

**Romania - Ukraine Joint Operational Programme
2014 ÷ 2020**

**Strategic Environmental Assessment
ENVIRONMENTAL REPORT**

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ABBREVIATIONS

MRDPA	Ministry of Regional Development and Public Administration
MEWF	Ministry of Environment, Water and Forest
MEF	Ministry of European Funds
MFA	Ministry of Foreign Affairs
EC	European Commission
EU	European Union
MS	Member State
ENI	European Neighbourhood Instrument
ENPI	European Neighbourhood and Partnership Instrument
CBC	Cross Border Cooperation
JCP	Joint Programming Committee
MA	Management Authority of the Programme
SME	Small and Medium Enterprises
PA	Partnership Agreement with EU
NRP	National Reform Programme
TO	Thematic Objective
SWOT	Strengths, Weaknesses, Opportunities, Threats Analysis
Ro	Romania
Md	Republic of Moldova
Ua	Ukraine
WG	Working Group
LIP	Large Infrastructure Project
GDP	Gross Domestic Product
NSCC	National Strategy on Climate Change 2013 ÷ 2020
NFRMS	National Flood Risk Management Strategy on medium and long term (2010 ÷ 2035)
PPPMD	Plans for prevention, protection and mitigation of damages caused by floods
NWMS	National Waste Management Strategy
NWMP	National Waste Management Plan
RWMP	Regional Waste Management Plan

1. INTRODUCTION

The Strategic Environmental Assessment is carried out based on the requirements of the SEA Directive (European Council Directive no. 2001/42/EC on the assessment of effects of certain plans and programmes on the environment).

The main elements recommended to be followed in such environmental assessments by law or guidelines are as follows:

- Description of key environmental aspects to be addressed;
- Description of the reference range of environmental values to be submitted for analysis in the SEA report;
- Ways to identify the environmental impact of the plan/programme implementation;
- Assessment of capacities to address the challenges, risks and their prevention on the environment.

The methodology used in the strategic environmental assessment includes the requirements of the above-mentioned documents and of the following methodological recommendations:

"Guidance Note on Strategic Environment Assessment in the context of ENI CBC" developed by **INTERACT ENPI** for the specific situation of **Joint Operational Programmes** and approved by **the Directorate General for Development and Cooperation - Europe Aid (DG DEVCO)** and **the Directorate General for Environment (DG ENV)**.

Considering the extent to which the Joint Operational *Programme "Romania - Ukraine" 2014 ÷ 2020* provides a framework for future projects and other activities, development of its first version will be notified to the environmental competent authorities, for estimation of its impact on environmental factors. In this procedure it is necessary **to finalize the Programme in parallel with the development of the Environmental Report.**

The Environmental Report is a part of the **Programme** documentation that identifies, describes and evaluates the likely significant environmental effects of its implementation and reasonable alternatives, taking into account the objectives and the related geographical area.

The development of the Strategic Environmental Assessment procedure is mandatory, the European Commission **requiring the official opinion** of the environmental authority regarding the environmental assessment procedure, for the approval of the Programme *"Romania - Ukraine" 2014 ÷ 2020* under legislation in force.

In accordance with the SEA Directive (2001/42/EC), environmental assessment involves the following steps:

- Identification of environmental authorities of all countries involved (Romania, Ukraine);
- The decision on whether SEA is required or not,

and if yes:

- Determining the SEA scope and development of the Environmental Report;
- Consultation of environmental authorities and the public;
- Inclusion of findings and results of consultations in the Environmental Report;
- Adequate monitoring of recommendations;
- Notification of the authorities consulted and public on the programme approval.

Environmental assessment is mandatory when programmes include projects covered by the EIA Directive in the sectors covered by Article 3.2 (energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning, land use, etc) and projects with significant environmental impact in other sectors, under Article 3.4.

ENI CBC Programmes with Large Infrastructure Projects should perform the SEA procedure.

Development of the **Environmental Report** involves pursuing the following relevant steps:

- Review of the **status of the environment at national level** (geographical areas specified), relevant aspects for the Ro-Ua Programme, respectively, taking into account existing data and information;
- Characterize the current state of the environment, and identify a set of **environmental matters and environmental issues** that are relevant to the concerned area and that can be addressed directly through the cooperation programme;
- For the environmental matters and environmental issues identified, **relevant environmental objectives** will be set which should be addressed by the Ro-Ua Programme;
- An analysis of the probable evolution of the state of the environment (of those environmental aspects identified), in the case of not implementing the objectives of the Ro-Ua Programme, **(Alternative "0")**;
- An **assessment of the environmental effects** generated by the implementation of the Ro-Ua Programme will be carried out, respectively, by analysing how its objectives and proposed measures contribute to achieving the relevant environmental objectives;
- Development of a **cumulative assessment** that can provide an overview of possible future developments of the environmental status in case of implementation of the Ro-Ua Programme;
- A list of indicators proposed for monitoring the Programme effects on the environment will be provided;
- **Recommendations** regarding the prevention, reduction and offset of any potential adverse environmental impacts associated with the implementation of the Ro-Ua Programme will be proposed.

