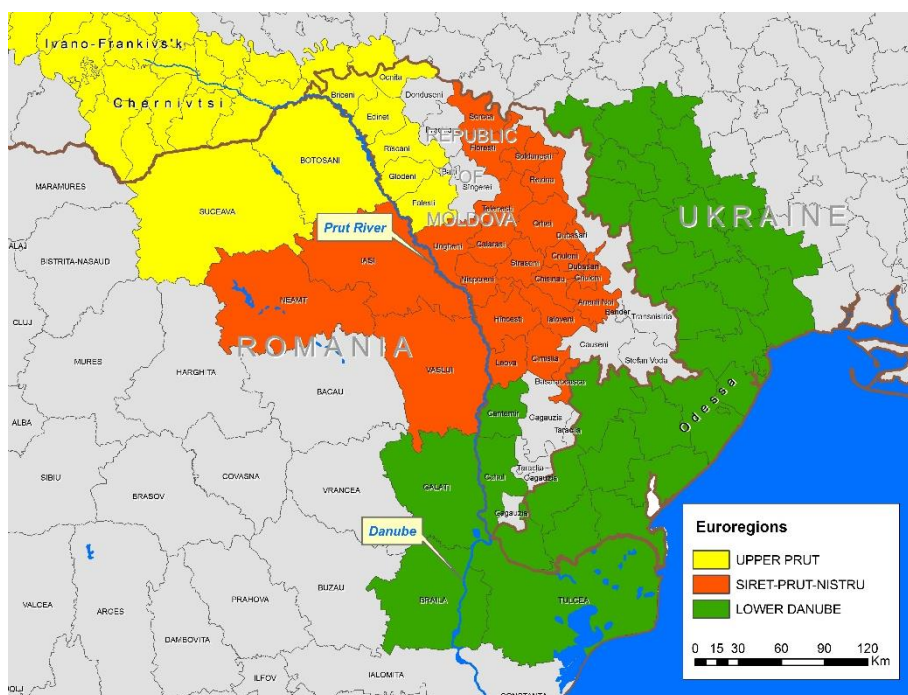


Figure 2: Euroregions at the Eastern Romania's border

The activity of Siret-Prut_Nistru Euroregion is focused on different fields of interest, ranging from economy, infrastructure, *environment*, tourism, agriculture and rural development, human resource development and social services, to *education*, *informational society* and culture. The mission of this Euroregion is to extend and improve relations between local communities and authorities in the economic, cultural, scientific and civic fields with the aim of ensuring sustainable and a territorially-balanced development of the Euroregion

Some of the objectives of the *Resources Pilot Centre for Cross-Border Preservation of the Aquatic Biodiversity of Prut River Project* are developed according to the *Siret-Prut-Nistru Euroregion objectives*.

Among the *Siret-Prut-Nistru Euroregion projects* we could list (www.euroregiune.org):

- Foundation and development of relations between local government and institutions in Romania, Moldova and Ukraine (2013).



- International Scientific Conference with topics dedicated to Siret-Prut-Nistru Euroregion (2013). Some of the objectives were the following: identifying areas of research and new opportunities of collaboration and cooperation in the most important areas of life and work in the Siret-Prut-Nistru Euroregion; setting up new projects of collaboration between researchers and teachers on both sides of the Prut River, between administrative and territorial units of the Euroregion and between businessmen; encouraging academics, researchers, postgraduate and doctoral students to contribute in finding solutions for short, medium and long term questions.
- Joint work meeting between District Presidents of the Siret-Prut-Nistru Euroregion, belonging to the Republic of Moldova and the national Union of County Councils of Romania (UNCJR) (2014). The objective was to harmonize and strengthen collaboration between the County Councils of Romania and District Councils of the Republic of Moldova in the context of European integration and to establish new bilateral agreements between districts of the Republic of Moldova and counties of Romania.

That means these projects directly strengthen the cross-border cooperation between the administrative institutions, academies and research institutions, the same way that the project *Resources Pilot Centre for Cross-Border Preservation of the Aquatic Biodiversity of Prut River* has done through its activities.

Based on the system of coupled settlements along the Prut River, starting with the year 1997 at the Eastern border of Romania, three Euroregions: *Lower Danube*, *Upper Prut* and *Siret-Prut-Nistru* have been institutionalized. The following table gives synoptic information about the established Euroregions.

These Euroregions are formed on the outer border of the European Union, including the Romanian space as an EU member state and involving the former Soviet space, represented by the Republic of Moldova and Ukraine. In this context, it can be stated that the Prut border sector benefits from a high security degree, functioning like a “filter” for human and material fluxes directed towards the European Union. Cohesion structure of the Euroregions is primarily based on the ethnic element, more precisely the territories are covered by a compact Romanian population. In addition to this, one can mention the intense habitation on both sides of the Prut River, the coupled settlements functioning as communication devices for the two settlements’ systems having a common historical ground. However, if the ethnic unity and the density of the habitation represent the main linking elements of the territories from the left- and right handside of the Prut River composing the three Euroregions, Romania’s integration into European and Euro-Atlantic cooperation structures imposed the need of securing its Eastern border and controlling the migration fluxes. The Prut River, therefore, defines itself, on the one hand, as an *integration* axis thanks to the continuity of ethnic and linguistic element to which the density and the continuity of habitation on both riversides could be added. Nevertheless, it also embodies a *fragmentation* axis, induced by its character as a relatively



stable border of NATO and the European Union, which imposes a specific framework to the cross-border co-operation. In addition to this comes the hard political line, an anti-Romanian one, promoted by some political formations from Chişinău, which stresses the segregation on both sides of the Prut River (Săgeată, 2014c).

Table 2: The system of Euroregions at the Eastern Romanian border

Name of the Euroregion / Year of its establishment / Area	Co-participating countries	Territorial-administrative units included [RO – counties, MD – districts, UK - regions]	Urban centers exerting an attractive function [towns]
Lower Danube 1997 - 1998 53.496 km ²	Romania	Galaţi, Brăila, Tulcea	Galaţi, Brăila, Tulcea
	Rep. of Moldova	Cantemir, Cahul	Camtemir, Cahul
	Ukraine	Odessa	Odessa
Upper Prut 2000 42.809 km ²	Romania	Botoşani, Suceava	Botoşani, Suceava
	Rep. of Moldova	Briceni, Edineţ, Făleşti, Glodeni, Ocniţa, Râşcani	Briceni, Edineţ, Făleşti, Glodeni, Ocniţa, Râşcani
	Ukraine	Cernăuţi/Chernivtsi, Ivano-Frankivsk	Cernăuţi, Ivano-Frankivsk
Siret-Prut-Nistru 2002 31.434 km ²	Romania	Iaşi, Neamţ, Vaslui	Iaşi, Piatra Neamţ, Vaslui, Bârlad
	Rep. of Moldova	Anenii Noi, Basarabasca, Călăraşi, Cimişlia, Criuleni, Dubăsari, Floreşti, Hânceşti, Ialoveni, Leova, Nisporeni, Orhei, Rezina, Soroca, Străşeni, Şoldăneşti, Teleneşti, Ungheni and Chişinău city	Chişinău, Dubăsari, Floreşti, Hânceşti, Orhei, Soroca, Ungheni

(Source: Săgeată, 2014c, p. 61)

178 settlements can be recorded on the Prut riversides on the entire cross-border sector between Romania and the Republic of Moldova: 99 of which on the right side and 79 on the left side. Urbanization is more pronounced on the left riverside of the River (6 towns, two with a city statute), as opposed to only 2 on the right riverside. A detailed description of administrative units can be found in the next table.



Table 3: Human settlements on the Prut riversides in the cross-border zone between Romania and the Republic of Moldova

Statute	Adm. unit RO – counties MD - districts	Administrative units [villages/villages – seat of communes/towns/towns with a city statute]
Romania	Botoșani	Cuzlău, Slobozia, Horodiștea, Rediu, Rădăuți-Prut*, Miorcani, Cotu Miculinți, Crasnaleuca, Horia, Mitoc*, Liveni, Șerpenița, Iorga, Manoleasa-Prut, Manoleasa*, Sadoveni, Bold, Ripiceni*, Cinghiniia, Stâncă, Ștefănești**, Bădiuți, Bobulești, Românești*, Dămideni, Ilișeni, Berza, Greaca, Santa Mare*, Bădărăi.
	Iași	Tabăra, Buruienesti, Bivolari*, Soloneț, Zapolodeni, Trifești*, Lunca Prutului, Vladomira, Șendreni, Frăsuleni, Sculeni*, Medeleni, Petrești, Bran, Bosia*, Ungheni*, Țuțora*, Oprișeni, Moreni, Prisăcani*, Măcărești, Colțu Cornii, Sălăgeni, Grozești*, Gorban*, Podu Hagiului.
	Vaslui	Ghermănești*, Drânceni, Albița, Rișești, Chersăcosu, Pogănești, Gura Văii, Săratu, Stăniliești*, Lunca Banului*, Oțetoaia, Răducani, Broscoșești, Focșa, Condrea, Lunca Veche, Bumbăta, Vetrișoia*, Berezeni*, Satu Nou, Bozia, Fălcu*, Bogdănești, Rânzești, Cârja.
	Galați	Vădeni, Rogojeni, Oancea*, Slobozia Oancea, Vlădești*, Brănești, Măstăcani*, Foltești*, Stoicani, Tămăoani, Frumușița*, Ijdileni, Șivița, Tătarca, Tulucești*, Vânători*, Satu Costi, Galați***.
Republic of Moldova	Briceni	Criva*, Drepcăuți*, Lipcani**, Șirăuți*, Slobozia-Șirăuți*, Pererita*, Tețcani*, Bezeda, Bogdănești*, Grimești.
	Edineț	Lopatnic*, Viișoara*, Bădragii Noi*, Bădragii Vechi*, Corpaci*, Cuconeștii Noi*, Cuconeștii Vechi.
	Râșcani	Dumeni, Duruitoarea Nouă*, Duruitoarea, Proscuțeni, Costești**, Păscăuți, Reteni-Vasileuți, Reteni, Braniște*, Avrămeni.
	Glodeni	Cobani*, Balatina*, Tomeștii Noi, Tomeștii Vechi, Cuhnești*, Cot, Bisericani, Serghieni, Movileni, Moara Domnească, Viișoara*.
	Fălești	Chetriș*, Călinești*, Hâncești*, Drujineni, Pruteni*, Valea Rusului, Lucăceni, Horești*, Unteni, Vrănești, Hrubna Nouă, Taxobeni*.
	Ungheni	Gherman, Floreni, Sculeni*, Blândești, Medeleni, Petrești*, Semeni, Zagrancea*, Ungheni***, Buzduganii de Sus, Buzduganii de Jos, Valea Mare*, Moldovenii Vechi, Costuleni*, Măcărești*, Frăsinești.
	Nisporeni	Bărboieni*, Grozești*, Zberoaia*, Bălăurești*.
	Hâncești	Nemțeni*, Obileni*, Cotul Morii*, Sărăteni, Leușeni*, Feteasca, Călmățui*, Dancu*, Cioara*, Marchet, Pogănești*, Voinescu*.
	Leova	Sărata-Răzești*, Tochile-Răducani*, Sârma*, Leova**, Hănăsenii Noi*, Nicolaevsca.
Cantemir	Vâlcele, Toceni*, Antonești*, Leca, Cantemir**, Stoianovca*, Țiganca*, Țiganca Nouă, Ghioltosu,, Gotești*.	



Statute	Adm. unit RO – counties MD - districts	Administrative units [villages/villages – seat of communes/towns/towns with a city statute]
	Cahul	Chircani, Cucoara*, Paicu, Zârnești*, Tretești, Roșu*, Cahul***, Crihana Veche*, Pașcani, Manta*, Vadul lui Isac*, Colibași*, Brânza*, Văleni*, Slobozia Mare*, Cășlița-Prut*, Giurgiulești*.

** Villages – seat of communes, **Towns, *** Towns with a city statute.
(Source: Săgeată, 2014c, p. 63)*

This way, some large urban centers are clearly distinguishable, which have developed as spatial structuring centers with a cross-border impact: Iași, Huși and Galați on the right riverside, and Ungheni, Leova and Cahul on the left riverside respectively. Among these, through their demographic and socio-economic potential, Iași and Galați, together with Ungheni, Cahul, Giurgiulești and Reni tend to take over cross-border functions at a macro-territorial level, leading to a spatial unitary structuring on both sides of the frontier. These are also the only first rank cities in the Romanian Prut border zone, which can develop, on grounds of Law 351/2001, metropolitan areas.

The traditional relations preserved among these countries enable a series of cross-border co-operation opportunities, increasing the economic and social potential of the Euroregions. Therefore, the problems which they face are mostly homogeneous, consequently, solutions cannot be achieved on the territory of the national states exclusively, but in a wider perspective. Therefore, in 1997 at the Ismail Summit, the Presidents of the Republic of Moldova, Romania and Ukraine signed the “Declaration regarding the cross-border co-operation”.

Evaluation of the economic and social potential of the Euroregions identifies numerous cross-border co-operation opportunities in various fields. Such co-operation should give an impulse to the economic development of the three countries. Several opportunities could be mentioned: correlation of the regional development programs for road and fluvial communication infrastructures; creation of common structures regarding wares’ certification, development of sale markets for products, employment of the labour force, development of the existing economical potential; coordination of efforts for ensuring drinking water and natural gas supply; development of an infrastructure to facilitate the frontiers’ transition, establishing new frontier transition points and modernization of the existing ones; common development and promotion of touristic offers and touristic traffic; organization of festivals, exhibitions, cultural fairs and regional sport competitions; co-ordination of environmental protection programs; and/or common monitoring of the pollution factors (Roșcovan et al., 2010).



1.2.1 The Lower Danube Euroregion

On August 14, 1998, within the framework of the reunion of the border regions in Galați, the leaders of the Republic of Moldova, Romania and Ukraine signed the Agreement regarding the creation of the “Lower Danube” Euroregion. On grounds of the constitution Agreement, the Euroregion has the following members (www.actedj.ro): the counties Tulcea, Brăila and Galați (Ro), the districts Cahul and Cantemir (MD) and the Odessa region (UA). The co-operation priorities are the following: founding of mixed enterprises and the intensification of commercial exchanges in the area; development of transport facilities; establishing common centers for emergency situations; joint organization of economic forums, seminars and exhibitions.

In the frame of the Euroregion cross-border co-operation, projects have been implemented with focus on biodiversity of protected areas, management of natural resources and tourism development: *Management plan for biodiversity protection and sustainable development in the Nature Protected Areas within the Euroregion Lower Danube; Danube Delta Eco-Touristic Centre; Integrated System for Monitoring the Environment Factors, Biodiversity and Natural resources in the cross-border Danube Delta Biosphere Reserve, Romania/Ukraine; Cross-border Information Center for environment protection; Health without border; Danube Delta in Europe; Inventory, assessment and remediation of the anthropogenic sources of pollution in the “Lower Danube” Region of Romania, Ukraine and Republic of Moldova; Regional Business Incubators’ Network “Black Sea BI-Net”; Innovative instruments for environmental analysis in North Western Black Sea Basin; Sustainable Tourism Development in the Lower Danube Region of Ukraine, Moldova and Romania, etc.*

1.2.2 The Upper Prut Euroregion

The concrete activities concerning the creation of the “Upper Prut” Euroregion started in August 1997. The Ukrainian part proposed that collaboration within the Euroregion to be exclusively concentrated on ecological issues. In September 2000, the Agreement regarding the founding of the “Upper Prut” Euroregion was signed.

On the grounds of the Agreement, the members of the Euroregion are (<http://www.cjbotosani.ro/portal/portal.html?pid=173>): the counties Botoșani and Suceava (Ro), the city of Bălți and the districts Edinet, Briceni, Fălești, Glodeni, Râșcani and Ocnița (MD) and the Cernăuți/Chernivtsi region (UA). The Euroregion co-operates in the fields of ([Roșcovan et al., 2010](#)): economic relations; cross-border infrastructure development; ecological security and environmental protection, science and education, culture and sports, relations among non-governmental organizations, protection of human health, tourism development.

The projects which were finalized or are currently under implementation are: Cross-border cooperation for the management of the Prut River Middle Course; *Bucovina Regional Economic Forum*, Development of an alternative transport network between Romania and Ukraine;



Discover Bucovina; Bucovina Traditional Folklore Festival; Cultural cooperation between Botoşani and Glodeni; Cross-border Exchanges in Professional Education; Rehabilitation, modernisation and improvement of the cross-border cultural centre; Common traditional patrimony – European promotion element; Quality infrastructure for Botosani County (Ro) - Herta District (Ua) border area; Valorisation of the touristic potential of Siret – Hliboca area; Development of border infrastructure between Ukraine and Romania, etc.

1.2.3 The Siret-Prut-Nistru Euroregion

The Euroregion involves three administrative units (counties) from Romania (EU) and 26 administrative units (districts) from the Republic of Moldavia (i.e from outside of the EU).

According to the development strategy of the local administrations, activities and projects of this association cover various fields of interest from economy, infrastructure, environment, tourism, agriculture and rural development, human resource development and social services, to education, informational society and culture.

The goal is to extend and improve relations between local communities and authorities in economic, cultural, scientific and civic fields with the aim of ensuring sustainable and territorial balanced development of the Euroregion and to respect, protect and guarantee the rights and interests of the administrative-territorial units, members of the Siret-Prut-Nistru Euroregion.

One of the Euroregion activities is represented by the Economic Cross-Border Forum. This is a concrete manifestation of the mission assumed by the Euroregion Siret-Prut-Nistru to support the development of economic cross-border relationships at the eastern border of the European Union. The first meeting took place in Iaşi-Romania, and it counted more than 400 participants from political, administrative and economic environment. The forum facilitates the relationship of several target audiences who have or want to have a key role in the domain of cross-border cooperation (www.euroregiune.org).