The development of the SEA procedure for the Programme in Romania and Ukraine is presented in Annex 2, including the public and authorities consultation. A short description on how the comments and observations to the SEA Draft Environmental Report were taken into consideration is presented, too.

2. SUMMARY OF THE CONTENT, MAIN OBJECTIVES OF THE PROGRAMME AND RELATIONSHIP WITH OTHER RELEVANT PLANS AND PROGRAMMES

2.1 Baseline information

During the 2014 ÷ 2020, the European Union will finance through the European Neighbourhood Instrument (ENI), a bilateral cross-border cooperation programme (CBC) between Romania - Ukraine, as a continuation of the Joint Operational Programme Romania – Ukraine - Republic of Moldova 2007÷2013.

The main EU regulations in force for the development of the cross-border cooperation programmes financed through ENI are as follows:

- Regulation (EU) no. 232/2014 of the European Parliament and of the Council establishing a European Neighbourhood Instrument;
- Regulation (EU) no. 236/2014 of the European Parliament and of the Council of 11 March 2014 laying down common rules and procedures for the implementation of EU's instruments financing external actions;
- Commission Implementing Regulation (EU) no. 897/2014 of 18 August 2014, laying down specific provisions for the implementation of cross-border cooperation programmes financed under Regulation (EU) No 232/2014 of the European Parliament and the Council establishing a European Neighbourhood Instrument;
- Programming Document of the EU support for cross-border cooperation (2014÷2020);
- Commission Implementing Decision C(2014) 7172 from 08.10.2014 adopting a programming document for European Union support to ENI Cross-Border Cooperation for the period 2014 ÷ 2020.

Cross border cooperation at the external borders of the EU continues to represent a top priority for the European Union during the 2014 ÷ 2020 programming period. The ENI CBC aims to create *“an area of shared prosperity and good neighbourliness between EU Member States and their neighbours”*. To this purpose the ENI has three strategic objectives:

- (A) Promote economic and social development in regions on both sides of common borders;
- (B) Address common challenges in environment, public health, safety and security;
- (C) Promotion of better conditions and modalities for ensuring the mobility of persons, goods and capital.

Crossborder Cooperation Programmes have to address at least one of the strategic objectives and in order to generate a significant impact for the border area each programme has to focus its strategic intervention in the area on a maximum of four thematic objectives from the following:

1. Business and SME development (Strategic objective: A);

2. Support to education, research, technological development and innovation (Strategic objective: A);
3. Promotion of local culture and preservation of historical heritage (Strategic objective: A);
4. Promotion of social inclusion and fight against poverty (Strategic objectives: A, B, C);
5. Support to local & regional good governance (Strategic objectives: A, B, C);
6. Environmental protection, climate change adaptation (Strategic objective: B);
7. Improvement of accessibility to the regions, development of transport and communication networks and systems (Strategic objective: C);
8. Common challenges in the field of safety and security (Strategic objective: B);
9. Promotion of energy cooperation (Strategic objective: B);
10. Promotion of border management and border security, migration and mobility management (Strategic objective: C);

Regulation no. 232/2014 establishing a European Neighbourhood Instrument (ENI) and Regulation no 897/2014 laying down specific provisions for the implementation of cross-border cooperation programmes, say that the programme partners have to cooperate in order to identify the needs of the programme area and select those thematic objectives and priorities, that are most relevant to the border region.

Within this context, the partner countries nominated the Ministry of Regional Development and Public Administration from Romania as Managing Authority and created the Joint Programming Committee (JPC) as decisional body for the programming process. Additionally, two working groups were created, one for the identification of Large Infrastructure Projects and one for the Management and Control structures.

The Joint Operational Programme Romania - Ukraine provides the legal framework for the financing of cross-border cooperation projects between the two countries during 2014 ÷ 2020. The methodology for the elaboration of the Romania-Ukraine Joint Operational Programme included stakeholder consultations, socio economic analysis (SWOT) and multi criteria analysis, as well as a review of the lessons learnt from the Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007 ÷ 2013.

The main steps of the development of the Ro-Ua Programme were:

- Socio-economic and SWOT analyses;
- Preliminary consultations: interviews, focus groups, online survey;
- Coherence analysis and multi-criteria analysis;
- Public consultations on the first JOP draft.

Following the above-mentioned analyses 4 thematic objectives (TO) were approved for the Romania-Ukraine Programme 2014-2020, together with their subsequent priorities as follows:

TO2 - Support to education, research, technological development and innovation:

Objective 1: Develop education and support research and innovation at the level of the Programme area by facilitating the cooperation at local, regional and central level:

- *Priority 1.1* - Institutional cooperation in the educational field for increasing education and quality of education;
- *Priority 1.2* - Promotion and support for research and innovation.