The working format wants to be balanced between the two components: business and inter-institutionalism. Therefore, the program included presentations of the economic projects of the central administration, regional and local authorities of the Republic of Moldova, Ukraine and Romania where the business representatives can find opportunities for adjustment and connections.

The component “business to business” will be ensured by the following elements: company presentations of strategic partners; brochure with milestones of all participants on hard-copy and soft-copy; stand provided by the organizers, dedicated to each county, district and region. The stand is the gathering point and the physical support for presentation materials of the participating companies. The Forum aims to mark in the first place the relational component (networking), equipping stand involves elements such as leaflets, brochures, business cards and other related items. Exhibiting products are not discouraged, but it is a subject of sponsorship



agreement. Opened spaces equipped with mobile seats, where participants can withdraw for discussion, are also provided (www.euroregiune.org).

1.2.3.1 General characteristics

The Siret-Prut-Nistru Euroregion (Fig. 3) situated in the central part of the Eastern cross-border zone is the only one of the three euroregions formed solely between the two states, Romania and the Republic of Moldova. It is therefore characterized by a strong ethnic and linguistic homogeneity and elements which assure its cohesion. Of the 681.3 km length of the border between the two states, approximately 70% is included in the area of the Siret-Prut-Nistru Euroregion. The Euroregion is composed of 22 administrative structures, three are in Romania (Iași, Neamț and Vaslui) and 18 districts and the Chișinău city are in the Republic of Moldova (Tab. 2). The major part of the cross-border connections are occurring on the Iași-Ungheni connection.

The main Euroregion convergence centers are given by the cities of Chișinău in the Republic of Moldova, Iași in Romania, moreover, Tiraspol, Piatra Neamț, Vaslui and Bârlad are added and other urban centers act as local attraction centers.

Chișinău (671.800 inhab., 2013), the capital of the Republic of Moldova, is located in a tableland area, on the Bâc riverside. It represents the main economic, financial, cultural-scientific center and the most important transport network knot in the Republic of Moldova. Situated at the crossing of important commercial routes which connected Iași to Kiev and Odessa, the city knew an early development through its commercial function (market), being certified since 1436. Between 1918 and 1940, Chișinău belonged to Romania, being the largest city of historical Bessarabia. The period, under Soviet administration, marked a turning point in the city's development: parallel to the industrialization and urbanisation, a strong immigration of population coming from the Russian federation and other union republics of the USSR took place, thus the population reached a number of 700 000 inhabitants in the 1980s. Nevertheless, the ethnic structure is still dominated by Romanians (declared as Moldavians) with 67.6% of the total population, followed by Russians (13.9%), Ukrainians (8.3%) and Romanians (4.5%). The investment with the function of a capital, as a consequence of the independence of the Republic of Moldova in 1991, maintained the rising trend of the urban development of the city, thus partially compensating the industrial decline. Within the environment of re-structuralization, only the food industry (*Bucuria* – sugar-based products, units of the wine industry) and mining industries (exploitations of mica and building materials) remained viable. The inner of the city is organized in five administrative sectors: Botanica, Buiucani, Centru, Ciocana and Râșcani (Săgeată, Mitrică, 2014, p. 77).



Figure 3: The Siret-Prut-Nistru Euroregion

1. Capital, 2. Attraction centers, 3. Cross-border connections, 4. Airports, 5. Borders, 6. Administrative boundaries.

Source: Săgeată, Mitrică, 2014, p. 78)

Tiraspol (135.700 inhabitants in 2011) represents a secondary attraction center, due to its peripheral position within the Moldavian sector of the Euroregion and its status as capital of the separatist region of Nistrene (Transnistria), although, demographically it is the third town of the Republic of Moldova. Situated on the left handside of the Nistru river, the town forms a common urban agglomeration with approximately 250 000 – 300 000 inhabitants together with city of *Bender* (Tighina), which is situated on the opposite side of the river, still under the jurisdiction of the separatist authorities. . These two cities are connected by common transport lines (Săgeată, Mitrică, 2014, p. 78-79).

There are other important cities, like *Ungheni* (38.200 inhabitants, 2013) which represents an attraction center of prime importance at the level of the Euroregion space; *Soroca* (37.700 inhabitants, 2013); *Orhei* (33.500 inhabitants, 2013), etc.

The Romanian sector of the Siret-Prut-Nistru Euroregion is dominated by Iași, Piatra Neamț, and within the Vaslui county, by the urban couple Vaslui-Bărlad. *Iași* (290.422 inhabitants, 2011) represents the main attraction center of the Romanian Euroregional sector. It is a town rich of cultural tradition, it was the capital of Moldavia until 1859. Having a favourable geographic position, the town developed firstly as a market and princely court (certified in 1437), later as a cultural and industrial centre. The wide scale industrialization after 1950, attracted important demographic fluxes from the rural environment, and consequently the city registered an important growth (94 075 inhabitants in 1948, 342 994 inhabitants in 1992). Later a decline followed, due to the industrial restructuring and the mass loss of employments which generated return fluxes towards the rural space or definite departures. Other important cities are: *Piatra Neamț* (85.055 inhab., 2011), seat and main attraction center of the Neamț county,



situated in the Moldavian Subcarpathians (Cracău-Bistrița Depression); *Vaslui* (55.407 inhabitants, 2011) at the confluence of the rivers Bârlad, Vasluieț and Racova; *Bârlad* (55.837 inhabitants, 2011) one of the main attraction centers within the Vaslui county. In addition to these, in the Romanian Euroregional sector there are some other towns, local attraction centres, of which worth mentioning are: *Roman* (50.713 inhabitants), *Huși* (26 266 inhab.) - Vaslui county and *Târgu Neamț* (18 695 inhab.) - Neamț county, the other urban centres (*Hârlău*, *Târgu Frumos* and *Podu Iloaiei* – Iași county, *Roznov* and *Bicaz* – Neamț county, *Negrești* and *Murgeni* - Vaslui county respectively) having below 10 000 inhab.

1.2.3.2 The demographic potential in the Romanian sector

The cross-border cooperation represents one of the important polyvalent instruments which involve mobilization of financial resources in the framework of common projects. The long-term objectives of this type of projects consist in creating several bilateral advantages, improving the physical and economic infrastructures, developing the region's human resources, deepening the cultural and educational links, preparing for the EU adhesion, protecting the environment, etc. (Roșcovan, 2003).

Immediately after the proclamation of the independence and recognition by the international community, the Republic of Moldova made considerable efforts to establish international relationships, join to the most important international political and economic bodies and organizations, as well as to sign bilateral agreements with different countries. Being a small country with limited natural resources, the Republic of Moldova cannot develop its economy unless integrated into European and international economic structures. In this respect, integration efforts were promoted both at central level, and at regional level by intensifying the cooperation of regional communities with similar structures of the neighbouring countries, like Romania and Ukraine (Roșcovan, 2003).

The complex political and socio-economic conditions of South-East Europe gave an impulse to this cooperation due to certain factors, like (Guțuțui, Miron, 2006):

- The Euroregions are formed between states which are situated at the intersection of transnational corridors linking states of Central Europe to those of the Caucasian region and Middle East, facilitating the transit of merchandise and people;
- Population and communities from the border regions are homogeneous in terms of language, mentality, culture, tradition;
- Reorientation of the foreign policy of the Republic of Moldova towards the European Union through the adoption of the Action Plan Republic of Moldova – European Union, furthermore, the organization of a series of meetings with the EU partners both in the Republic of Moldova and in countries of the European Union.



- The extension of the European Union to the east and the possibility to access EU funds by elaborating and implementing cross-border projects in various fields (social, economic, environmental, public administration).

The Siret-Prut-Nistru Euroregion, established in 2002, is the “youngest” Euroregion and it gathers the largest number of territorial-administrative units of the three Euroregions existing at the Eastern border of Romania.

The communes within the Siret-Prut-Nistru Euroregion belong to those with a population below 5 000 inhabitants. The smallest communes from a demographical point of view are the following ones: Cucuteni, Mădârjac, Bălteni, Bogdănița, Alexandru Vlahuță and Blăgești with a population comprised between 1 300 and 1 700 inhabitants. At the opposite pole are the communes of the Iași county - Holboca, Tomești, Belcești, Ciurea, Deleni and Neamț county - Săbăoani, having between 10 000 and 12 000 inhabitants.

Regarding the urban centers, the largest city is Iași with 290 422 inhabitants and it is the only one which belongs to the category of large cities. In the category of medium towns are Piatra Neamț, Vaslui, Bârlad, Roman with a population comprised between 50 000 and 100 000 inhabitants; on the next level are situated Pașcani and Huși, with a population between 20 000 and 50 000 inhab, while to the category of small towns belong Târgu Neamț, Târgu Frumos, Hârlău, Podu Iloaiei, Bicz, Roznov, Negrești and Murgeni. These hold a special place in the urban hierarchy, forming the base of the urban pyramid and satisfy territorial-organisational functions within the national economy, functioning the same way in this Euroregion.

The concentration element which defines the urban habitat and definitely separates it from the rural one, results from the specificity of urban activities. Population density is determined by the different intensity of the socio-economic development in time, as well as by the Euroregion’s landforms. High density areas are registered in the case of Bârlad (5 463.5 inhab./km²), Iași (3 048.4 inhab./km²), Roman (1 685.9 inhab./km²), Piatra Neamț (1 098.4 inhab./km²) and/or in Vaslui (814 inhab./km²) cities. High densities, comprised between 200 and 400 inhab./km², can be encountered in the case of communes like Tămășești, Săbăoani (Neamț county) or Gherăești, Doljești, Holboca, Ciurea (Iași county). At the opposite pole, low densities, such as below 50 inhab./km², are registered in the case of 73 administrative units. The minimum density (8.8 inhab./km²) is registered in the Tarcău commune of the Neamț county, due to the mountain relief with a large fragmentation degree (Fig. 4) (Săgeată, Mitrică, 2014, p. 82-83).

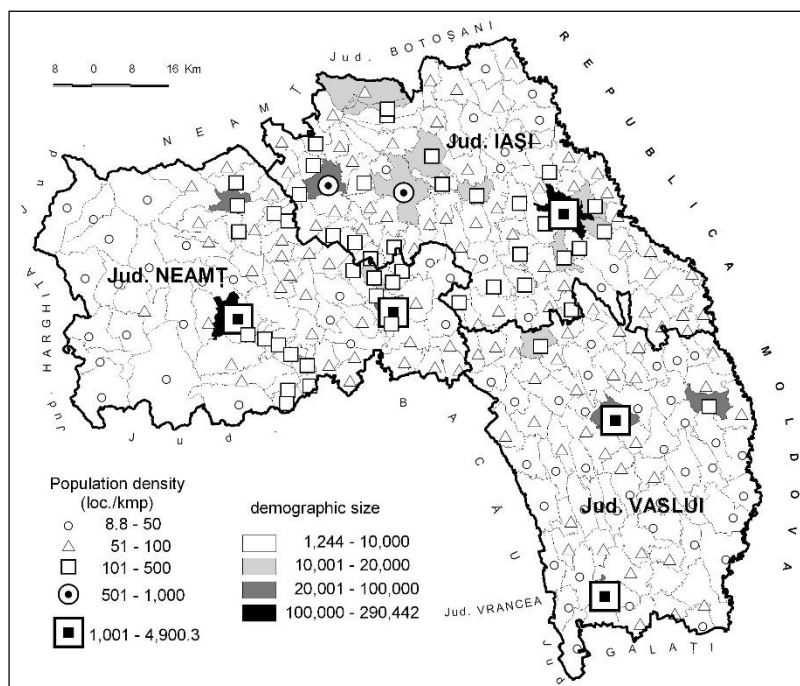


Figure 4: Demography and population density (2011)

Source: Săgeată, Mitrică, 2014, p. 83

The birth rate registers oscillations in time which depend upon several factors. The politics of the communist party was oriented towards ensuring a normal demographic balance of the population, and hence the values were high until 1990. After the political changes and fall of communism, the birth rate suddenly started to drop but the eastern region of Romania is however recognised as having the highest values of the birth rate in the country. The 2011 census registered a variation between 2.8‰ in the Moldoveni commune (Neamț county) and 27.5‰ in the Băcești commune (Vaslui county). The lowest values (below 10‰) were registered in 57 administrative units, most of them situated in the Neamț and Vaslui counties. High values, above 20‰, were characteristic to 16 administrative units, situated in the north-western and western parts of the Central Moldavian Plateau (Săgeată, Mitrică, 2014, p. 83).

The death rate varied, according to the 2011 census, on a range between 5.2‰ in the Tomești commune (Iași county) and 29.6‰ in the Alexandru Vlahuță commune (Vaslui county). The smallest rates (below 10‰) were registered in 55 administrative units, representing 23.2% of the total number within the Euroregion. Values above 20‰ were registered in 11 administrative units, 5 of which in the Vaslui county. The majority of the administrative units have values of the death rate between 10 and 20‰ (Săgeată, Mitrică, 2014, p. 83).

Similarly to the birth and death rates, the dynamics of the population's natural balance varied in function of the demographic, economic and social politics which succeeded under the different political regimes, especially after the Second World War. Until the beginning of the XXIth century, the natural balance followed a descending curve, in such a way that in 2006, 127 administrative units (53.6% of their total within the Siret-Prut-Nistru Euroregion) registered

negative values. The annual variation of the natural balance, may substantially differ among counties and localities in Romania. In other words, while the localities from the west and center of the country registered a massive population decline, the eastern and southern counties of the country registered a slower change. In the Romanian sector of the Euroregion, the natural balance varied between -17.9‰, e.g. in the Moldoveni commune (Neamț county), and 16.4‰, e.g. in the Todirești commune (Vaslui county) (Săgeată, Mitrică, 2014, p. 84) (Figure 5).

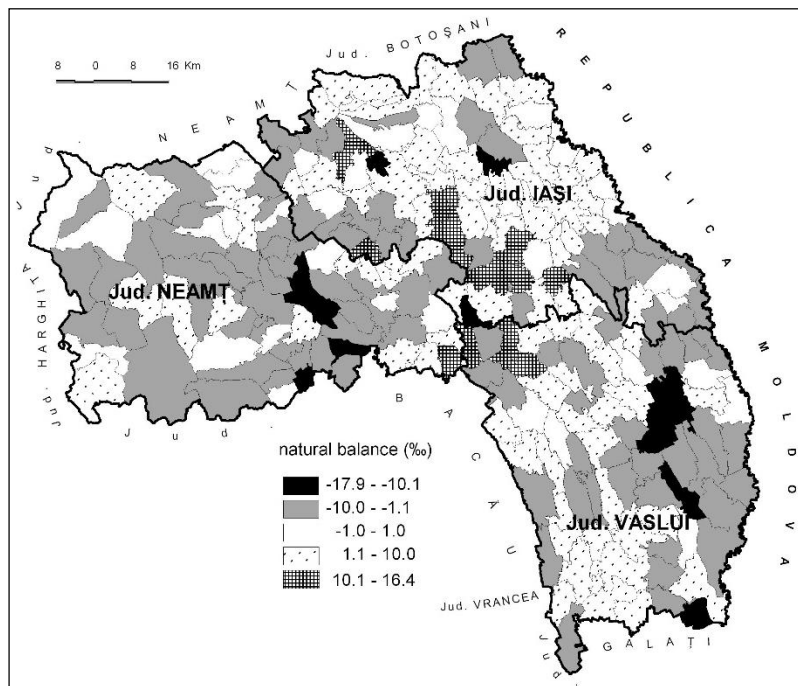


Figure 5: Population's natural balance (2011)

Source: Săgeată, Mitrică, 2014, p. 84

The population's migrations have a series of effects on the demography, economy and society both for the departure regions and for the arrival ones. These effects include the question of territorial redistribution of the population, changes in the gender and age structure of the society. The phenomenon of migration is usually driven by an uneven geographic development which predetermines the existence of dichotomy between developed and underdeveloped regions. Subsequently, the formers tend to have a deficit in terms of labour force, thus they attempt to attract it from the surrounding areas, while the latter are characterized by an excess in labour force which will be attracted by the regions with an accelerated dynamics. The highest arrival values are in the communes surrounding the large and medium-sized towns – Iași, Piatra Neamț, Vaslui, Bârlad and Roman. In the year 2011, distribution of the migration balance shows changes compared to the last decade of the previous century, as a consequence of the decline in the population's movements (Fig. 6). Maximum values are in Miroslava (43.0‰), Dumbrava, Bârnova, Muntenii de Jos (between 19.6 and 18.5‰) while minimum ones in the Focuri, Vișoara, Brusturi, Laza, Coarnele communes (between -20.9 and -17.0‰) (Săgeată, Mitrică 2014, p. 85).