• **TO 3 - Promotion of the local culture and preservation of historical heritage**

Objective 2: Preservation of the cultural and historical heritage in the eligible area, support the developing of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.

- *Priority 2.1* – Preservation and promotion of the cultural and historical heritage

• **TO 7 - Improvement of accessibility to the regions, development of transport and common networks and systems:**

Objective 3: Improve public transport services, infrastructure and ITC cooperation and networking

- *Priority 3.1* - Development of cross border transport infrastructure and ITC tools

• **TO 8 - Common challenges in the field of safety and security**

Objective 4: Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint projects

- *Priority 4.1* - Support to the development of health services and access to health;
- *Priority 4.2* – Support to joint activities for the prevention of natural and man-made disasters as well as joint activities during emergency situations;
- *Priority 4.3* - Prevention and fight against organized crime and police cooperation

The selection of the four thematic objectives was done by the Joint Programming Committee, which agreed also on the preliminary list of Large Infrastructure Projects and in the next period the projects which bring the greatest added value for the eligible area will be identified.

During the 2014 ÷ 2020, the European Union will finance the Joint Operational Programme Romania - Ukraine, through the European Neighbourhood Instrument (ENI).

The Programme is addressing the area situated at the border between Romania and Ukraine, and contributes to the achievement of the overall ENI objective of *“progress towards an area of shared prosperity and good neighbourliness between Member states and their neighbours”*.

2.2 The Programme Area

The Joint Operational Programme Romania - Ukraine 2014 ÷ 2020 covers the following area, established by ENI CBC:

Romania: **5 counties:** *Satu Mare, Maramureş, Botoşani, Suceava, Tulcea;*

Ukraine: **4 oblasts:** *Ivano-Frankivsk, Zakarpatska, Chernivtsi, Odessa.*

The core regions encompass a total of 100,860 km², out of which:

- Romanian territory: 32,760 km² (Suceava 8,553 km², Botosani 4,986 km², Satu - Mare 4,418 km², Maramures 6,304 km², Tulcea 8,499 km²);
- Ukrainian territory: 68,100 km² (Zakarpatska 12,800 km², Ivano-Frankivsk 13,900 km², Odesa 33,300 km², Chernivtsi 8,100 km²) .

In terms of proportionality, the Ukrainian eligible area is more than double in size compared to the Romanian territory.

The border shared by the two countries represents part of the current virtual border of the European Union, as the Romanian regions of North-West, North-East, and South-East are the outermost border regions of the EU in the region.

Romania-Ukraine border

The total length of the border is of 649.4 km.

The border is varied in terms of type: land – 273.8 km, river – 343.9 km, sea – 31.7 km. Furthermore, the Southern part of the Romanian-Ukrainian border divides the shared biosphere of the Danube Delta. The two countries share six land border crossing points, accessible by car and train:

- | | |
|-----------------------------------|----------------------------|
| • Halmeu – Diakove | rail and auto; |
| • Câmpulung la Tisa – Teresva | rail, but not operational; |
| • Sighetu - Marmăţiei – Solotvino | auto; |
| • Valea Vişeuului – Dilove | rail; |
| • Vicşani – Vadul Siret | rail, but not operational; |
| • Siret – Porubne | auto. |



The programme area sums up a total of approximately 8,022,042 inhabitants. Of the total *population*, 26% (2,083,538 inhabitants) reside on the Romanian side of the border and 74% (5,938,504 inhabitants) on the Ukrainian side.

The core eligible area concentrates a large population with ages between 15 and 64 years. Territorial comparisons show that the four Ukrainian oblasts have a positive (but sensitive) natural increase of 0.6‰, while the Romanian counties have a negative rate of -3.78‰.

The **health infrastructures** are underdeveloped, especially in the rural areas. The level of development and the capacity of the health units are below national averages across all of the core eligible area. In Romania, male life expectancy is 71 years and female life expectancy is 78 years, while in Ukraine the life expectancy for males is of 66 years and 76 years for females. Compared to previous years life expectancy is on a rise, but it is still below European averages.

The core eligible area's **active population** represents 45.09% of the total population. Out of this total, 93.83% of the active population is employed, while 6.15% is unemployed. The largest employed population by sector is employed in the agricultural sector, and represents 25.35% of the total employed population. Territorial differences are however significant, as in Romania 42.58% of the employed population works in this sector, while in Ukraine only 20.35%. The average gross monthly earnings in the area are some of the lowest at national and European levels. On average the gross monthly earnings reached in 2012 €360 in Romania and €241 in Ukraine. The agricultural sector is the largest sector in terms of employed population; however, earnings in this sector are some of the lowest, registering values below the averages.

Competitiveness is rather low in the core eligible area. The major causes behind this are: the predominance of agriculture and industry as the main economic activities; the low level of investments in Research & Development and its underuse in industrial and technological activities, reduced productivity; low accessibility due to the poor quality of the transport infrastructure.

In terms of **transport infrastructure**, the core eligible area has a poorly developed transport infrastructure, which cannot insure accessibility and connectivity at international standards, resulting in an isolation effect.

Intermodal transport is still limited, as the naval and air links are underdeveloped, in spite of the gain potential given by the Tulcea-Odessa region. The road and rail infrastructures are sufficiently dense if compared to their national figures. However, quality wise the infrastructure still leaves room for improvement. Local roads lack investments due to limited funding opportunities and bureaucracy, compared to national and European roads, which receive significantly more attention.

The state of the **public utilities and services infrastructure** serving the urban and rural localities in the area raises a number of issues. Even if significant percentages of the localities in the core eligible area are connected to these networks, their quality is rather poor.

A large portion of these infrastructures are developed before 1989 and in general lack serious investments since then, especially in the case of rural localities. This creates problems in terms of environmental protection, as this leads to the evacuation of undertreated or untreated waters and poorly managed waste, which combined have a negative impact on soil and water quality. The analysis shows that the core eligible area is a big consumer of energy, mostly due to industrial activities and energy production with the purpose of heating.

The Ukrainian oblasts have significantly higher levels of energy use compared to the Romanian counties. Furthermore, the Ukrainian oblasts are large consumers of coal and gas as fuels, greatly increasing particle and greenhouse emissions in the area.

The area benefits from over 1000 natural protected areas of national and international importance and numerous historic sites. The increasing number of tourists in the last two years confirms that the attractiveness of this area is one of international level.

Major social, economic and cultural centres

The programme decided to make use of the art. 8 (3) of the *Regulation no 232/2014 of the European Parliament and of the council establishing a European Neighbourhood Instrument* provisions, and included two major social, economic and cultural centres in the programme area: Bucharest (RO) and Kiev (UA).

A **flexibility rule** set in accordance to point (b) of article 39(2), and article 45(4) of Commission Regulation 897/2014 **may** be used outside the programme area (meaning outside core regions and major social, economic and cultural centres).

Maximum 10 % of the Programme allocation may be used outside the programme area or by the beneficiaries located outside the programme area.



2.3 The Programme Description

The general objective of the Romania-Ukraine Joint Operational Programme is to enhance the economic development and to improve the quality of life of the people in the programme area through joint investments in education, economic development, culture, infrastructure and health while ensuring the safety and security of the citizens in the two countries.

The Ro-Ua Programme has 4 specific thematic objectives; the activities and the beneficiaries are presented below.

TO2 - SUPPORT TO EDUCATION, RESEARCH, TECHNOLOGICAL DEVELOPMENT & INNOVATION

Objective 1: *Develop education and support research and innovation at the level of the Programme area by facilitating the cooperation at local, regional and central level*

Priority 1.1 – Institutional cooperation in the educational field for increasing access to education and quality of education

Indicative activities:

- Joint planning and joint development of educational strategies;
- Exchanges of experience, teacher exchanges, transfer of good practices between institutions from both sides of the border for increasing the effectiveness of education through the diversification of professional training programs for employees in the education system in areas such as:
 - School development, school management, developing the relation between schools and communities;
 - Developing and applying innovative educational methods, for increasing teaching skills to facilitate and motivate students to perform;
- Developing specific joint programs of entrepreneurship education, programmes that stimulate creativity, innovation and active citizenship;

- Rehabilitation/modernization/extension/equipment procurement for the educational infrastructure to provide the necessary material preconditions of a quality educational process and increase the participation in the educational processes;
- Development and implementation of partnerships between education institutions from both sides of the border to:
 - Prevent and correct early school leaving phenomenon through integrated programs (including awareness campaigns) for prevention of school dropout, encourage school attendance and reintegration of those who have left school early;
 - Develop after school programs and extra-curricular activities;
- Development and implementation of joint actions in support of disadvantaged groups, e.g*:
 - Integrated support actions addressing children and youth with parents living abroad (which may include inter alia guidance, counselling, after school programmes, educational and cultural activities);
 - Support actions meant to facilitate the social and work integration of people (children, youth and adults) with disabilities*
- Joint support actions for youth for the prevention of drug use, human trafficking, alcohol abuse, etc.**
- Development and implementation of cross border actions for enhancing/improving/facilitating job qualifications and competences.**

* *Only activities that do not provide an economical advantage for the beneficiary will be supported.*

** *These activities should be carried out in the framework of educational campaigns and in cooperation with education institutions in order to be eligible.*

Indicative Beneficiaries:

- ❖ National/regional/local public administration and other public institutions;
- ❖ Education institutions;
- ❖ NGOs; / professional teachers associations; other relevant associations;
- ❖ Health organizations acting to prevent and cope with alcohol and drug abuse**

** *These types of beneficiaries may only be eligible for this priority when work in partnership/association with education institutions.*

Priority 1.2 – Promotion and support to research and innovation

Indicative activities:

- Development of partnerships/networking between universities for joint development of theoretical research;
- Joint research actions and studies (including related equipment procurement) in the field of environment (climate change challenges, preservation of biodiversity, renewable energy and resource efficiency, etc.);

- Promotion and support for research and innovation through rehabilitation/modernization/extension of the specific infrastructure including the procurement of related equipment;

Indicative Beneficiaries:

- ❖ Universities;
- ❖ Research institutes/organizations/NGOs;
- ❖ National /regional/local public administration and other public institutions;
- ❖ Professional/ other relevant associations.