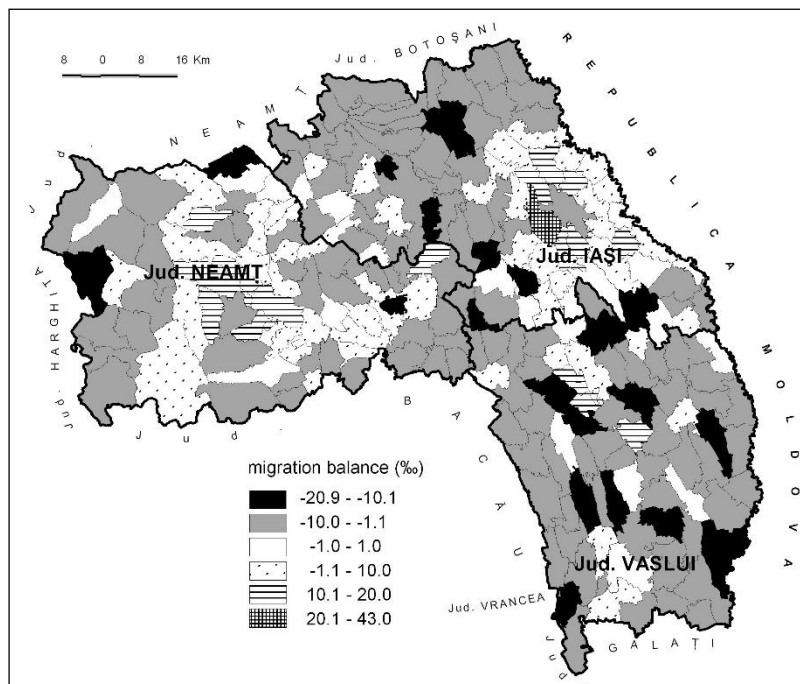


Figure 6: Population's migration balance (2011)

Source: Săgeată, Mitrică 2014, p. 86

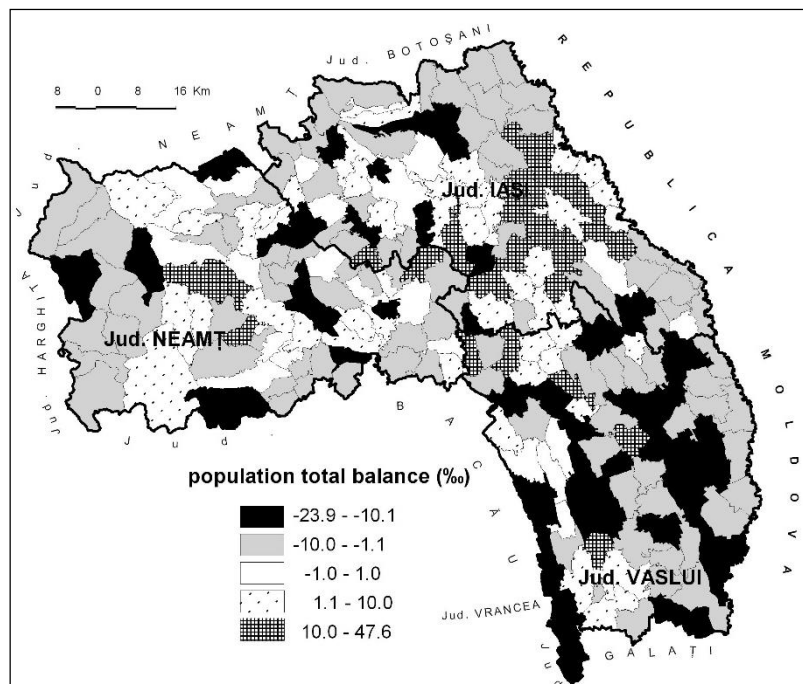


Figure 7: Total balance of the population (2011)

Source: Săgeată, Mitrică, 2014, p. 86

The total demographic balance, established as a difference of the natural balance and migration, varied between -23.9‰ in the Tansa commune and 47.6‰ in the Miroslava commune, both situated in the Iași county (Fig. 7). Negative values were in 157 localities (66.2%

of their total number in the Euroregion), the rest of the 80 localities (33.8%) registered positive or zero values. Moreover, 22 administrative units are emphasised with values between -1.0 and 1.0‰, which means approximately equal values for the natural and migration balances. The highest values (between 20.9 and 25.2‰) were in the Reditu, Bârnova, Aroneanu, Popricani communes of the Iași county, while minimum values (between -20.8 and 22.4‰) in the Alexandru Vlașuță commune (Vaslui county), Focuri și Cucuteni (Iași county) (Săgeată, Mitrică 2014, p. 85).

1.2.3.3 The demographic potential of Republic of Moldova

The highest values of population density are registered in the districts situated in the central part of the Republic of Moldova and along the Nistru River (150 inhab./km²) (Fig. 8). These departments, which are densely populated, occupy the largest area of the country's territory. High density is due to several factors, either to the concentration of the population in industrial areas (including in the periurban spaces where an intensive agriculture is being performed), or to the high natural balance of the population.

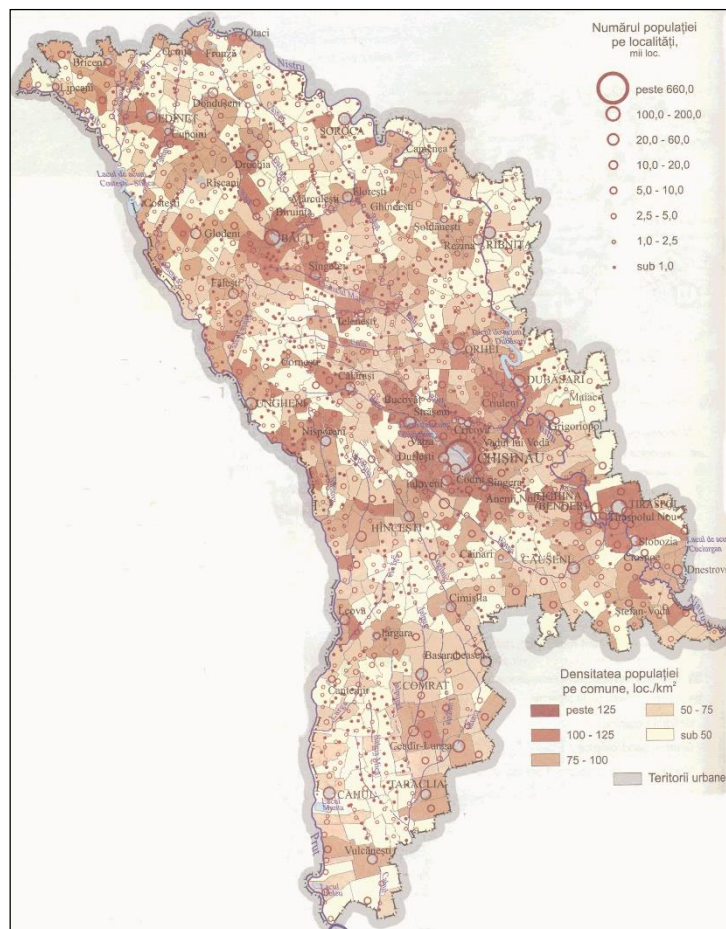


Figure 8: Demography and population density
(Source: Atlasul Republicii Moldova. Geografia fizică și socio-economică, 2003)



In the districts which are part of the Euroregion, the population is composed of Romanians (around 70-90%), but in the greatest part of the large and middle-sized towns their share decreases below 50%. In the districts of Orhei și Soroca, the share of Romanians exceeds 90%. Only in districts like Ungheni, Soroca and Orhei, the Romanian population exceeds 50% of the total. Russians and Ukrainians, who migrated into the territory during the post-war period, mainly live in the urban environment.

Regarding the natural balance of the population, this shows a negative tendency comprised between 0.1 and -0.5‰ in the Ungheni district (raion), between -2.0 and -3.0 in the Orhei district (Fig. 9).

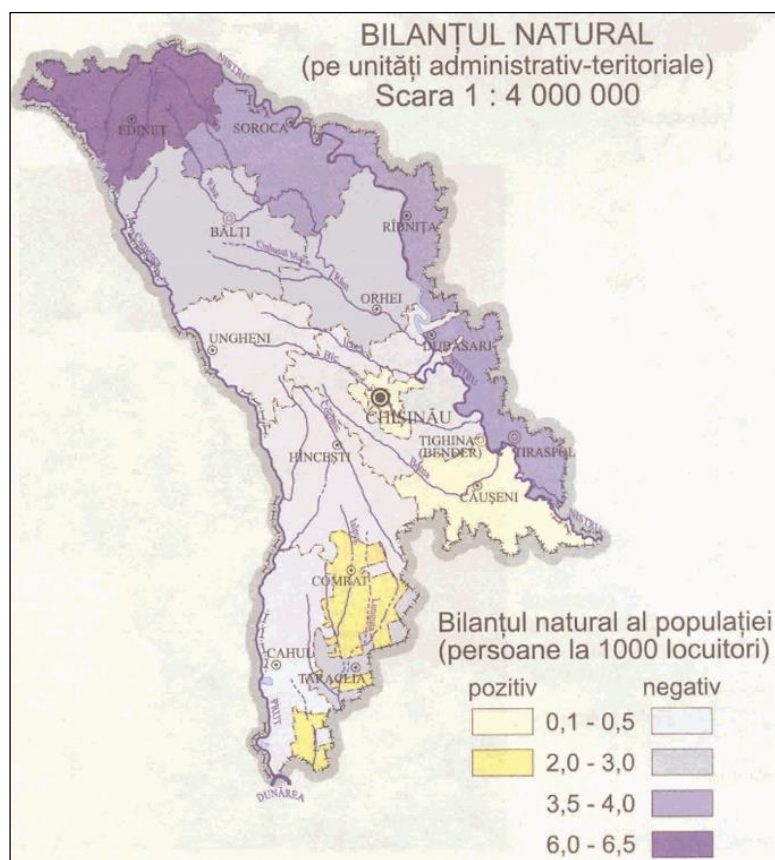


Figure 9: Natural balance of the population

(Source: Atlasul Republicii Moldova. Geografia fizică și socio-economică, 2003)



2. Resources Pilot Centre for Cross-Border Preservation of the Aquatic Biodiversity of Prut River

The project *Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River* is financed by The Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013, Priority 2 - Environmental challenges and emergency preparedness, Measure 2.1 - Addressing strategic cross-border environmental challenges including emergency preparedness.^{1,2}

Within the context of global environmental change, the aquatic environment represents one of the most sensitive ecosystems, due both to its intrinsic ecological characteristics and external factors. Therefore, implementing a biodiversity and water resources project regarding one of the main rivers in the Danube Basin is a highly topical problem of integrated research of the environment.

The case study of the project is the Prut River which is investigated across and alongside from its entry into the Romanian territory to the confluence with the Danube River.

The project is implemented in a densely populated area of cross-border cooperation Euroregions. The actions undertaken within this project make a significant contribution to improve cultural, economic and an environment-related closer collaboration between the partners on both sides of the Prut River. Other actions take into consideration a sustainable management of cross-border protected areas, a better institutional capacity of local decision-makers to improve accessibility to funding and the implementation of future cross-border joint actions. The project is a means of interdisciplinary approach that brings together specialists in zoology, ecology, climate, water resources management, etc.

At the end of the project, the following will be available: biodiversity database, consultancy services, facilities and training programmes for developing business in the field of aquaculture in the advent of funding through the Operational Programme for Fishery.

The project aims to jointly develop the scientific, human and logistic resources, monitor, restore and improve the Prut River aquatic resources during difficult climatic conditions and threatening anthropogenic actions.

The project's main objectives are:

- Management of biodiversity in the border area;
- Monitoring of fish-aqua cultural resources;

1 The project, under implementation between May 2012 and May 2015, was evaluated in the following pages during the period September - December 2014, while it was still ongoing.

2 Further information about the CBC is available: <http://prutrivier.uaic.ro/>



- Management of aquatic resources during difficult climatic situations;
- Preparation of joint action plans for the sustainable management of the cross border protected areas, including actions for increasing the institutional capacity of the local key decision factors in order to improve the access to funding and implementation of joint cross border actions;
- Better collaboration between professionals from both sides of the border with a view to elaborate and implement joint action plans in various emergency situations, e.g. floods, drought, severe pollution, etc.;
- Assessing current environmental conditions which call for improvements in order to remake the Prut River's ecological state and to introduce collective measures for sustainable use of its water resources;
- Improving public and stakeholders awareness on the necessity for joint action to maintain the Prut River's biodiversity and natural resources;
- Developing an on-line network for emergency situations.

Under this Project, the health state of the Prut River water species will continue to be tested, a risk analysis report will be completed and a joint action plan for emergency situations (caused by floods, drought, or massive pollution with impact on biodiversity) will be issued. At the same time, the infrastructure of the Ezareni Station for Research in Aquaculture and Aquatic Ecology will be restored to become a source of reproduction, and a pilot centre for resources and research education will be set up for the academic and business milieu.

The Project aims to contribute to a more efficient collaboration between managers and final users of the Prut River biodiversity on both sides of the border and to strengthen the capacity of the two partner institutions to collaborate in field of education and research under some future European Union related actions.

The coordinator of the project is the "Alexandru Ioan Cuza" University (RO), and the partner of the Academy of Sciences of Moldova, Institute of Zoology (MD). Associate institutions are National Administration "Romanian Waters" Prut Directorate (associate no.1), Environmental Protection Agency Iași County (associate no.2), and The Inspectorate for Ecology of the Republic of Moldova (associate no.3). The target regions are Iași (Iași County, RO) and Chișinău (Chișinău District, MD).

The budget of the project is split into partners contribution (10%: 325,430.24 EUR) and CE contribution (90%: 2,928,872.17 EUR). The implementation period is for 36 months from May 7, 2012 to May 7, 2015.



3. The development of the cross-border cooperation

3.1 Development of cross-border cooperation: a general overview

The border region between Romania and the Republic of Moldova is characterized by a rich biodiversity, specific for the main types of habitats encountered in the region. The need to adopt the principles of sustainable development and biodiversity conservation imposed changes at the level of governments and the development of strategies and policies in the field of environmental protection as well as instruments destined to the implementation of these – legislative, technical, economic-financial, social and/or communicative ones³. A harmonized management is needed and a unitary approach of the aspects regarding the management of biodiversity.

Cooperation between the border regions of Romania and the Republic of Moldova have been established since the mid-1980s, but they had a formal character. After 1989, these relations intensified, but they were made difficult due to the lack of clear external relations between the states, having a more cultural character (fraternities, book exchanges). Strengthening cross-border cooperation has become an important realm of action of bi- and trilateral documents with neighbouring countries, especially signing the Protocol for trilateral collaboration between the governments of Romania, Republic of Moldova and Ukraine in Ismail, on 4th of July 1997, (*Dandiş, 2008*). At the same time, the constitution of Euroregions represented an important moment in the intensification of cross-border co-operation, inclusively in the field of environmental protection, between border administrative units of Romania and similar structures of the Republic of Moldova.

The bilateral cooperation Romania - Republic of Moldova is founded on some conventions and agreements:

- Convention regarding the Environmental Protection of the Black Sea against Pollution (Bucharest 1992);
- Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention, Helsinki, 1992)
- Convention on Co-operation for the Protection and Sustainable Use of the River Danube (Sofia, 1994);
- The Tripartite Agreement Romania – Republic of Moldova - Ukraine regarding the Cross-Border Cooperation in the Region formed by the Natural Protected Areas of the Danube Delta and the Lower Prut River (Bucureşti 2000);

3 Ghid de acţiuni comune pentru conservarea biodiversităţii în zona de graniţă România – Republica Moldova, 2008



- Agreement between the Government of Romania and the Government of the Republic of Moldova with Regard to the Cooperation in the Area of Protection of Fish Resources and the Regulating of Fishing in the Prut River and Stâncea-Costești Artificial Lake (Stâncea-Costești, 2003);

In 2010, the Memorandum of Understanding between The Ministry of Environment and Forests of Romania and the Ministry of Environment of Republic of Moldova was signed in Bucharest, which referred to the cooperation in the field of environmental protection, a document which offers new cooperation perspectives between the two countries. The main cooperation fields are (Temneanu, 2010):

- elaboration and implementation of environmental legislation and policies, inclusively the implementation of international and regional conventions in the field of environmental protection;
- environmental impact assessment;
- sustainable development;
- protection and conservation of biological diversity and the management of natural protected areas;
- waste and hazardous waste management;
- the elaboration of policies and measures regarding the reduction of greenhouse gas emissions and the identification of measures for climate change adaptation;
- the integrated control of industrial pollution;
- the development of an integrated environmental monitoring system in the cross-border context;
- exchange of information in the field of environmental protection and rationale use of natural resources;
- promotion of environmentally-friendly technologies;
- atmosphere protection;
- mitigation of desertification and soil degradation;
- soil and sub-soil protection.

After 2000, cooperation, with the aim to implement common projects, is increasing with the launching of cross-border cooperation programmes of the European Union:

- **Phare Programme CBC** (Cross Border Co-operation), which had a main goal: strengthening of public administrations and institutions for an efficient functioning at the interior of the European Union and promoting economic and social cohesion;
- **Black Sea Basin Joint Operational Programme 2007-2013**. It aims to contribute to a stronger and sustainable economic and social development of the regions of the Black Sea Basin. The programme's three specific objectives (<http://www.blacksea-cbc.net>),



are promoting economic and social development in the border areas, working together to address common challenges, promoting local, people-to-people cooperation;

- **South Eastern Europe Transnational Cooperation Programme.** Overall objective of the program: creating partnerships in areas of strategic importance aiming to improve territorial, economic and social integration and contribute to cohesion, stability and competitiveness.
- **The Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013.** The program aims to create a bridge between the three partner states, by supporting communities in border areas in order to find common solutions to similar problems that they face. Programme's objectives: stimulating the development potential of the border area; improving socio-economic situation and the environment.