TO3- PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE

Objective 2: *Preservation of the cultural and historical heritage in the eligible area, support the developing of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.*

Priority 2.1 – Preservation and promotion of the cultural and historical heritage

Indicative activities:

- Restoration, conservation, consolidation, protection, security of cultural and historical monuments, archaeological sites (including the corresponding access roads), museums, objects and art collections and their joint promotion based on relevant cross-border strategies/concepts;
- Preservation, security, and joint valorisation of cultural and historical monuments and objects;
- Cultural institutions networks aiming at the promotion of the cultural and historical heritage
- Support for specific and traditional craftsman activities, important for preserving local culture and identity.
- Promotion of specific and traditional activities in the eligible area (including cross border cultural events);
- Preserving, promoting and developing the cultural and historical heritage, mainly through cultural events with a cross-border dimension;
- Valorisation of the historical and cultural heritage through developing joint promotion strategies, common tourism products and services.

Indicative Beneficiaries:

- ❖ Museums, cultural/religious/higher education institutions;
- ❖ National /regional/ local public authorities and other public institutions;
- ❖ NGOs, cultural and tourism associations;
- ❖ Local business associations in the domain of traditional and craftsmen activities;
- ❖ International organizations.

TO7 - IMPROVEMENT OF ACCESSIBILITY TO THE REGIONS, DEVELOPMENT OF TRANSPORT AND COMMON NETWORKS AND SYSTEMS

Objective 3: *Improve public transport services, infrastructure and ITC cooperation and networking*

Priority 3.1 – Development of cross border transport infrastructure and ICT tools

Indicative activities:

- Reconstruction, rehabilitation, modernization of cross-border transport systems;
- Development of environmentally friendly (carbon-proofed) cross-border transport initiatives and innovative solutions;
- Improvements of multimode transport (road/water) facilities of cross-border interest;
- Reconstruction, rehabilitation, widening of cross-border (segments of) roads connecting settlements alongside the border with main road, which leads to the border;
- Improvement/restoration/construction of (segments of) access roads to centres of cross-border interest;
- Elaboration of joint strategies/policies/plans for improving the cross-border transport infrastructure;
- Development of cross-border connections, information and integrated communications network and services;
- Upgrading existing facilities to enable linkages between communities and public services which promote co-operation on a cross-border and wider international basis.

Indicative Beneficiaries:

- ❖ National /regional/ local public administration and other public institutions;
- ❖ State owned companies administrating transport and communication infrastructure.

TO8 - COMMON CHALLENGES IN THE FIELD OF SAFETY AND SECURITY

Objective 4: *Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint projects*

Priority 4.1 - Support to the development of health services and access to health

Indicative activities:

- Joint activities meant to enhance the access to health in the border area through construction/rehabilitation/modernization of infrastructure of public health services (including through the use of renewable energy etc.);
- Developing labs and mobile labs for screening/clinical monitoring of diseases and prevention of cross border epidemics;
- Equipping specific public medical service infrastructure (outpatient, emergency room facilities, medical centres, integrated social intervention, etc.);
- Joint training programs and exchange of experience, networking for supporting the functioning of the specific public medical services, telemedicine;

- Exchange of experience, joint activities in order to ensure compatibility of the treatment guidelines, joint diagnosis programmes;
- Awareness campaigns concerning public education on health, diseases and prevention of epidemics.

Indicative Beneficiaries:

- ❖ National /regional/local public administration and other public institutions
- ❖ National/regional/local/ institutions acting in the field of health and social policies;
- ❖ NGOs, universities and research institutes;
- ❖ Professional medical and other relevant associations.

Priority 4.2 – Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations

Indicative activities:

- Common measures for preventing land slide and flooding of the cross border areas;
- Joint integrated systems for efficient monitoring and disaster prevention and for the mitigation of consequences;
- Common strategies and tools for hazard management and risk prevention including joint action plans;
- Elaborating of joint detailed maps and databases (indicating natural and technological risks, and land use for regional planning authorities, environmental agencies and emergency services;
- Exchanging experience and knowledge, including raising awareness in the field of efficient risk prevention and management in the cross-border area;
- Development of integrated and common standards for the urban planning and risk management;
- Investments and development of common, integrated, emergency management systems;
- Planning co-ordinated actions of the authorities in emergency situations caused by natural and man-made disasters (flood, fire, heat waves, earthquakes, storms, etc.).

Indicative Beneficiaries:

- ❖ National/ regional/ county/local public administration and other public institutions acting in the area of mitigation of disaster risks and effects and emergency situations;
- ❖ Research institutes/organizations, universities, NGOs.