The projects have been focused on cross-border problems, having different approaches in their implementation. This was due to the specific application guidelines, program funding and initiatives, partnerships between applicant and project partners. The implemented projects are focused especially on life quality and economic development: social inclusion, institutional cooperation, safety, health and social services, small and medium-sized enterprises, economic cooperation, agricultural development, cultural heritage, tourism activity encouragement. An important category is represented by the actions of conserving and protecting the environment and of managing the threatened areas. In this sense, the following projects were undertaken:

- Developing the capacities to use methods of ecological agriculture with the aim of reducing pollution with nutrients in the Danube River basin (2003-2004), financed by the Regional Environmental Center of the Republic of Moldova with the financial support of PNUD and GEF;
- Cross-border cooperation project for the management of the mid-course of the Prut River (2004);
- Cross-border cooperation for the protection of surface water quality in the Prut River basin (2005), supported by the Phare Programme 2003, Trans-border cooperation Romania-Republic of Moldova;
- Mutual management Romania - Republic of Moldova for biodiversity conservation on the border between the two countries (2006-2008), supported by PHARE Programme 2006. The project permitted to evaluate biodiversity in the border region, to identify the problems and to prioritise and to develop a guide of common measures and activities ([Gache, 2008](#));
- Cross-border cooperation for reducing the waste impact on the environment (2006-2007), supported by Phare Programme 2004, Trans-border cooperation Romania-Republic of Moldova;
- Cross-border cooperation for biodiversity conservation between Romania and the Republic of Moldova (2006-2008). The project has several goals: strengthening of



biodiversity conservation structures in the cross-border area between Romania and the Republic of Moldova, increase of the information level of population regarding biodiversity and its problems, as well as the development of the institutional capacity of the structures involved in the biodiversity conservation;

- Environmental management - instrument for socio-economic sustainable development in the cross-border context (2007- 2008), supported by Phare Programme 2006;
- Demonstrative use of alternative energy resources in the Republic of Moldova through the experimental cultivation of crops – ALTER ENERGY (2006-2007);
- Cross-border Resource Center for Sustainable Development (2007-2008), supported by Vicinity programme Romania – Republic of Moldova (Phare CBC 2004). The goal of the project was to establish a permanent regional cross-border structure to contribute to the strengthening of relations between non-governmental organizations and local public institutions interested in the sustainable development of the border region Romania - Republic of Moldova.
- Environmental management – instrument for socio-economic sustainable development in the cross-border context (2008), supported by Phare Programme 2004, Trans-border cooperation Romania-Republic of Moldova;
- Common management Romania - Republic of Moldova for the protection of air quality (2008-2009), financed by Phare Programme 2004, Trans-border cooperation Romania-Republic of Moldova;
- Cross-Border Cooperation for common needs: health, environment, sports (2011-2012), financed by The Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013. The project will develop an efficient cross-border partnership for sports activities in a healthy environment;
- Joining nature and culture through outdoor activities in the border area (2011-2012), financed by The Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013. The objective of the project is the promotion of a greater and more effective educational, social and cultural interaction between two groups of children from Romania and the Republic of Moldova in order to protect natural and cultural heritage through outdoor activities;
- Educational park - model of cross-border ecological education (2011-2012), financed by The Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013. The project aims to contribute to the development of an educational program which has in view the personal and professional development of the pupils from Romania and the Republic of Moldova and a long lasting development of the communities in the project;
- Resources pilot for cross border preservation of the aquatic biodiversity of Prut River (2012-2015), financed by The Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013. The project's objective is to jointly develop the scientific, human



and logistic resources, aiming to monitor, restore and improve the Prut River aquatic resources during difficult climatic conditions and threatening anthropogenic actions.

The important progresses registered in the development of economic, cultural, social projects, which reunite Romania and the Republic of Moldova in the frame of cross-border cooperation, create perspectives for a tight collaboration in the future with beneficial effects for both parties involved.

3.2 Cooperation and the Prut River basin

The concept of cross border cooperation, as already implemented in other regions in the Danube River Basin (e.g. Sava, Tisza), offers a much wider scope for the exchange of data and information, methodologies and best practices, especially with regard to the integrated development of shared basin and nutrient reduction (Islam et al., 2006).

The Prut River, a tributary river of the Danube, is 953 km in length (the first 211 km are in Ukraine 31 km represent the border between Romania and Ukraine, and the remaining 711 km represent a natural border between Romania and the Republic of Moldova. Of the total basin area, 39% lies in the territory of Romania, 28% is in the territory of the Republic of Moldova, and 33% in the territory of Ukraine. (Figure 10)

The Prut basin, through the variety of geomorphic elements, of flora and fauna, is permanently subjected to the researches of various experts from Romania, the Republic of Moldova or other countries (Vartolomei, 2012). Water quality of the Prut River is subject to numerous trans-boundary impacts. Therefore, international cooperation and the implementation of international and regional projects play a special role in the evaluation of hydrological and environmental risks in the basin, and in the protection and rational use of water resources as a whole (River Basin Management Plan for Prut Pilot Basin, 2013). Most significant among these are:

- Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention, Helsinki, 1992);
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 1971);
- Procedure for Monitoring of the Prut River Water Quality within Bilateral Cooperation between Romania and Republic of Moldova (1992);
- Convention on the Protection of Black Sea against Pollution (Bucharest 1992);
- Convention on Co-operation for the Protection and Sustainable Use of the River Danube (Sofia, 1994);
- Agreement between the Government of Romania and the Government of the Republic of Moldova with Regard to the Cooperation in the Area of Protection of Fish Resources

and the Regulating of Fishing in the Prut River and Stânca-Costești Artificial Lake (Stânca-Costești, 2003);

- Agreement for the Establishment and Management of a Cross-Border Protected Area between the Republic of Moldova, Romania and Ukraine in the Danube Delta and the Lower Prut Nature Protected Areas (Bucharest, 2000);
- Agreement between the Government of Romania and the Government of the Republic of Moldova on Cooperation for Protection and Sustainable Use of Water Resources of the Danube and the Prut (Chisinau, 2010);
- Regulation of water quality monitoring of the Prut River within the framework of bilateral cooperation between Romania and the Republic of Moldova (1992).

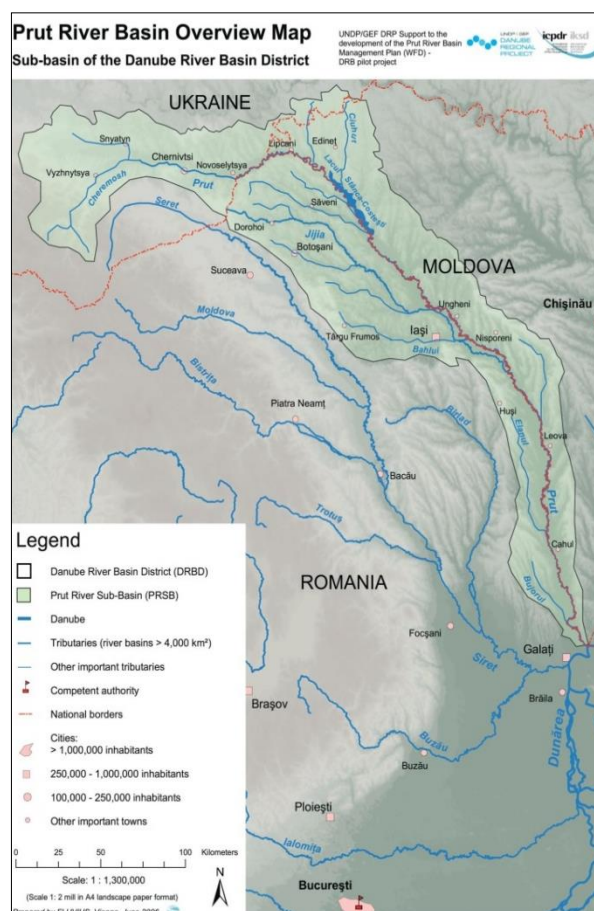


Figure 10: Position of the Prut River Basin within Romania, the Republic of Moldova and Ukraine

(Source: <http://www.icpdr.org/main/publications/focusing-prut-river-basin>)

The main anthropogenic pressures in the Prut River basin are the following: water abstraction and point sources of pollution, related to insufficient processing of urban wastewater, discharge of industrial wastewater, and inadequate management of municipal/livestock and industrial waste. The most significant and urging water issue is the pollution with organic substances, nutrients and hazardous materials caused by emissions from agglomerations and



industrial activities. Agriculture, especially through drainage works, is an important issue in the Prut River corridor area. At the same time, a special importance and attention is given to flood defence and nature protection⁴. Activities related to the management of the Prut River constitute actions for the implementation of the Water Frame Directive and have as objective the balanced management of water resources. They also aim to implement protection of aquatic ecosystems and to achieve a good quality of surface/ground-waters. The management and protection is directly correlated to the socio-economic development and represents the starting point for the management measures in all economic branches, water management measures and emphasizes on the major factors which influence water and basin.

The main objectives of the management activities are (Cserwid, 2013):

- Permanent knowledge of water resources, conservation and protection of water resources;
- Assurance, allocation and optimal use of water resources;
- Protection and improvement of water quality;
- Water management infrastructure operation;
- Prevention and defence against the destructive action of water and accidental pollution;
- Developing and updating River Basin Management Plans and River Basin Developments Plans;
- Completing and adopting the institutional and legislative frame at European Union requirements;
- Strengthening collaboration with neighbouring countries regarding the trans-boundary rivers and international cooperation;
- Public awareness and participation.

Bilateral cooperation between Romania and the Republic of Moldova, regarding the management of the Prut River basin, has in view the following: hydrometeorological data exchange; water quality monitoring; common hydrometrics; exchange data in case of droughts; procedures in case of floods; experience exchange in the field of risk management associated to the hydrotechnical works; experience exchange in the field of groundwater exploitation; cooperation regarding the improvement and developing of the groundwater monitoring systems for answering to the Water Framework Directive requests.

The partnership of the project *Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River* has been established on a common and solid ground during the elaboration of the application form, based on common needs, values and scientific objectives. The partners met on various occasions, kept a close and regular contact via email and phone

⁴ <http://www.see-river.net/pilot-sites.7.html>



calls. Any difficulty was subject to negotiations and mutual help. No risks were identified in this collaboration.

The two organizations have a long co-operation history dating back to the period immediately after 1990. This start was marked by individual collaborations on common themes, i.e. among the employees from the two institutions, while the working language has always been Romanian.

The relationship with other organisations is the following:

- The associate institutions (ROMFISH National Association of Fish Producers, National Waters Administration - Prut Bârlad-Branch and Iași Agency for Environment) quickly responded to their requests and gave their support during the elaboration of Support Documents.
- Sub-contractor(s) - average well.
- Other third parties involved (including other donors, other government agencies or local government units, NGOs, etc.): quick and favourable response of the institutions involved with the custody, security and exploitation of protected areas alongside the natural border of the Prut River.

The partnership of this project did not change over time. The very beginning of the organizational partnership can be traced back to 2009, when the “Alexandru Ioan Cuza” University from Iași sent an official address to the Academy of Sciences of Moldova. Moreover, a general template of the project’s proposal was sent to all institutes pertaining to this important research body of the Republic of Moldova, with the aim of receiving collaboration offers. The Romanian organization also directly contacted the Institute of Zoology of the Academy of Sciences of Moldova and a renewal of the partnership was embraced. Under the restrictions imposed by the need for a visa to visit the other county, the two institutions decided to meet on the Stâncă-Costești bridge over the Prut River, in the “Friendship’s House” (“Casa prieteniei”), an administrative space commonly managed by Romanians and Moldavians, symbolically sealing the future partnership. Hosted by this environment, they held meetings in two stages, each having a one-day-duration. The final project proposal was conceived and written by experienced scientists from both partners together.



4. Determination of geographical confines

4.1 Geographical context

Considering the region of the Danube basin, the Prut River is the second longest (950 km) and the last major tributary of the Danube, with its confluence located just upstream of the Danube Delta. Its source is in the forests of the Ukrainian Carpathians and later the Prut forms the border between Romania and Moldova. Of its total length, 695 km (72%) represent a natural border between Romania and the Republic of Moldova.

The Prut hydrographical basin is situated at the contact between the Carpathian Mountains, the Moldavian Plateau and the Podolic Plateau, covering an area of 27 447 km². Three main sectors of the Prut River: superior, middle and inferior can be clearly delineated, flowing through the mountain, plateau and plain regions. Within this environmental settings, the urban and rural localities are developing in the riverine lowlands along the Prut River, while the catchment area is mainly used in agriculture. The floodplain of the river is used mainly for grazing, while some areas are afforested ([Geografia Romaniei, vol. IV, 1992](#)).

4.2 Social and territorial characteristics

The Prut River flows through the area of three countries: Ukraine, the Republic of Moldova and Romania. All localities are situated in contiguous districts of the three countries (i.e. belonging to 2 regions in Ukraine, 12 territorial administrative districts in the Republic of Moldova and 6 counties in Romania). Several reports were elaborated in order to evaluate the current state of the Prut River basin and to find proper sustainable development and management solutions at the basin level ([Environmental Protection of International River Basins, 2013a, 2013b](#)). Similarly, The Prut River Basin Management Plan for 2016-2021, 2015, elaborated by the Academy of Sciences of the Republic of Moldova (Institute of Ecology and Geography) and coordinated by the Ministry of Environment in Chisinau, represents a synthesis of the current state of the environment and of the settlements in the basin, including the EU Water Directive targets and objectives that need to be complied with (http://www.dbga.md/V1%20Moldova_Plan_Prut_ro.pdf).

Ukraine

In Ukraine, the Prut River basin is situated in two administrative regions – Ivano-Frankivsk (two thirds of the water catchment area) and Cernăuți/Chernivtsi

Given current industrial production structure, the Prut River basin in Ukraine is an industrial-agrarian area. Industrial machinery construction, is involved in the manufacture of oil and gas processing equipment; industrial wood processing is involved in the production of shaped



timber, veneer and furniture; the industry for construction materials produces bricks, roofing paper, ceramics, reinforced concrete structures; the light industry manufactures apparel, knitwear and denim; the food industry produces sugar, baked goods, alcohol, sunflower oil, meat, milk, and canned vegetables and fruits. Industry in Cernăuți/Chernivtsi Region includes over 200 enterprises with combined production of 0.4% of the country's economic output. Important to note is that the region is energy-deficient, subsequently, it necessitates the development of industries, which consume little energy and materials ([Environmental Protection of International River Basins, 2013a, 2013b](#)).

The Republic of Moldova

The landscape of the Prut River basin on the territory of the Republic of Moldova is typically agrarian, with over 74% rural population. Over the last 20 years, the total population number has declined by approximately 50 000 people. The basin area in Moldova includes 253 communities grouped in 12 territorial-administrative districts. The number of settlements totals 447 – villages, urban-type localities, and 15 towns. The total share of urban population in the basin is 24.8%. Most towns (except Lipcani, Cupcini, Costesti, Cornesti and Iargara) are district centres. In the last 20 years urban population in the basin has remained stable. A decline of about 22 500 people (2.7%) is part of an overall reduction in demographic parameters related to economic crisis ([Prut River Basin Management Plan for 2016-2021, 2015](#)).

The primary demographic indicators suggest that the overall number of population in the basin will tend to decrease in the coming years. The low level of economic development leads to outflow of working-age population. Thus, anthropogenic pressure on natural resources in the basin will likely decrease slightly, leading to certain environmental improvements.

Industrial enterprises in the basin are primarily concentrated in towns. A few small enterprises exist and they process agricultural products (e.g. mills and dairies) and they operate in villages. Moreover, a food canning factory operates, which utilizes the resources of the Făleşti sugar refinery (part of Sudzucker Moldova). In Ocnita and Lipcani, small canning factories operate, as part of the local consumer cooperatives. The Ungheni Business Free Economic Zone was established in 2003 and it helps to ensure foreign trade of goods. 38 companies were registered in the zone in 2012, and Austrian, Italian, Russian and Belgian capital can be also found amongst them. In 2011, sales of industrial products in the Zone reached 927 million lei (over 57 million Euros).

Romania

The largest part of the Prut basin, almost 60%, is situated in Romania, extending over the Botoșani, Vaslui and Galați counties and most part of the Iasi county, as well as over small areas in the eastern part of the Neamț and Bacău counties ([Geografia Romaniei, vol. IV, 1992](#)).



Iași and Galați act as main polarizing centers, especially for the surrounding localities whose socioeconomic profile is shaped by the market forces of the two cities in their response to the demands of the respective markets as well as of the cities' dwellers. Nevertheless, the influence of the two poles is to a certain extent present at national level as well, as an effect of major economic traits (e.g. the steel industry in Galați represented by ArcelorMittal Company, a long standing shipyard industry in Galați – Damen Shipyard Company, traditional and prominent higher education in Iași, etc.). Worth mentioning that the economy of the two cities is growing, with increased focus on new economic branches such as IT, R&D sector, education and services (Popescu, 2011; www.sdtr.ro). These sectors become more diverse and they are capable of coping with various external impacting factors. As such, this aspect comes in favour of supporting the polycentric structure of the respective areas, with potential to intensify at regional level, expanding across the border in Ukraine and the Republic of Moldova.

To reduce the territorial disparities and to increase the resilience of, as well as the social cohesion in the entire area, key driving forces should be identified to act in this direction. The Prut River itself, through its ecosystem functions (i.e. aquatic biodiversity, water delivering resources, floodplain provisioning functions, etc.) plays an integral role in the region by multiplying the feedbacks at the level of the human and natural systems interactions, and thus increasing the diversity and, subsequently, the resilience of the region. Moreover, the cross-border particularity of the region enhances the capacity of the whole area to increase its dynamic relations across borders, thus enabling the socio-economic development and rising local peoples' living standards.

4.3 Prut River's ecological services

Considering the quality of water and biodiversity, Stâncă – Costești reservoir makes a good case-study for investigation (as it is the case of the present project, among other sampling sites), based on its importance of providing services to a large share of local communities. This reservoir is the largest accumulation of water in the Prut basin and the second in the country, built jointly by the two riparian states Romania and the Republic of Moldova.

The role of the reservoir is manifold: to protect against the effects high flood, to prevent from damage caused by floods, to provide water supply for the population, industry, irrigation, fishery as well as for hydropower energy production and fish production (Rădoane et al., 2006; Briciu et al., 2011).

At the level of the entire Prut River basin, there are 307 reservoirs in operation with a gross volume of 1.657 million m³, a net volume of 681 million m³. Out of them, 18 are complex lakes with total gross volume of 1 451 million m³ and a net volume of 510 million m³. The most important is the accumulation of the Stanca-Costesti on the Prut River with a gross volume of



1 285 million m³ and 450 million m³ net volume, of which 225 million m³ for the Romanian side (Vartolomei, 2009).