Priority 4.3 Prevention and fight against organised crime and police cooperation

Indicative activities:

- Common actions for increasing mobility and administrative capacity of police units (including border police);

- Creating collaborative working platforms in order to increase the efficiency of police, border police and custom structures in the exchange of data and information;
- Joint trainings of police, customs, border police, gendarmerie, exchange of best practices on specific areas of activity (analysis, criminal investigation, organized crime).
- Investment in construction, renovation or upgrading of police and border crossing infrastructure and related buildings;
- Investments in operating equipment and facilities specific for the activity of police/customs/border police/gendarmerie (e.g. laboratories, equipment, detection tools, hardware and software, means of transport);
- Developing common policies and strategies, experience exchange for fighting organised crime.

Indicative Beneficiaries:

- ❖ Custom services, border police, police, other national/regional/local public institutions acting in the area of crime prevention and police, professional associations.

LARGE INFRASTRUCTURE PROJECTS

The Programme will finance Large Infrastructure Projects, as follows:

1. «Clean river» Danube (OT8) 4.2

Activities:

- ✓ Reconstruction and modernization of sewage pumping (Ua);
- ✓ Conducting of monitoring and control of Danube waters for localization of anthropogenic discharges.

2. Improving the cross-border infrastructure – opening the gate to Europe (OT7) 3.1

Activities:

- ✓ Road construction works on the section Krasnoilsk – checkpoint “Krasnoilsk – Vikovu-de-Sus”;
- ✓ International conference in Suceava regarding transport and transit issues of the border area;

3. Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine (OT 8) 4.3

Activities:

- ✓ Consolidation/ refurbishment/ extension of space for territorial police structures;
- ✓ Construction of police facilities;
- ✓ Acquisition and equipping border police infrastructure.

4. Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management (OT 8) 4.1

Activities:

- ✓ Drafting the joint cooperation plan for emergency situations (including those for mountainous-based intervention);
- ✓ Building/ setting-up the training infrastructure;
- ✓ Upgrading and modernization of the State Service Department of Emergency Situations control centres (Ua);
- ✓ Building/setting up 2 heliports for aerial medical interventions (Ro).

3. THE RELEVANT ASPECTS OF THE CURRENT STATE OF THE ENVIRONMENT AND THE LIKELY EVOLUTION THEREOF WITHOUT IMPLEMENTATION OF THE PROGRAMME

The eligible area of the Programme has several ecological problems, as a result of the aggressive industrialised process before 1989, but within the international pollution limits. The major problems come from four main sources:

- The industrial emissions and the waste resulted from operating and closing the industrial platforms, that have a negative impact on air, soil and waters;
- Reduced management of waste, especial in the rural zones; having a direct effect on environment, if we take into consideration that there are no adequate facilities for their treatment;
- The usage of the chemical fertilizers and improper disposal of agricultural waste, with direct impact on soil and on water quality;
- The urban centres are the main generators of greenhouse gas (CO₂) and have a significant impact on air quality and generally on the environment, too.

There are now in the Programme area more than 1000 national and international protected areas and many historical sites.

If there won't be any projects financed from Programme Ro-Ua, the ecological status of the eligible areas both from Romania and Ukraine will not be directly influenced.

The projects that can be financed under the thematic objectives TO2 and TO3 are generally soft projects focused more on concept and exchange of experience related to education, research & development and innovation or rehabilitation and promotion of the historical heritage and they can have only an indirect impact on environment.

On the other hand, the projects implemented under TO7 and TO8 would have beneficial effects on the environment through the development of an infrastructure development at the border with a significant positive impact compared to the actual situation and through prevention of the landslides and flooding with a positive impact, too.

If the Programme Ro-Ua will not be implemented, the current status of the environment in the eligible area will stay unchanged with the possibility of deteriorating in time, affecting almost all the environment aspects: air, water, soil, biodiversity, waste management, archaeological and architectural heritage and landscape.

In case of certain indicative actions of the Programme when they are not performed, the effect can be beneficial to the environmental aspect - biodiversity, particularly in protected areas, because it does not intervene in the existing situation with various projects that would lead to a negative impact.

4. THE ENVIRONMENTAL CHARACTERISTICS OF AREAS LIKELY TO BE SIGNIFICANTLY AFFECTED

I. ROMANIA

Characterization of the situation of air and soil quality in the five counties of Romania that are in the eligible area of the Programme was based on the environment reports made by Local Environmental Protection Agencies.

Information and data on water resources and their description were taken from the following projects:

- Somes - Tisa River Area Management Plan;
- Prut - Barlad River Area Management Plan;
- Siret River Basin Management Plan;
- Danube River Delta Danube River Area Dobrogea and coastal waters Management draft Plan.

These Plans were published on the websites of the National Administration of Romanian Waters and Somes – Tisa, Prut – Bârlad, Siret, and Dobrogea Costal Water Branches.