Stanca-Costesti reservoir provides water for Iasi and Vaslui towns, all settlements in the bordering area of the lake and downstream, and also the irrigation of 70 000 ha of agricultural land (Vartolomei, 2013). It should be pointed out that the reservoir had a particular effect on the upstream and downstream runoff, being observed, over the last 30 years (i.e. since the Stâncă-Costești dam was built), a steady increase in the downstream discharge, with a decrease in the sector next to Oancea station, until the flowing of the Prut into the Danube (Briciu et al., 2011). This situation is quite complex having in view the lower amounts of precipitation and the higher levels of evapotranspiration downstream, and could be proved by climate variability and human intervention in the original flow of the ecosystem services generated by the Prut River, particularly through the construction of the Stâncă-Costești dam upstream (Rădoane et al., 2006; Briciu et al., 2011; Vartolomei, et al., 2011).

To assess the water quality and the biodiversity level of the Prut River, sampling campaigns were performed over the working phases of the current project, in many sites as: Stâncă-Costești reservoir (lower sector, straight next to the dam), and the Prut River (Braniște, Ungheni, Prisecani-Valea Mare, Sculeni, Leușeni, Bumbata-Leova, Oancea-Cahul, Cislita-Prut, Sivita-Giurgiulești). Investigations were directed both to the assessment of diversity, quantitative structure and production peculiarities of bacterio-, phyto- and zooplankton, zoobenthos, ichthyofauna and hydrochemical state of the Prut River.

4.4 Protected areas

The Prut River basin preserves high level of biodiversity, recognised at the national and international level. This could be turned into a big opportunity for the local communities in order to improve their life's quality and to take benefit from the biodiversity of the territory, and to bring strong financial support for the sustainable development into one of the last green oasis of the European Union (Gache, 2008). Along the Prut River and its vicinity area, both parts of the Romania and the Republic of Moldova, were declared as important protected areas for conservation and protection of the natural resources, including scientific reserve, monuments of nature, natural reserve, natural parks, SCI-Sites of Community Importance and SPA-Special Protection Areas. On the Romanian side, the following natural areas were designed "Lower Prut Floodplain Natural Park" (V IUCN category), Stâncă Costești Lake and meadow forest (SPA), Belcești Lakes (SPA), Ibăneasa-Bașeu-Podriga lakes (SPA), Cârja-Mata-Rădeanu Lakes and Roșcani Forest (SPA), Jijia and Miletin Ponds (SPA), Vlădești-Frumușița Prut Floodplain (SPA), Brateș Lake (SPA) (the last two are belonging to the natural park), Medeleni Forest (SCI), Prut River (SCI), Lower Prut Floodplain (SCI), part of them being included in the Romanian Natura 2000 Network (Government Decision, no. 1284/24.10.2007) (Fig. 11). On the Moldavian side, there exist three small scientific reserves: Prutul de Jos/Lower Prut, Plaiul Fagului/Beech'

Forest, Pădurea Domnească/Royal Forest (I IUCN category), covering a total surface about 13,365 hectares. Other protected areas are monuments of nature and natural reserves: Meandrul Pererița/Pererița Meander, Caracușeni, Călineștii Mici (III IUCN category), Rosoșeni, Dancu, Pogănești, Lucăceni, Vadu lui Isac (IV IUCN category), etc. We must notice here that the last protected area and its territory represent a larger wetland – the surface is about 19,000 ha- with Ramsar situ status, under the name “Lakes of the Low Prut River”, with the wetland flora and fauna’s protection like first priority.

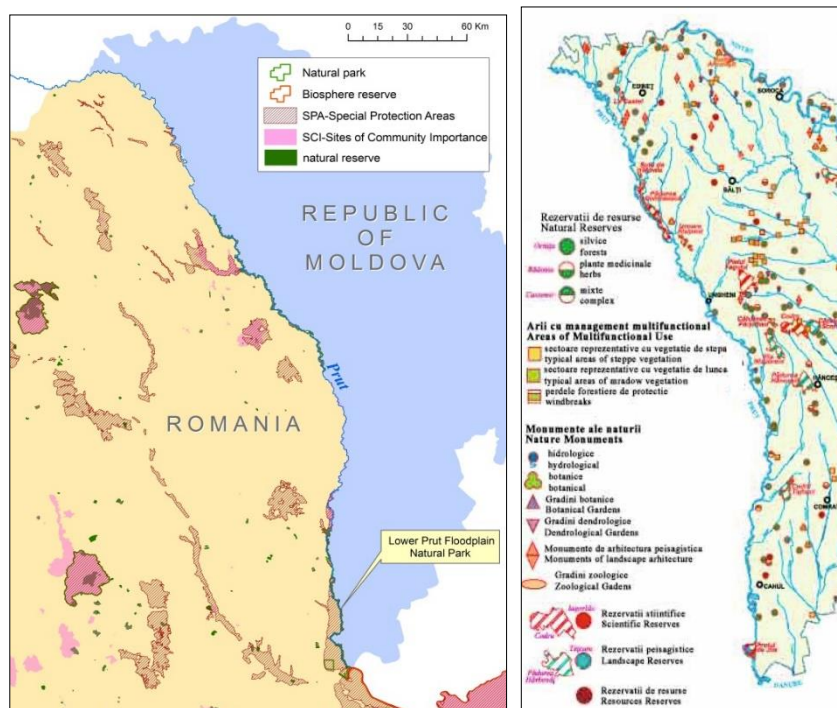


Figure 11: Protected areas along the Prut River within Romanian side (left) (processed after data from Government of the Romania, Ministry of Environment and Climate Change) and Moldovan side

(Source: Government of the Republic of Moldova, State of the environment in the Republic of Moldova)



5. Organisational and institutional structure, operation (level of institutionalisation)

5.1 Partners of the project

The research within the project Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River was, but it still continues to be performed on a solid basis of research, education and local authorities. The project was initiated by the education-oriented organization “Alexandru Ioan Cuza” University from Iași (Romania), as the Lead-Partner, together with the research organization Institute of Zoology of the Academy of Sciences of Moldova, as its partner. The partnership includes three other associates, namely the National Administration “Romanian Waters” – Prut Directorate (Associate No. 1), The Environmental Protection Agency of the Iași County (Associate No. 2) and the Inspectorate for Ecology of the Republic of Moldavia (Associate No. 3).

The project coordinator is Professor Mircea-Nicușor Nicoară from the “Alexandru Ioan Cuza” University, while the Project Head is Mrs. Maria Sava. The seat of the Lead-Partner is located in Iași, Romania. The coordinator representing the main Partner is Professor Ion Toderaș, member of the Academy of Sciences of Moldova, while the project Head of the same partner is Dr. Laurenția Ungureanu. In the following part, the case study gives a brief information about the involved actors.

Alexandru Ioan Cuza University of Iași

Alexandru Ioan Cuza University of Iași (UAIC) is not only the *oldest* Higher Education Institution (HEI) but also the first *modern* Romanian



university. The university, opened in 1860, currently has more than 38.000 students, 24 research centres, 15 faculties and almost 200 study programmes at Bachelor, Master and Doctoral level. The university has been carrying on a tradition of excellence and innovation in research due to its academics' expertise, its modern infrastructure and its numerous research projects. In 2008, Alexandru Ioan Cuza University was placed first in the national research ranking compiled on the basis of Shanghai criteria. Striving for excellence, the university takes unique initiatives to stimulate research quality, to encourage dynamic and creative education and to involve its best students in academic life (www.uaic.ro).

The Faculty of Biology is the institution involved in the organisation and the development of the **Resources Pilot Centre for Cross-Border Preservation of the Aquatic Biodiversity of Prut River Project**. Students and teachers have at their disposal an important material basis for research and practice: Faculty's research centres of Agigea (Black Sea) and Potoci (Bicaz); Botanical Garden; Museum of Natural History (Romania's oldest); Herbarium. Faculty's



fundamental and applicative research concerns: biodiversity, modern biotechnologies, ecology, integrated and biological obliteration of harmful agents, genetics, biochemistry, biophysics, cellular biology, anatomy, cytology, vegetal physiology, histology, etc.

The Academy of Sciences of Moldova, Institute of Zoology – Partner

The Institute of Zoology is one of the 25 research institutions which belong to the Academy of Sciences of Moldova (ASM). The Institute of Zoology has its origin in 1947. It is a prestigious scientific and methodical center, coordinating and conducting fundamental and applied research, as well as training high qualified research staff in zoology, entomology, parasitology, helminthology, hydrobiology, ichthyology, and ecology. The institute is one of the leading research bodies of the country in the field of conservation of wildlife biodiversity, working out the scientific basis for the development of aquaculture and fish culture in Moldova. The originality and competitiveness of the institute researches are confirmed by successful participations in numerous international projects, by many obtained invention patents, and awarded gold, silver and bronze medals, national and international diplomas (www.pрутriver.uaic.ro).



National Administration “Romanian Waters” Prut Directorate – Associate no. 1

National Administration “Romanian Waters” representing the unique administrator and manager of water resources in Romania has the following objectives: the use, processing and sustainable development of water resources as well as the progressive improvement of the relations with the beneficiaries and users of water resources and of their potentials.



The National Administration “Romanian Waters” has the following main attributions which cover the project objectives: unitary and long lasting water resources management both for the surface and for the underground waters, their protection against exhaustion and degradation through a rational and balanced sharing of these resources; administration, operation and maintenance of minor water river beds, lakes and ponds, in their natural or fitted condition, of the sea wall and beach, wetlands and other protected heritage areas ; administration, operation and maintenance of the National System of Water Resources Quality Supervision; allocating the right to use the resources of the surface waters and groundwater in all forms; implementation of the EU directives in the field of water.

Environmental Protection Agency Iași County – Associate no. 2

Environmental Protection Agency Iași County is a public institution with legal personality, subordinated to the National Environmental Protection Agency, with the status of a decentralized public service, funded from the state budget.





Environmental Protection Agency Iași County fulfils, at the county level, the attributions of the National Environmental Protection Agency, including: the implementation of policies, strategies and legislation on environmental protection.

The Inspectorate for Ecology of the Republic of Moldova – Associate no. 3

The Inspectorate for Ecology of the Republic of Moldova works under the umbrella of the Ministry of Environment of the Republic of Moldova. Some of the Inspectorate responsibilities which cover the project objectives are the following (<http://inseco.gov.md/>): participation in the development and promotion of programs and national action plans on environmental protection and natural resources; monitoring of environmental factors and organization of state ecological control; supervising the use of water resources, special consumption compliance, management of the special protection zones and areas of sanitary protection of water resources; controlling the performance of recreational-sports and industrial fishing; establishing the necessary measures to increase the biological potential of fisheries resources.

5.2 Roles of the institutions in the project

The roles of the institutions are presented in this section as they could be identified based on the partial project narrative reports available (Annex VI, Interim Narrative Reports, no.1 and no. 2, internal documents, 2014a,b), covering the period May 2012 – July 2014 out of the total implementation period of the project. These reports were kindly provided by the UAIC project manager.

The roles of the Lead Partner (LP) and Partner 1 (P1) in the project were distributed according to the main groups of activities present in the project's structure: GA1: Project management, coordination and communication; GA2: Public procurement; GA3: Cross-border institutional capacity; GA4: Prut River investigation; GA5: Information, awareness and dissemination. Therefore, within GA1: Project management, coordination and communication activities, both the Lead Partner and Partner 1 ensured the coordination of the project, including the management of financial aspects and of human resources, according to the established procedures into force in both institutions. They both organized kick-off meetings in the headquarters of their institutions. On regular meetings throughout the project, the LP of the project had the role of evaluating the documents (labour contracts, job descriptions, monthly time-sheets, monthly attendance sheets and financial documents) delivered by Partner 1, in terms of correctness and completeness and with the aim of ensuring that these are in agreement with the Programme's requirements.

In the framework of the same group of activities, P1 had the mission of carrying out the Audit report (intermediary and final). In this respect, the organization prepared the necessary documents to be assessed and approved by the auditor in order to receive the Report for an



Expenditure Verification of a Grant Contract - External Actions of the European Union. By bringing together the results provided within the two Reports for Expenditure Verification approved by the Audit Company (for P1) and the 1st level National Control (for LP) respectively, the LP was responsible with the elaboration of consolidated reports (intermediary and final) to be approved by the Management Authority of the Programme Ro-Ua-Md.

With regard to the public procurement activities comprised in the GA2, LP ensured that public procurement procedures for the different needs (i.e. various support documents – e.g. FS5, ED6, SEIA7 -, equipment and supplies, subcontracting construction works to rehabilitate the existing Ezăreni infrastructure, communication and visibility services) were respected as stipulated in the Romanian Law concerning the public procurement (OUG 34/2006) and in the Practical Guide to Contract procedures for EU external actions, by pursuing the sequence: 1. Elaboration of tender dossier; 2. Submission of tender; 3. Receipt and registration of offers; 4. Evaluation of offers; 5. Award and signature of contracts; 6. Delivery and quality appraisal of the products/services; 7. Reception of the products/services. The tender dossiers were uploaded on the SEAP (Electronic System for Public Procurement) platform, in order to comply with the requirements of transparency, fair treatment of competitors and free market. On his side, the Moldavian partner was engaged in assuring that public procurement procedures for equipment and supplies developed according to the Practical Guide to Contract procedures for EU external actions. In addition, P1 was also responsible that the Public procurement procedures for Audit subscribed to the Moldavian Law and to the Practical Guide to Contract procedures for EU external actions. The same sequence consisting of several steps was respected: 1. Elaboration of tender dossier; 2. Submission of tender; 3. Receipt and registration of offers; 4. Evaluation of offers; 5. Award and signature of contracts; 6. Delivery and quality appraisal of the products/services; 7. Reception of the products/services.

In the frame of the GA3: Cross-border institutional capacity, regarding the activity devoted to the rehabilitation of the Ezăreni infrastructure (fish reproduction tanks, laboratories and other facilities), the LP specialists regularly reviewed the papers submitted by the company which won the elaboration of the Feasibility Study and Technical documentation, with the aim of ensuring a better adaptation of the proposed solutions described in the Pre-Feasibility Study to the functional characteristics of the hall breeding. The technical solutions were discussed and decided during several meetings organized with the design company, the constructors and the supervisor. After the finalisation of the rehabilitation works, the infrastructure, as well as other facilities, now still in the process of being procured, will be set-up.

5 Feasibility Study

6 Execution Details

7 Strategic Environmental Impact Assessment



As part of the activity of developing joint action plans for sustainable valorisation of fish resources alongside and across the Prut River, both partner institutions elaborated the Methodology for monitoring fish population structure. More precisely, the LP responsible for organizing the scientific fishing (Grigore Davideanu) in collaboration with the P1 investigation responsible (Elena Zubcov) prepared a Methodological guide for monitoring the structure of ichthyocenoses.

Both partners were also involved in elaborating of an Action Plan for developing joint research and education projects in the field of self-sustained aquaculture.

The Group of activity 4 concentrated on the actual Prut River investigation. The hydro-biological study (including fish sampling) was performed across and alongside the Prut River from its entry into the Romanian territory to the confluence with the Danube. It comprised several activity phases, of which the following are in an advanced stage of development: monitoring of the structural and functional characteristics of the main aquatic organisms communities inhabiting the River Prut; investigation of the hydro-chemical characteristics of the Prut River; identification of the influences of abiotic factors upon aquatic organisms' communities; evaluation of the natural and human-induced threats upon the fish reproduction capability; assessing the role of aquatic organisms in the chemical migration process, in view of evaluating water quality.

The LP was in charge with ensuring good conditions for the scientific fishing. As such, in order to acquire the right to perform scientific fishing in the Prut River, the LP team was involved in obtaining the necessary annual agreements, permits and approvals from the central administrative bodies and all institutions dealing with the custody, management and border security of the Prut River basin. P1, as well, obtained new permits for carrying out scientific works in the border area.

Before the expeditions could start, a Health and work security plan for scientific fishing was drafted. The training based on such a plan was compulsory in order to ensure the compliance with the legal conditions concerning safety standards and equipment handling protocols.

The LP team performed seven scientific fishing expeditions for collecting data and samples of Prut's ichthyofauna. On the other hand, the staff of Partner 1 performed twenty expeditions, collecting water and biological samples. The sampling was performed, most of the times, in the Costești-Stânca reservoir (lower sector, straight next to the dam), and the Prut River (Braniste, Sculeni, Leuseni, Leova, Cahul, Cislita-Prut, Giurgiulesti). Investigations were focused on assessing the diversity, quantitative structure and production characteristics of the bacteria-, phyto- and zooplankton, zoobenthos, ichthyofauna and the hydro-chemical state of the Prut River and the Costești-Stânca reservoir. Experiments were performed in laboratory conditions. Additionally, several field experiments were carried out to determine the influence of heavy metals (Cd, Pb, Ni, Cu, Zn) on production processes. The obtained results, especially on the structural and functional characteristics of the main aquatic organisms communities (including



fish population), the hydro-chemical characteristics, the human impact on the water quality, the state of hydro-biont populations and the role of aquatic organisms in the migration of chemical elements, being processed and presented in Investigation Reports, are meant to be included in the Risk assessment report. The laboratory researchers of the partner institutions agreed upon the framework of the Risk Assessment Report (RAR). Furthermore, information gathered in the written Investigation Reports, related to laboratory results and main trends of biodiversity changes, were further synthesised in the Risk Assessment Report.

One important activity, concerning the elaboration of an Emergency Plan for restoring the natural ecosystems of the Prut River, is currently taking place.

During the implementation period, the visibility and advertising of the project and of the Programme was ensured by the involvement of both partner organizations within GA5: Information, awareness and dissemination. To this purpose, LP utilized one press release, several advertising insertions in print media, more precisely in editions of the “Evenimentul” newspaper, and several audio spots on Radio Iași. The two media institutions have regional coverage.

In the Republic of Moldova, the project benefitted of a good coverage in visual media. TV Publika, in one edition of its broadcast news “Săptămâna devreme”, invited the Moldavian head of the project, namely, Elena Zubcov, to present the project and its major benefits for cross-border collaboration (this was done in Russian language). Since the Chișinău print media is weak and did not accept advertising insertions, the staff of Partner 1 decided to generate media topics by inviting press people at each major event of the project: launching, investigations, conference. Hence, P1 succeeded in contributing to a good visibility of the RO-UA-MD Programme and to a popular awareness of the aim of the project. The advertising of the project was also made during working meetings at ministries and on the occasions of different scientific events organized by the Academy of Sciences of Moldova.

As well, the staff of both institutions elaborated several promotional materials by selecting all relevant pictures and texts to be printed on posters, banners and folders, according to the rules specified in the Programme’s Visibility Handbook and in the project.

All information and communication materials were released after first being approved by an Information and publicity officer from the JTS8 of the Regional Office for Cross-border Cooperation Iași.

With regard to public events, the Lead Partner (“Al.I.Cuza” University) organized a scientific symposium. A special focus was attributed to this project, as well as to the opportunity and stimulation provided by EC funding for cross-border collaborative research in the field of biodiversity. The researchers from two partner institutions participated in 11 articles, out of



which two valorised the results of the Prut River project. Besides, LP organized an exhibition with the aim of raising the awareness on the potential of the Prut River to provide services in terms of biodiversity, food and leisure. Also, LP organized the 1st roundtable, gathering all relevant stakeholders involved in the management, monitoring and use of the waters of the Prut River and of its tributaries. The event was advertised in print and audio media, and further through banners, posters and leaflets. The roundtable was destined to create good visibility of the results achieved at that stage (the hydrological, chemical and biological characteristics of the Prut River, the methodology for monitoring the ichthyocenoses' structure), and moreover, to present the main risks generated by human and natural incidents, that are threatening the aquatic biodiversity.

P1 organized the Zoologists conference. The event was advertised 6 times on TV Moldova 1, which is a public company. The researchers from the two partner institutions participated in 14 articles, 11 of which valorised the results of this project. In April 2014, Partner 1 presented the project's results at the 5th Danube Academies Conference, held in Chişinău.

Regarding the project's website, LP was responsible with subcontracting the design of the website to a company with relevant experience in the field.

The good co-operation with the associate institutions (ROMFISH National Association of Fish Producers, National Waters Administration – Prut-Bârlad Water Branch and the Environmental Protection Agency, Iaşi) was based on their constant prompt reactions to the requests of the project's partner-organizations, as well as on their availability and support during the elaboration of the Support Documents.

The National Administration "Romanian Waters" - Prut-Bârlad Water Branch, the Environmental Protection Agency, Iaşi, the Ecology Inspectorate of the Republic of Moldova are some of the local authorities benefitting from this project. They will be provided, following the research results of this project, with a clear view about the risks that threaten the biodiversity of the Prut River, an Emergency plan and a methodology for mitigating the effects of threatening actions.

6. Composition of the working group⁹

The Project was organized in five activity groups (Fig. 12).

GA1: Project management, coordination and communication activities

- A1 Coordination and management activities
- A2 Financial management
- A3 Project's progress monitoring
- A4 Audit
- A5 Implementation reports (technical and financial)

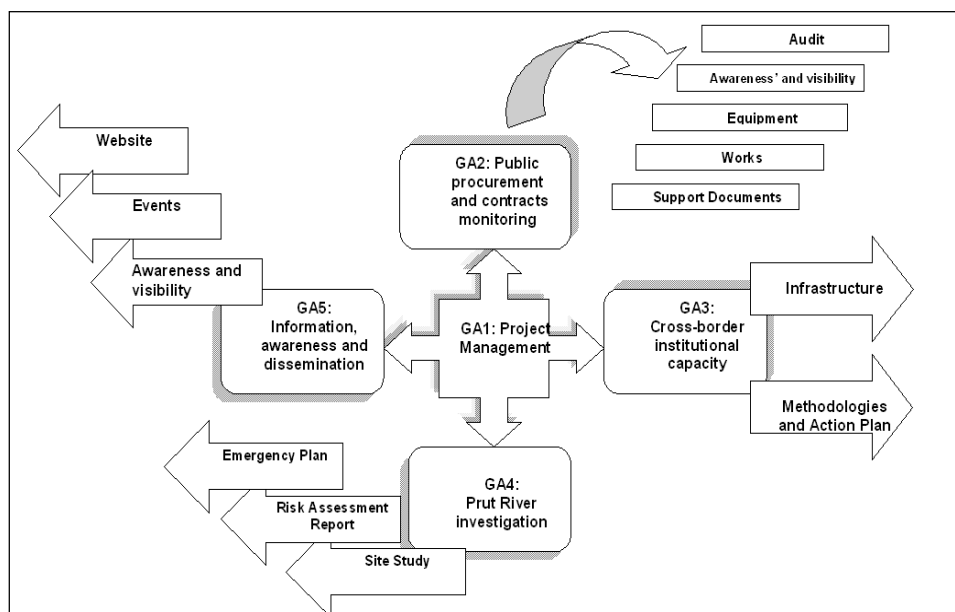


Figure 12: Main goals of the project
(Source: <http://prutrivier.uaic.ro/>)

Activity Outputs:

Decision making structure for project's implementation; Staff's assignment Decision; Decision for establishing salaries, workload and labour contracts duration; Description of job and task for every member involved in project'; Labour contracts for every member involved in project's implementation; The minute of the kick off meeting; The minute of the half year meeting; Internal evaluation report and corrective measures (intermediary); 8 Progress reports – at every four months (narrative report, procurement report, communication and visibility report,

⁹ <http://prutrivier.uaic.ro/>



financial report); Final report; National controllers' report (intermediary and final) - LP; Audit report (intermediary and final) – P1

GA2: Public procurement

- B1 Public procurement procedures for Support Documents (FS, ThP+ED, SEIA)
- B2 Public procurement procedures for equipment and supplies
- B3 Public procurement procedures for construction works to rehabilitate the existing Ezareni infrastructure
- B4 Public procurement procedures for communication and visibility services
- B5 Public procurement procedures for Audit

Activity Outputs:

Procurement contracts, invoices, etc. for: Feasibility Study, Technical Documentation, Strategic Environmental Impact Assessment; Equipment and supplies; Construction works; Communication and visibility actions; Audit.

GA3: Cross-border institutional capacity

- C1. Elaboration of the Support documents (Feasibility study, Technical documentation, Strategic Environmental Impact Assessment) for rehabilitating the Ezareni infrastructure: fish reproduction tanks, laboratories and other facilities;
- C2. Development of the rehabilitation works for the infrastructure necessary for the management of the aquatic resources and for restoring the biodiversity related to Prut River
- C3. Reception and setting-up of the equipment and facilities
- C4. Continuing monitoring the degree of compliance of executed works with the quality/price requirements and with the schedule's terms
- C5. Setting-up the infrastructure dedicated to the sustainable management of the aquatic resources and for restoring the biodiversity related to Prut River



- C6. Development of joint action plans for sustainable valorisation of fish resources alongside and across river
 - C.6.1. Elaboration of the Methodology for monitoring fish population structure
 - C.6.2. Elaboration of the Action Plan for developing joint research and education projects (within national and/or EU programs) related to self-sustained aquaculture
- C7. Subscription for specialized journals, books and database/software

Activity Outputs

- List of subscription for journals, books and database/software (contracts): at least 3 scientific journals related to biodiversity and limnology (fresh waters) and 8 scientific books focused on environment, aquaculture, fresh waters and marine ecosystems etc.
- Support documents
- Feasibility Study
- Technical documentation
- Strategic Environmental Impact Assessment
- Written monitoring report concerning the status of the construction works – in narrative report
- Methodology for monitoring fish population structure
- Action Plan for developing joint research and education projects (within national and/or EU programs) related to self-sustained aquaculture
- Written record of equipment and facilities setting up
- Written report of Ezareni overall infrastructure reception

GA4 Prut River investigation

- D1. Site hydro-biological study (including fish sampling) performed across and alongside from the entry into the Romanian territory to the confluence with river
 - D1.1. The monitoring of the structural and functional characteristics of the main aquatic organisms communities inhabiting the River Prut.
 - D1.2. Qualitative and quantitative investigation of fish populations, aiming at preserving their biodiversity.
 - D1.3. River Prut hydrochemical characteristics investigation.



- D.1.4. Abiotic factors' influence upon aquatic organisms' communities. Evaluation of the natural and anthropogenic threats upon the fish reproduction capability.
- D.1.5. Assessment of the aquatic organisms' role in the chemical migration process, aiming at the evaluation of river's aquatic resources quality.
- D.1.6. Identification of threatened species according with the Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora and the Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy

D2. Elaboration of the Risk assessment report for the integrity of the ecosystem

D3. Elaboration of the Emergency plan for restoring the natural ecosystem of the river

Activity Outputs

- Methodology for monitoring fish population and its structure: Written Prut investigation report on: 1. structural and functional characteristics of phyto- and zooplankton, zoobenthos and ichthyofauna 2. hydrochemical characteristics 3. relationship between biotic and abiotic factors 4. water quality 5. evaluation of fish reproduction capability 6. ecological indices of fish population
- Risk assessment report for the integrity of the ecosystem
- Action plan for developing joint research and education projects within European programmes
- Emergency plan for restoring the natural ecosystem of Prut river

GA5: Information, awareness and dissemination

E1. Communication and visibility activities

E.1.1. Official launching of the project (press release)

E.1.2. Official closure of the project (press release)

E.1.3. Advertising insertions in print media

E.1.4. Advertising announcement in broadcasting media

E2. Elaboration of promotional materials



E3. Public events:

E.3.1. Scientific symposium (“Al.I. Cuza” University)

E.3.2. The Zoologists conference (Zoology Institute)

E.3.3. Exhibition

E.3.4. Round table addressed to the main stakeholders and users of river aquatic resources

E4. Project website

Activity Outputs:

40 press releases; 48 advertising insertions at every 4 months in the print media; 48 announcements in audio media at every 4 months; Advertising and promotional materials (Leaflets; Banners; Posters; Folders; Canvas bags; Ball pens; Badges; CDs); 2 scientific symposia organized by “Al. I. Cuza” University; The Zoologists Conference organized by Chisinau Institute of Zoology; The conference volume; 2 exhibitions organized by “Al. I. Cuza” University regarding the species living in Prut River; 2 round tables; Project website

Within the project: Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River (No. MIS ETC 1150), 45 people were engaged in the planned activities. The expertise of the project’s working groups was in the fields of: biologists specialized in vertebrate and invertebrate organisms, ichthyofauna, hydrobiology, hydrochemistry, ecotoxicology as academic and teaching professionals including MSc and PhD students. Likewise the successful completion of the project was facilitated by the work of the administrative and technical group including economists, engineers, accountants, secretaries and translators.



7. Main activity areas/profile¹⁰

The cooperation is involved in scientific publication, scientific events and promoting activities using promotional materials, press releases, advertising, and information output through the project website www.uaic.prutriver.ro.

During the implementation period, the visibility of the project and of the Programme was ensured using a press release, 10 insertions in print media and 10 audio spots (on September 2012 and March 2013 and October 2013) in “*Evenimentul*” newspaper, respectively on Radio Iași, two media institutions with regional coverage. The press release appeared in electronic media, with a larger impact especially on the young public:

- <http://www.ziare.com/ziare-iasi/stiri-actualitate/cercetatorii-de-la-cuza-au-intocmit-un-plan-de-urgenta-pentru-raul-prut-3015380>;
- <http://portal.radiolasi.ro/proiect-de-protectie-a-biodiversitatii-prutului-de-3-000-000-de-euro-a64286.html>;
- <http://www.agendadelasi.ro/eveniment/3-stiri/25165-granite-comune-solutii-comune-cercetatorii-de-la-universitatea-gaicuzaq-lasi-vor-studia-speciile-pe-cale-de-disparitie-si-cele-puse-in-pericol-din-raul-prut.html>;
- <http://curieruldelasi.ro/2012/05/31/centru-pilot-pentru-conservarea-biodiversitatii/>;
- <http://www.bzi.ro/cercetatorii-de-la-cuza-au-intocmit-un-plan-de-urgenta-pentru-raul-prut-291865>;
- <http://www.toplasi.ro/homepage/eveniment/1264-proiect-de-pestre-3-milioane-de-euro-la-cuza.html>

In the Republic of Moldova, the project’s launching benefitted from a good coverage.

During the reporting period, the project received the diploma for “the largest number of media actions to promote the project” awarded within the Annual Conference of the programme organised in Odessa, Ukraine, on September 20th 2012. The project’s website contains available information related to the funding programme, the project and the partner institutions.

Furthermore, three scientific events were organised: the Zoologists Conference “Actual problems of protection and sustainable use of animal world diversity” (10th of October-12th of October 2013), an exhibition (24th of October 2013) and the symposium “Biodiversity without borders” (25th of October 2013). The events benefitted from a large spectrum of visibility tools: TV interviews, banners, posters and leaflets. The events were advertised in regional print and audio media.

¹⁰ <http://prutriver.uaic.ro/>



The scientific Symposium “Biodiversity without borders” was organized by the “Alexandru Ioan Cuza” University, Faculty of Biology in collaboration with Institute of Zoology, Academy of Sciences of Moldova and structured in three sections according to main biology research: animal biology, vegetal biology and molecular interactions within the living world. The event was attended by 100 participants at national and international level from universities, research centers and botanical gardens. A special focus was attributed to Prut River project, emphasizing the role of EC funding in boosting the collaborative research with neighbouring countries in the field of biodiversity. The researchers from the two partner institutions participated with 11 articles from which 2 valorised the results of Prut investigation.

Moreover, the 8th Zoologists Conference “Actual Problems of Protection and Sustainable Use of the Animal World Diversity” organized by the Institute of Zoology, Academy of Sciences of Moldova in collaboration with the “Alexandru Ioan Cuza” University was structured in eight distinct thematic areas: Terrestrial vertebrates, Invertebrates, Water ecosystems (methodology of investigation, monitoring, evaluation of threats and assessment of risks), Palaeontology. The researchers from the two partner institutions participated with 14 articles from which 11 valorised the results of Prut investigation.

The project is involved in several scientific publication activities (Figure 13):

1. Methodological guide for monitoring the ichtyocenoses structure, a book which presents a set of documented procedures, a list of steps to follow. Mr Grigore Davideanu launched the “Methodological guide for monitoring the ichtyocenoses structure” within the project Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River MIS ETC 1150. The methodology includes:
 - a. activities and materials,
 - b. instructions for using tools and materials,
 - c. forms.
2. Using a unified methodology for monitoring ongoing ichthio-fauna reduces activity time, effort required, and the results are reproducible and comparable with other teams.
3. The conference volume of the Scientific Symposium “Biodiversity without borders”;

The conference volume of the Zoologists Conference “Actual Problems of Protection and Sustainable Use of the Animal World Diversity”.

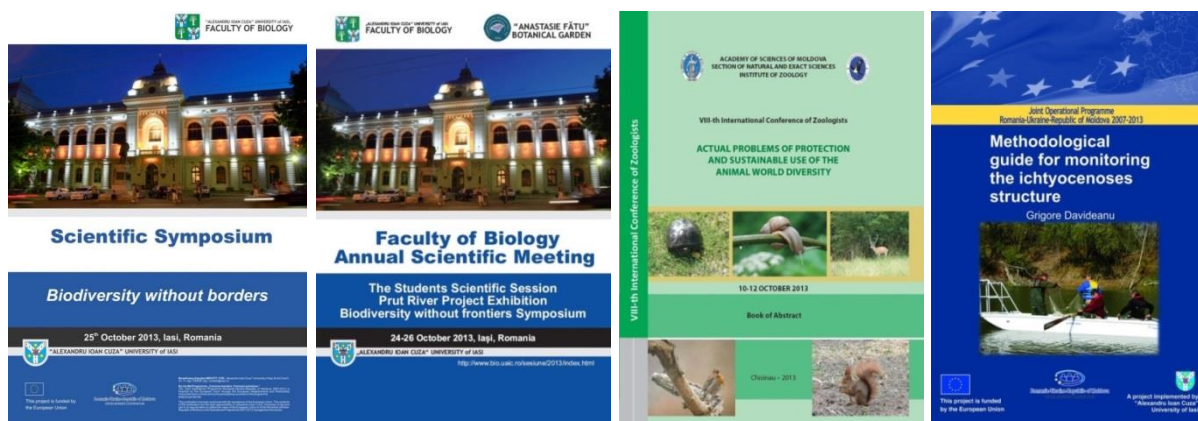


Figure 13: Scientific activities within the project
(Source: <http://prutriver.uaic.ro/>)

At the same time, the following programs and events were organized (www.prutriver.uaic.ro):

- Master programme in aquaculture;
- Access to Ezareni infrastructure for researchers and students;
- Exhibition, organized by “Alexandru Ioan Cuza” University. The exhibition’s main goal was to create a public awareness about the rich potential of the Prut River as source of biodiversity, food and leisure. The posters, in Romanian and English language, were displayed on the halls and amphitheatres of the Faculty of Biology.
- Round tables addressed to the main stakeholders and users of the Prut River’s aquatic resources;
- Kick-off and Regular meetings of the Project (the details of which are listed below).

Kick-off Meeting Romania, May 11th, 2012, Iasi, Romania

Agenda:

Presentation using Power-Point slides of the Programme and of the project: general objective, specific objectives, activities, terms, results, indicators; Presentation and consensus obtained for necessary modifications of the annexes to grant contract; Establishing the teams for launching the procurement procedures for equipment and supplies, pre-feasibility study, visibility services and other necessary services; Assignment of the main responsibilities in order to elaborate the job descriptions.

Decisions, resolutions and terms:

- The [participants](#) appreciated the opportunity to develop research and investigation of the Prut River in order to have up-to-date information about the bio-diversity of this natural border with major impact on the communities living around.
- The idea of developing a resources centre in Ezareni, urged the [participants](#) to declare their commitment for obtaining best results, educational and training products, etc. The [implementation team](#) approved the necessity to modify Annex 1 and Annex 2 to



Partnership agreement in order to use the warm weather for the investigation of the Prut River.