Somes -Tisa river basin is located in the north and northwest part of the country, bordered in the north by the natural boundary - the river Tisa with Ukraine over a length of 61 km, at west of the border with Republic of Hungary and on the territory of the country with Siret basin to east, Mures basin at the south and Crisuri basin to southwest (fig. 4.1).

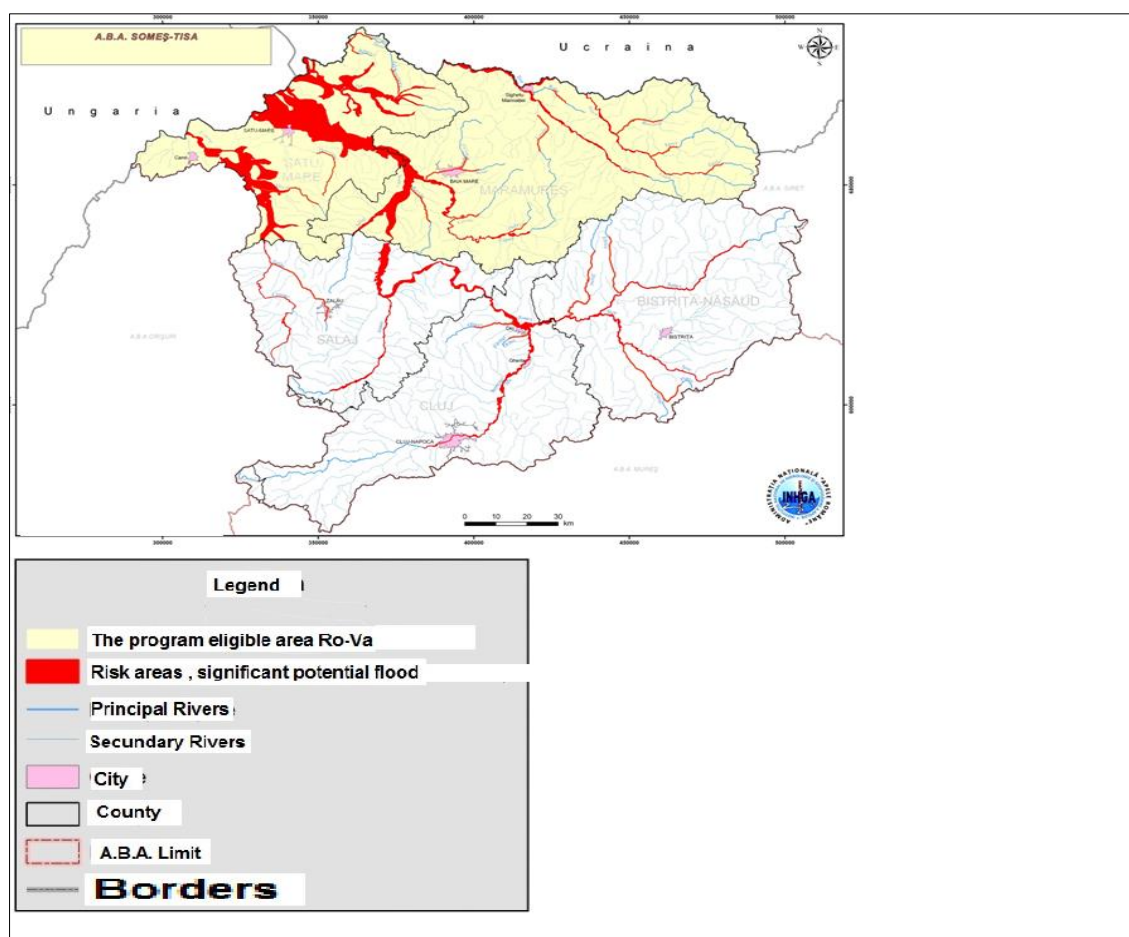


Figure 4.1 Somes –Tisa river basin

From an administrative point of view, hydrographic area r Someș - Tisa includes the territory of 7 counties: Cluj, Salaj, Bistrita - Nasaud, Maramures, Satu Mare, Alba and Bihor. The weight of the last two is not significant.

Hydrography

The total area of Someș -Tisa hydrographic area is of 22,380 km², representing a share of 9.4 % of the country. The hydrographic network comprises a number of 580 coded water streams with a total length of 7,828 km and an average density of 0.35 km/ km².

In Romania, the hydrographic area Someș – Tisa includes sub-basin Tisa (including Tur) with a total of 123 encoded water streams (surface 4,540 km² and network density 0.35 km/km²), Someș with 403 encoded rivers (15,740 km² area network density 0.35 km km²) and Crasna with 54 encoded water streams (area 2,100 km² and network density 0.34 km/km²) .

LAND USE

Regarding land use throughout the Someș – Tisa hydrographic area, there is an uneven distribution of forests, grasslands, farmland, urban and industrial land, depending on the type of relief of those areas.