- The [persons involved in the procurement process](#) (GA2) agreed to extend the period for the procurement of equipment and supplies because of the longer terms to comply with the exigencies of the ANRMAP (Autoritatea Nationala pentru Reglementarea si Monitorizarea Achizitiilor Publice – National Authority for Regulation and Monitoring the Public Procurement). The team decided to have ad-hoc meetings with all personnel of the Public Procurement Department of the “Al.I.Cuza” University, for establishing the final form of the RNOs (Necessity and Opportunity Reports).

Regular Meeting no. 1, 13-14 September, 2012, Headquarters of the Institute of Zoology, Chisinau, the Republic of Moldova

Agenda:

Brief presentation of the procedures and tools to be used for the elaboration of Progress Reports; Verification of technical documents elaborated by Partner 1: management decisions related to the assigned staff for the project, labour contracts, job descriptions, monthly time sheets; public procurement contracts; Verification of the financial documents elaborated by Partner 1; Elaboration of common sections of the Annex VI- Narrative report no. 1.

Decisions, resolutions and terms:

The representative of the Lead Partner verified the correctness of labour contract and of other documents related to human resources and indicated some modifications to be made to attendance sheets and monthly time sheets in order to have a good correlation between these papers and the provision of Annex 3 and job description. It also verified the procurement documents for audit services and the financial documents. The Lead Partner encouraged the Partner team to apply the European Procurement Guide for the procurement of services and products provided in Annex 3 – Partner Budget in order to respect the right procedures.

Regular Meeting no. 2, February 13th 2013, The “Alexandru Ioan Cuza” University of Iași, Department for Project management and Structural Funds.

On February 13th 2013, the Department for Project management and Structural Funds of “Alexandru Ioan Cuza” University of Iași, Romania, hosted the second regular meeting of the Project Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River, Code MIS ETC 1150. During this meeting, the participants focused their attention on checking and evaluation of technical and financial papers, to be joint to the 2nd Progress Report as justificatory documents, identification of research themes and topics to be included in Action Plan.



Agenda:

Checking and evaluation of technical and financial papers to be joint to the 2nd Progress Reports as justificatory documents; Discussing of the Prut River Investigation Reports; Identification of research themes and topics to be included in Action Plan; Elaboration of common sections of the Annex VI- Narrative report no. 2

Decisions, resolutions and terms:

- The Lead Partner asked the Partner to modify the attendance sheets and to provide information about the workload of each member team according the assigned position instead of cumulated positions; term for execution 28 February 2013.
- It was also asked to respect the order of the staff's positions as described in Annex 3 Partner's Budget instead of hierarchical display of them.
- The Partner' staff presented the 2nd Investigation Report and agreed with Lead Partner which of data and information could be used within scientific papers.
- The investigation team agreed with the research themes proposed to be included in the Action Plan for being developed in the future collaboration within European Programmes.

Regular Meeting no. 3, August 16th 2013, The "Alexandru Ioan Cuza" University of Iași Department for Project management and Structural Funds

Agenda:

to discuss, amend and approve the content of the Methodology for monitoring the fish population structure; to improve the framework of Risk Assessment Report established in the application form; to establish the information and data to be processed for the elaboration of the Risk Assessment Report and the criteria to be taken into consideration; to establish the content and form of the promotion materials to be used during the events; to establish the first steps for the Action Plan for developing common research within European Programmes; to underline the necessary actions for speeding the procurement process; to elaborate the common sections/documents for Progress Report no. 4.

Decisions, resolutions and terms:

- The representatives of P1 agreed on the content of the Methodology for monitoring the fish population structure and recommended an English translation; The participants established the main lines/chapters to be developed within the RAR and also the criteria for evaluation: pollution, flood, drought;
- The participants agreed to send the digital format of the posters to be used during the fair organised in Chişinău on 20th of September 2013, in order to obtain the approval of Iași CBC Office for visual identity conformity;
- The members of the research team from two institutions agreed to extend the list of the research themes and to fill the electronic application with information and data



related to each institution. The presentation will improve the chances of the two institutions to be asked for participation within collaborative projects in the framework of the EC Research and Innovation Programme HORIZON 2020.

- The staff discussed the main difficulties encountered during the equipment procurement; it was emphasised the necessity to procure only the equipment originated in EU and the difficulty (even impossibility) to obtain a derogation from the Commission in the case of non EU provider.
- The Partner 1 provided the necessary information for an up-date of the procurement progress plan and for written investigation report no.4

Regular Meeting no. 4 and European Cooperation Day, September 20th 2013, Institute of Zoology, Academy of Sciences, the Republic of Moldova.

The representatives of the project Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River participated at the European Cooperation Day, organized by the Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013 and hosted by Chişinău, the capital of the Republic of Moldova.

During two days, 20-21 September 2013, they participated and attended several important events. The Prut River representatives presented the results of the implemented project. And they attended the press conference where representatives of the Programme's managing structures, as well as the *EU Ambassador in the Republic of Moldova*, and *Romanian Ambassador*, presented the main directions of cooperation between the Romania, Ukraine and the Republic of Moldova.

Agenda:

to elaborate the amendments requested by JMA to Notification no. 5; to organise and take the justificatory documents related to Progress Report no. 4; to establish the conditions for participation on two scientific events organised in October 2013; to instruct about organising the justificatory documents in view of audit report

Decisions, resolutions and terms:

The partners commonly agreed to allow free participation on two scientific events for the members of project's implementation team; The partner organisation agreed to organise the financial justificatory documents according to the rules imposed by the programme even if the national procedures are slightly different; The scientific members of Partner organisation understood to register on <https://cordis.europa.eu/partners/web/guest/home> as private persons emphasising their own scientific expertise.

Regular Meeting no. 5, November 13th 2013, the “Alexandru Ioan Cuza” University of Iași, Department for Project Management and Structural Funds.

Agenda:

To provide data and information to Mr Mattias Lindstrom, the representative of European Commission’s Results-Oriented Monitoring (ROM) to the ENPI CBC JOP Romania-Ukraine-Republic of Moldova 2007-2013 regarding: project ‘s relevance & Quality of Design, efficiency and effectiveness, impact and sustainability, horizontal and cross-cutting issues; To elaborate the Notification no. 7

Undertaken decisions, resolutions and terms:

All personnel involved in this meeting provided the ROM expert with full, coherent and specialised information in order to have a clear image of the project: aims, actions, results, sustainability; The partners agreed on the budget changes necessary to be made in order to adjust the foreseen prices of the equipment to those into force on the market.

Roundtable, April 7th 2014, “Alexandru Ioan Cuza” University of Iași (Figure 14)

The “Alexandru Ioan Cuza” University of Iași organised the 1st Roundtable within the project Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River MIS ETC 1150 on April 7th 2014. The event took place in the “King Ferdinand” Conference Hall of the University.

This 1st meeting brought together all parties involved in the management, exploitation and valorisation of the Prut River, in order to acknowledge the project results attained at this stage:

- Purchased research infrastructure;
- Health and work security plan for scientific fishing;
- Methodological guide for monitoring the structure of ichthyocoenoses;
- Results related to Prut River investigation;
- Identified risks due to anthropogenic actions or to natural hazards.



*Figure 14: Roundtable, April 7th 2014 (“Alexandru Ioan Cuza” University of Iași, Romania)
(Source: <http://prutriver.uaic.ro/>)*



8. Management (incomes/expenses)

The budget was split, to be specific,, 70% was granted to the lead partner, the Alexandru Ioan Cuza University of Iași (Faculty of Biology) and 30% was given to the Academy of Sciences of Moldova (Institute of Zoology) ().

Table 4: The budget structure

	Value (EUR)
PARTNERS CONTRIBUTION	325.430,24
LP financial contribution (Alexandru Ioan Cuza University)	250.826,55
1'st Partner's financial contribution (Institute of Zoology)	74.603,69
CE contribution	2.928.872,17
LP's share of grant (Alexandru Ioan Cuza University)	2.257.438,99
1'st Partner's share of grant (Institute of Zoology)	671.433,18
TOTAL	3.254.302,42

Source: <http://prutrivier.uaic.ro/>

The LP's public procurement activity was the most challenging because of some rejections of procedures by the ANRMAP (The National Authority for Regulating and Monitoring of Public Procurement) under suspicion of infringement of free concurrence. As a consequence, the procedures have been resumed, a time-consuming and labour intensive activity. On another hand, the competitors contested the conditions imposed by the Annex IV (rules of origin for products and services) under accusation of putting barriers to free competition. The procurement of services, related to technical documents (feasibility study, technical documents, and execution details), were finalised following a close consultation between the final users (the staff of Ezareni Research Station for Aquaculture and Aquatic Ecology) in order to ensure the optimal technical solutions for fish breeding.



9. SWOT-analysis (specifically with a cooperation base, instead of a territorial base)

The main strengths, weaknesses, opportunities and threats that are relevant to the design and implementation of the Project are summarized in the table below.

Strengths (S)	Weaknesses (W)
<p>GEOGRAPHICAL CONTEXT</p> <ul style="list-style-type: none"> ▪ The main organizational partnership of the project composed of two major education and/or research institutions representing the two countries situated on both sides of the Prut river border; ▪ Cultural co-operation is especially strong because of the common ethnic background. Numerous agreements were signed and their repercussions were felt also in the border area. In this phase, outside intervention (the EU, foreign investors, etc.) but also NGO intervention can only foster these positive elements and favour effective cross-border co-operation; ▪ High levels of biodiversity and landscape, preserved in protected areas as the Prut River SCI ROSCI 0213, Lower Prut Floodplain Natural Park; ▪ Resourceful region given by the existence of important natural resources such as forests and water; ▪ Preserved cultural assets, properly managed, could serve as a development driving force at local as well as at regional level. ▪ Important higher education centers in the region, i.e. Iași and Galați. ▪ EU external border creates new opportunities for cross-border cooperation among the three countries; ▪ Implementing the project in a cross-border cooperation Euroregion; 	<p>GEOGRAPHICAL CONTEXT</p> <ul style="list-style-type: none"> ▪ The border areas of both countries are among the poorest; this poverty is visible in the weakness of the industrial apparatus, in the high unemployment rate and in the lack of investments. These weaknesses are accentuated by the lack of funds, specialists and support from central authorities. The creation of co-ordination agencies and the development of infrastructures and marketing policies would favour investments in the area; ▪ Increased need for scientific knowledge on the hydrological impacts of climate variability coupled with human interventions in the flow of ecological services of the Prut River, with particular emphasis between upstream and downstream connection links; ▪ Need for information materials and tools in order to increase local people awareness on the current state of the environment and water resources and future challenges of climate change; ▪ Low public participation in the action plans for the development of the area. <p>MONITORING AND QUALITY OF WATER RESOURCES</p> <ul style="list-style-type: none"> ▪ Lack of the emergency integrated monitoring system.



Strengths (S)	Weaknesses (W)
<ul style="list-style-type: none"> ▪ the same language (Romanian) used by the Project partners. <p>PARTNERSHIP CONTEXT</p> <ul style="list-style-type: none"> ▪ Implementation of the project under the coordination of a university in Romania together with a research institute of the Academy of Sciences of the Republic of Moldova; ▪ Joint elaboration of the initial research proposal by the two national partners of the current project ▪ Design of the project’s structure with the involvement of stakeholder-institutions highly relevant in the management, monitoring and use of Prut aquatic resources. <p>RESERCH AND EDUCATIONAL CONTEXT</p> <ul style="list-style-type: none"> ▪ The Project contains the topical problematic of integrated environmental research; ▪ Intensifying research on the Prut River biodiversity and natural resources; ▪ Interaction among researchers from several fields of activity; ▪ Disseminating of the project’s results at national and international symposia, in volumes of proceedings, and books; ▪ Involvement of volunteers represented by Master and PhD students, hence contribution to their experience-building. <p>MONITORING AND QUALITY OF WATER RESOURCES</p> <ul style="list-style-type: none"> ▪ Assessing the ecological state of the Costești-Stâncă reservoir. <p>BIODIVERSITY KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Developing an on-line platform for information. <p>BUDGET CONTEX</p> <ul style="list-style-type: none"> ▪ High value of the project 	



Opportunities	Threats
<p>GEOGRAPHICAL CONTEXT</p> <ul style="list-style-type: none"> ▪ The landscape and cultural treasures of the area should be exploited for the development of tourism; ▪ The Prut River as an ecosystem with multiple services useful for the local communities and as a corridor of territorial and social coherence in the region; ▪ The transboundary region has the potential to increase its relations across borders, thus creating new dynamic relations and fostering the development of the local communities; ▪ Increased potential to develop polycentric structures in the entire region through sustainable territorial planning; ▪ Potential to preserve traditional land use and other traditional activities of the local people; ▪ Potential restoration of some wetlands sites in the Lower sector of the Prut River basin (Vartolomei et al., 2011; Vartolomei, 2013). <p>INTERREGIONAL COOPERATION</p> <ul style="list-style-type: none"> ▪ Improving cultural, economic and environmental conditions between partners from Romania and the Republic of Moldova; ▪ Promoting inter-regional cooperation. <p>VISIBILITY OF RESULTS</p> <ul style="list-style-type: none"> ▪ Project results more visible through dissemination in national and international scientific journals; ▪ Increasing awareness on the importance of biodiversity. 	<p>GEOGRAPHICAL CONTEXT</p> <ul style="list-style-type: none"> ▪ Environmental threats: floods occurrence during heavy rains, particularly downstream of the Prut River, where the variability of the runoff/discharges is higher (Radoane et al., 2006). Nevertheless, at a regional level, this aspect should be well controlled to some extent, since in the upstream part of the region the runoff is relatively well managed (the Stanca-Costesti dam has a protection role by retaining large quantities of water during heavy rain events); ▪ High water abstraction levels, stationary point and diffuse pollution sources are main pressures with significant impact on the water bodies (Environmental Protection of International River Basins, 2013b); ▪ Loss of aquatic biodiversity due to strong human impacts; ▪ The stereotypes due to the fear in the Republic of Moldova of being annexed to Romania and the high unemployment and poverty in the area undermine the trust of the institutional and local economic actors; ▪ - Significant differences among the involved countries, in terms of their relationship to the EU, could lead to greater differences in the border region.



Opportunities	Threats
<p>RESERCH AND EDUCATIONAL CONTEXT</p> <ul style="list-style-type: none"> ▪ Access to Ezareni infrastructure for researchers and students; ▪ The project will provide facilities for education and research purposes: laboratories, fish production hall, action plan for developing research and education projects through European programmes; ▪ The following information and experience will be available at the end of the project: biodiversity database, consultancy services, facilities and training programmes for developing business in the field of aquaculture in the advent of funding Operational Programme for Fishery; <p>BIODIVERSITY KNOWLEDGE</p> <ul style="list-style-type: none"> ▪ Increasing public and stakeholders awareness of the Prut River biodiversity and natural resources. <p>JOINT ACTION PLANS</p> <ul style="list-style-type: none"> ▪ Increasing the access capacity and the implementation of future cross-border joint funding; ▪ Elaborating some joint action plans for emergency situations in case of extreme events impacting water resources: floods, drought, severe pollution, etc. 	



Cross-border cooperation of the partners contributes to the improvement of the current situation. Moreover, it has increased the awareness of local people about the current state of the environment and water resource of the Prut River. This will be implemented through the project activities of information, awareness and dissemination: project website, Methodological guide for monitoring the ichthyocenoses structure, the conference volume of Zoologists Conference “Actual Problems of Protection and Sustainable Use of the Animal World Diversity”, the conference volume of Scientific Symposium “Biodiversity without borders”, the Master programme in aquaculture, round tables addressed to the main stakeholders and users of the Prut River aquatic resources. Elaboration of the Action Plan for developing joint research and education projects (within national and/or EU programs) will play an important role in the future cross-border cooperation.

As a conclusion, the Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River was an example of CBC best practice along the Romanian-Moldavian border, hence the cooperation will be a good example for other cross-border interaction.



10. Future plans and goals of the cooperation

It is important to underline that the Resources Pilot Center for Cross-Border Preservation of the Aquatic Biodiversity of Prut River is a very successful cross-border interaction between Romania and the Republic of Moldova. The long-term goals of the current collaboration become obvious from a simple look on the project's title and objectives. These announce a joint development of human and logistic resources with the aim to monitor, restore and improve the Prut River aquatic resources under difficult climatic conditions and/or threatening anthropogenic actions.

There are some important activities included in the project which reveal that this one strongly contributes to building a solid and promising ground for future collaboration of the two partners. One type of such activities, also announced by the project title, refers to the rehabilitation works which are being brought to the infrastructure (e.g. laboratories, fish production hall) of the Ezăreni Station for Research in Aquaculture and Aquatic Ecology. As shown, the station is dedicated to the sustainable management of the aquatic resources and the restoration of biodiversity associated to the Prut River. The works will be followed by the final set-up of the infrastructure in the following period. The Ezăreni Station is intended to be transformed into a pilot center for resources and research education destined for both academic and business purposes. The desired future access of researchers and students to such a modern infrastructure demonstrates the long-term impact of one of the core results of this project for further scientific cross-border collaborations in the field (Annex VI, Interim Narrative Reports, no.1 and no. 2, internal documents, 2014b).

Other equipments and facilities will be set up in the final year of the project; among these, a „high-performance computing” (HPC) cluster, which was acquired by the „Al. I. Cuza” University for ecological research and modelling. Once put into function, such facilities will serve to several purposes: obtaining new data on the structure of matter and universal laws; detailed study of processes and phenomena; experimental results; statistical simulations in short time allowing a reduction of the study areas and of the investigation time; scientific modelling; model calibrations; etc. (Stoicescu, 2014). For the „Al. I. Cuza” University, these equipments constitute important assets for the research in the frame of the Cross-border Prut River Pilot Center, which will continue after the ending of the project. The use of the acquired equipments will allow: risk analyses, biological and ecological simulations, analyses of the interaction between chemical compounds (e.g. heavy metals) and the organic matter, modelling the evolution of populations, etc. (Stoicescu, 2014).



The Action Plan, elaborated in the framework of this project, for developing joint research and education projects (within national and/or EU programs) in the field of self-sustained aquaculture, gathers a series of relevant information, e.g. on the partnership scientific expertise, laboratories, interesting open calls on EC Programmes. This document represents an important pre-requisite for future access to funding opportunities and implementation of cross-border joint actions (Annex VI, Interim Narrative Reports, no.1 and no. 2, internal documents, 2014b).

All the above announce the innate need for further successful cross-border cooperation in several other scientific studies in the field of aquatic environment and life, with the associated opportunity to publish the obtained results.



11. Summary

Within the context of global environmental change, the aquatic environment represents one of the most sensitive ecosystems, due both to its intrinsic ecological characteristics and external factors. Therefore, implementing a biodiversity and water resources project regarding one of the main Danube Basin rivers is a highly topical problem of environment integrated research.

The project Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River was financed by The Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013, Priority 2 - Environmental challenges and emergency preparedness, Measure 2.1 - Addressing strategic cross-border environmental challenges including emergency preparedness. The project was aimed to jointly develop scientific, human and logistic resources, in order to monitor, restore and improve the Prut River aquatic resources during difficult climatic conditions and threatening anthropogenic actions. It was initiated by education-oriented organization "Alexandru Ioan Cuza" University from Iași (Romania), as the Lead-Partner, together with the research organization Institute of Zoology of the Academy of Sciences of Moldova, as its Partner. The partnership included three associates, namely the National Administration "Romanian Waters" – Prut Directorate (Associate No. 1), The Environmental Protection Agency of the Iași County (Associate No. 2) and the Inspectorate for Ecology of the Republic of Moldavia (Associate No. 3).

The Project aims at contributing to a more efficient collaboration between managers and final users of the Prut River biodiversity on both sides of the border and to strengthen the capacity of the two partner institutions to collaborate in field of education and research under some future European Union-related actions.

This Project made a significant contribution and it improved tight cultural, economic, and environment-related collaboration between the partners on both sides of the Prut River. Furthermore, the project involved actions which concentrated on sustainable management of cross-border protected areas, better institutional capacity of local decision-makers in order to improve accessibility to funding and implementation of future cross-border joint actions. The project was an interdisciplinary approach that brought together specialists in zoology, ecology, climate, water resources management, etc. 45 people, academic and teaching professionals including MSc and PhD students. were engaged in the planned activities. The expertise of the project's working groups was in the fields of: biology of vertebrate and invertebrate organisms, ichthyofauna, hydrobiology, hydrochemistry, ecotoxicology.

Under this Project, the health state of the Prut River and the species in the River will continue to be tested, a risk analysis report will be completed and a joint action plan for emergency situations issued.



The Project was organized in five activity groups:

GA1: Project management, coordination and communication activities

GA2: Public procurement

GA3: Cross-border institutional capacity

GA4: Prut River investigation

GA5: Information, awareness and dissemination

At the end of the project, the following items will be available: biodiversity database, consultancy services, facilities and training programmes for developing business in the field of aquaculture in the advent of funding Operational Programme for Fishery.

A list of some main tools guaranteeing the project's long-term sustainability, ensuring a continuous relevance of its results, could consist of the following products/services which will be available at the end of the project: biodiversity database, consultancy services, facilities and training programmes for developing business in the field of aquaculture in the event of funding through the Operational Programme for Fishery; access to the Ezăreni infrastructure for researchers and students, facilities for education and research purposes (laboratories, fish production hall, an action plan for developing future joint cross-border research and education projects through European programmes), the launching of an education programme in aquaculture (starting with the fall of 2014), plans for emergency situations in case of extreme events impacting water resources: floods, drought, severe pollution, etc.

Acknowledgements:

The authors are most grateful to dr. Marta Jurchescu for the contributions, useful advise and suggestions which were helpful in improving the manuscript. Herewith, special recognition is credited to the management team of the project entitled "*Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River*", namely prof. Nicoară Mircea Nicușor - project coordinator and Mrs. Sava Maria - head project, from "Al. I. Cuza" University, Iași, for their kind support throughout the progress of our study, providing valuable information and data.



12. Bibliography

Publications

Botnaru V., Cazanțeva Olga, Sîrodoev Ig. et al. (2003), Atlasul Republicii Moldova. Geografia fizică și socio-economică. Clasa 8-9, Chișinău, Edit. Iulian, 32 p.

Briciu AE., Mihaila D., Lazurca LG., Costan LA., Nagavciuc V., Badaluța CA. (2011), Observations on the spatial variability of the Prut River discharges, Annals of “Stefan cel Mare” University of Suceava, Geography Section, XX, Suceava.

Cazantseva Olga, Sirodoev Ig. (2009), Republic of Moldova. Demographic situation, Chișinău: Strih (set of maps) [1 : 600 000],
<http://www.statistica.md/pageview.php?l=ro&idc=334&id=2338>

Ciobanu N. (2008), Evoluția geopolitică a frontierelor românești – trecut și prezent, Edit. Centrului Tehnic-Editorial al Armatei, București

Cserwid Elisabeta (2013), Water management in Romania, Annual Conference of EECCA 8-9 November 2013, Moscow.

Dandiș N. (2008), Perspectives of Cross Border Cooperation of the Republic of Moldova within the Frameworks of the ENPI (2007-2013), EuroEconomica, Vol 20, No 1, Danubius University of Galați.

Davideanu Grigore (2013), Methodological guide for monitoring the structure of ichthyocenoses, “Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River” project MIS ETC 1150.

Environmental Protection of International River Basins (2013a), River basin management plan for Prut pilot basin in the territories of Ukraine and Moldova, EU project no 2011/279-666

Environmental Protection of International River Basins (2013b), Communication strategy and plan for the Prut River basin, EU Project No 2011/279-666.

Fetiniuc Valentina, Melnic Stela (2009), Euroregiuni ca instrumente ale Cooperării Tansfrontaliere, Revista Economică 1(44), Sibiu-Chișinău.

Gache, Carmen (2008), [Aspects concerning the biodiversity's conservation in the border region between Romania and R. Moldova](#), Natura Montenegrina, 7(2), Podgorica.



Gasparini Alberto, Del Bianco Daniele (2011), Strategies and Euroregions for Cross-border Cooperation in Balkan and Danube European countries. An analysis of Strengths, Weaknesses, Opportunities and Threats, Institute of International Sociology of Gorizia (I.S.I.G.).

Government of the Romania, Ministry of Environment and Climate Change (2014), Natural protected areas (<http://www.mmediu.ro/beta/domenii/protectia-naturii-2/arii-naturale-protejate/>).

Government of the Republic of Moldova (2014), State of the environment in the Republic of Moldova, Popular report (http://cim.mediu.gov.md/raport2004/en/priorp/bd/bd_en3.htm).

Guțuțui V., Miron V. (2006), Armonizarea politicilor de gestionare a resurselor naturale și patrimoniului cultural pentru încurajarea turismului transfrontalier în cadrul parteneriatului UE Republica Moldova, docs.moldova.org

Ilieș Al. (2003), România între milenii. Frontiere, areale frontaliere și cooperare transfrontalieră, Edit. Universității din Oradea, Oradea.

Ilieș Al. (2004), România. Euroregiuni, Edit. Universității din Oradea, Oradea.

Islam Oana, Savin Anca, Belous Tatiana (2006), Prut River Basin Management. Case Study (Final report), Center for Environmentally Sustainable Economic Policy, Bucharest.

Moruzi Otilia (2004), Eurorégion du Prut Supérieure: Instrument moderne de coopération transfrontalière, în *Geographica Timisensis*, XIII, 2, p. 103-108.

Popa N. (2004), Frontières et régions transfrontalières en Roumanie: entre territoires, cultures et fonctions, *Geographica Timisensis*, XIII, 2, p. 79-102.

Popescu, C. (2011), The demographic component in the development of a metropolis. Case-Study: Iași, *Romanian Review of Regional Studies*, Vol. VII, No.2, p. 3-16.

Popescu G. (2000), Zonele transfrontaliere, în *Terra*, XXX (L), 1, p. 91-92.

Popescu I. (2004-a), Românii din Ucraina – partea I, *Dacoromania*, 18, p. 1-26.

Popescu I. (2004-b), Românii din raionul Herța (Ținutul Istoric Herța), *Dacoromania*, 17, p. 12-15.

Popp N. (1942), Românii din Basarabia și Transnistria, *Revista Societății Regale Române de Geografie*, LX, 1941, București și în *Geopolitica*, Edit. Glasul Bucovinei, Iași, 1994.



Radoane N., Radoane Maria, Amariuca M. (2006), Aspects of hydrologic variability of Prut River (in Romanian: Asupra variabilității hidrologice a râului Prut), Annals of “Stefan cel Mare” University of Suceava, Geography Section, XV, Suceava.

Roșcovan M. (2003), Cooperarea transfrontalieră a Republicii Moldova cu România și Ucraina, <http://www.ipp.md/files/Publicatii>.

Roșcovan M., Bulat V. Puntea Mariana, Miron V. (2010), Ghid de cooperare transfrontalieră, Ediția a II-a, Edit. Epigraf, Chișinău, 288 p.

Săgeată, R. (2005), Zonele transfrontaliere și euroregiunile în procesul globalizării, GeoPolitica. Revistă de Geografie Politică, Geopolitică și Geostrategie, III, 13, Edit. Top Form, București, p. 67-74.

Săgeată R. (coord.), Nancu Daniela, Mitrică Bianca, Persu Mihaela, Nicoleta Damian, Popescu Claudia, Mocanu Irena, Grigorescu Ines, Guran Liliana, Șerban Paul, Baroiu Dragoș (2014), Euroregiunile de cooperare transfrontalieră din Bazinul Inferior al Dunării, Edit. Academiei Române, 339 p.

Săgeată, R. (2014)a, Frontiera de est a României și sistemul de euroregiuni de la frontiera de est a României/Romania's eastern border and the euroregion system in Euroregiunile de cooperare transfrontalieră din Bazinul Inferior al Dunării/Cross-border cooperation Euroregions in the Lower Danube Basin (in Romanian), Săgeată, R. (coord.), Edit. Academiei Române, pp. 49-55.

Săgeată, R. (2014)b, Omogenitatea elementului etnic/Ethnic homogeneity in Euroregiunile de cooperare transfrontalieră din Bazinul Inferior al Dunării/Cross-border cooperation Euroregions in the Lower Danube Basin (in Romanian), Săgeată, R. (coord.), Edit. Academiei Române, pp. 56-58.

Săgeată, R. (2014)c, Sistemul de așezări dublete și euroregiunile de cooperare transfrontalieră/The settlement doublet system and cross-border co-operation euroregions in Euroregiunile de cooperare transfrontalieră din Bazinul Inferior al Dunării/Cross-border cooperation Euroregions in the Lower Danube Basin (in Romanian), Săgeată, R. (coord.), Edit. Academiei Române, pp. 59-63.

Săgeată R., Mitrică Bianca (2014), Euroregiunea Siret-Prut-Nistru. Studiu de caz: potențialul demografic al sectorului românesc/ Siret-Prut-Dnister Euroregion. Case-study: demographic potential in the Romanian sector in Euroregiunile de cooperare transfrontalieră din Bazinul Inferior al Dunării/Cross-border cooperation Euroregions in the Lower Danube Basin (in Romanian), Săgeată, R. (coord.), Edit. Academiei Române, pp. 77-86.



Stamate Gr. (1997), *Frontiera de stat a României*, Edit. Militară, București.

Stoicescu M. (2014), *AGER Business Tech. Platforma HPC pentru activități de cercetare și modelare ecologică*. Roundtable April 07, 2014, University "Alexandru Ioan Cuza", Iași (oral presentation). http://prutriver.uaic.ro/?attachment_id=751 (last accessed 29 December 2014)

Temneanu G. (2010), *Colaborarea in domeniul protecției mediului între România și Republica Moldova - la o nouă etapă*, *Buletin Informativ* (2), Agenția pentru protecția mediului Iași.

Ungureanu Al., Groza O., Muntele I. (2002), *Moldova. Populația, forța de muncă și așezările umane în tranziție*, Edit. Corson, Iași.

Vartolomei F. (2009), *Stânca-Costești reservoir – the most important water management unit in Prut catchment area*, *Lakes, reservoirs and ponds*, vol. 3(2), p. 74-84.

Vartolomei F. (2012), [Integrated Measurements for Biodiversity Conservation in Lower Prut Basin](#) in *Biodiversity Conservation and Utilization in a Diverse World*, Edited by [Gbolagade Akeem Lameed](#), InTech.

Vartolomei F. (2013), *Management problems and solutions for wetlands and floodplain habitats in the Lower Prut Floodplain Natural Park*, *Georevie: Scientific Annals of Stefan cel Mare University of Suceava – Geographical Series*, 22, p. 87-104.

Vartolomei F., Andrei MT., Dumitrascu Monica, Dumitrascu C. (2011), *Ecological potential and environmental protection in the Prut Basin*, *GeoConference on Ecology, Education and Legislation*, Section: Ecology and Environmental Protection, p. 307-314.

*** (1971), *Convention on Wetlands of International Importance especially as Waterfowl Habitat*, Ramsar.

*** (1991), *Pactul Ribbentrop-Molotov și consecințele lui pentru Basarabia*, Edit. Universitas, Chișinău.

*** (1992), *Convention on the Protection of Black Sea against Pollution*, Bucharest.

*** (1992), *Geografia României*, vol. IV, Edit. Academiei Române, București.

*** (1992), *Regulation of water quality monitoring of the Prut River within the framework of bilateral cooperation between Romania and the Republic of Moldova*.

*** (1994), *Convention on Co-operation for the Protection and Sustainable Use of the River Danube*, Sofia.



- *** (1996), România. Atlas istorico-geografic, Edit. Academiei Române, București.
- *** (2000), The Tripartite Agreement Romania – Republic of Moldova - Ukraine regarding the Cross-Border Cooperation in the Region formed by the Natural Protected Areas of the Danube Delta and the Lower Prut River, Bucharest.
- *** (2000), Agreement for the Establishment and Management of a Cross-Border Protected Area between the Republic of Moldova, Romania and Ukraine in the Danube Delta and the Lower Prut Nature Protected Areas, Bucharest.
- *** (2003), Atlasul Republicii Moldova. Geografia fizică și socio-economică, Chișinău, Edit. Iulian, 44 p.
- *** (2003), Agreement between the Government of Romania and the Government of the Republic of Moldova with Regard to the Cooperation in the Area of Protection of Fish Resources and the Regulating of Fishing in the Prut River and Stanca-Costesti Artificial Lake, Stanca-Costesti.
- *** (2007), România. Atlas istorico-geografic, Academia Română, Institutul de Geografie, Ediția a II-a, Edit. Academiei Române.
- *** (2008), Ghid de acțiuni comune pentru conservarea biodiversității în zona de graniță România – Republica Moldova, Iași.
- *** (2009), Government Decision, no. 1284/24.10.2007, Romania.
- *** (2010), Agreement between the Government of Romania and the Government of the Republic of Moldova on Cooperation for Protection and Sustainable Use of Water Resources of the Danube and the Prut, Chisinau.
- *** (2012), Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki.
- *** (2013), River Basin Management Plan for Prut Pilot Basin, Institute of Ecology and Geography, Academy of Science of Moldova (MD), Ukrainian Center of Environmental and Water Projects, Academy of Science (UA).
- *** (2014a), Annex VI, Interim Narrative Report No.1. Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River Project, (internal document), UAIC, 23 p.
- *** (2014b), Annex VI, Interim Narrative Report No.2. Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River Project, (internal document), UAIC, 18p.



*** (2014), SDTR – Strategia de Dezvoltare Teritorială a României. România policentrică 2035 – coeziune și competitivitate teritorial, dezvoltare și șanse egale pentru oameni (versiunea 2), Ministerul Dezvoltării Regionale (RO)

*** Anuarele statistice ale României 1990-2014, INS, București.

*** Recensămintele populației și locuințelor, 1992, 2002, 2011, INS, București.

Websites

http://cim.mediu.gov.md/raport2004/en/priorp/bd/bd_en3.htm (last accessed October 14, 2014)

<http://www.brct suceava.ro/program/joint-operational-programme-2007-2013/ro-ua-md-1.html> (last accessed December 28, 2014)

<http://www.icpdr.org/main/publications/focusing-prut-river-basin> (last accessed September 29, 2014)

<http://www.mmediu.ro/beta/domenii/protectia-naturii-2/arii-naturale-protejate> (last accessed December 12, 2014)

<http://www.see-river.net/pilot-sites.7.html> (last accessed November 24, 2014)

<https://cordis.europa.eu/partners/web/guest/home> (last accessed December 20, 2014)

http://www.dbga.md/V1%20Moldova_Plan_Prut_ro.pdf (last accessed July 22, 2015)

http://mmediu.ro/new/wp-content/uploads/2014/08/2014-08-14_SDTR_6.1.pdf (last accessed July 22, 2015)

<http://www.blacksea-cbc.net> (last accessed September 30, 2014)

<http://inseco.gov.md/> (last accessed October 22, 2014)

<http://www.ro-ua-md.net/ro/> (last accessed December 12, 2014)

<http://www.brctlași.ro/programe> (last accessed December 28, 2014)

www.putrriver.uaic.ro (last accessed July 20, 2015)

www.uaic.ro (last accessed July 20, 2015)

<http://www.cjbotosani.ro/> (last accessed July 23, 2015)



www.actedj.ro (last accessed July 23, 2015)

www.euroregiune.org (last accessed July 23, 2015)

<http://www.territorialcooperation.eu/> (last accessed October 10, 2014)

Crossing the borders

Studies on cross-border cooperation within the Danube Region

2016

ISBN 978-963-12-4756-5

Published by
Central European Service for Cross-Border Initiatives
H-1067 Budapest, Teréz krt. 13.



MINISTRY OF PUBLIC ADMINISTRATION
AND JUSTICE

**The Research was supported by the
Hungarian Ministry of
Public Administration and Justice**