Agricultural lands are prevalent in all three hydrographic sub-basins: Tisa (51.9%), Someș (64.3%) and Crasna (72.1%). Forests cover a grand surface in the sub-basin Tisa (42.8%) in other sub-basins the share is below 30% (28.3% Someș and Crasna 18.2%). Other forms of land use occupy smaller areas of the habitat. Urban areas with water bodies account for about 7% of the total area.

WATER RESOURCES

Water resources stationed in Someș -Tisa river basin could be considered relatively modest (but still sufficient) and unevenly distributed in space and time.

Theoretical total resource has an annual average stock of 6,593 million m³, out of which the usable technical resource is 1,316 million m³, i.e. 20%. The main component of water resources is composed of the surface water of the river system which ensures an average hydrological year million m³ leak a volume of 6110 (theoretical resource), of which 16% is usable technical resource (approximately 971 million m³). Of this, 70% is provided in a natural regime (650 million m³) with Tisa, Someș, Vișeu, Someșul Mic, Lăpus, Iza and Șireu and their tributors as the main courses and the rest by accumulations.

Reported to the basin population, specific usable resource is 504 m³/person/year and the specific resource relative to the theoretically available stock (annual average) amounts to 3,504 m³/person/year. Water resources stationed in the Someș-Tisa basin area are sufficient, with a reserve potential.

Annual average flow of the river Someș records at hydrometric station Satu Mare, near the exit from the country, a value of 125 m³/s, for a surface of 15,600 km² (specific rate 8.01 l/s/km²), with significant hydrological contribution rivers: Sieu (15.1 m³/s), Someș Mic (21.2 m³/s), Lapus (19.3 m³/s).

For the Tisa River when leaving the country an annual average flow of aproxsimative 130 m³/s has been calculated, for a total area of the river (including Ukraine) of 6,423 km²

(specific rate 20.2 l/s/km^2), with important hydrological contribution on the Romanian territory of rivers Viseu ($33.9 \text{ m}^3/\text{s}$) and Iza ($16.6 \text{ m}^3/\text{s}$).

It can be observed that the Tisa River has a specific flow three times higher than river Someș, although the surface of Tisa basin is half that of the Someș basin, as a result of heavy rainfalls which are registered in the catchment area of the Tisa. The area with low water resources is Crasna River basin, which is characterized by low leakage due to morphological factors (low-altitude, low rainfall and high temperatures). At Domănești hydrometric station, near the border with Hungary, an average flow of $3.5 \text{ specific l/s/km}^2$ is recorded.

Resources of groundwater inventoried at the basin level are: theoretically groundwater 483 million m^3 and usable 316 million m^3 , being constituted in proportion of 62.3% from phreatic aquifers and 41% depth waters.

WATER SURFACE CATEGORY

In the Someș-Tisa hydrographic river space there are the following surface water categories: 521 rivers with surfaces greater than 10 km^2 and 13 lakes with surfaces greater than 50 ha. Also there have been selected three natural lakes with surfaces lower than 50 ha.

Rivers

Tisa River – springs from Carpatii Padurosi in the western territory of Ukraine, forms the natural border between Romania and Ukraine over a length of 61 km between the localities of Viseu and Piatra and flows into the Danube on the territory of Hungary.

On the Romanian territory, Tisa basin covers an area of $4,540 \text{ km}^2$, with an average slope of 2‰, collecting waters from 115 watercourses with areas greater than 10 km^2 , with a total length of 1,557 km.

Viseu River - with the surface of $1,581 \text{ km}^2$ and a total length of 82 km, springs from Maramures Mountains in the Pasul Prislop area at an altitude of 1,535 m, drains southwest slopes of these mountains and northern Rodnei Mountains through right side tributaries Cislă, Vaser, Ruscova and Frumuseaia.

Iza River – with the surface of $1,293 \text{ km}^2$ and with a total length of 80 km, has its source in Rodnei Mountains at an altitude of 1,275 m, collecting waters through left side tributaries springing from Gutaiul and Tiblesului Mountains. The main tributaries of Iza are Boicu, Ieud, Botiza, Mara Cosău and Rona (right side tributary).

Someș River drains a water catchment area of $15,740 \text{ km}^2$, including 362 watercourses with areas greater than 10 km^2 and with a total length of 5,263 km.

Little Someș River with the surface of $3,773 \text{ km}^2$ and total length of 178 km is the most important tributary of Someș. It is formed by the union of Someș Cald and Someș Rece, rivers with springs in Vlădeasa and Gilau Mountains.

Lapus River is almost the sole collector in the southern slopes of the volcanic mountains of Gutai – Tibles and of the Lapus Mountains and with a strong right asymmetry. Basin covers an area of $1,875 \text{ km}^2$ and a total length of 119 km.

Natural lakes

In the hydrographic space of Someș -,Tisa River haven't been inventoried lakes with areas exceeding 0.5 km^2 .

Characterization of the ecological and chemical state of the waters in the Someș – TISA basin

In the Someș – Tisa hydrographic area were analyzed and characterized from the point of view of the status/ ecological potential of a number of 278 water bodies (246 naturals and 32 heavily modified natural/artificial) out of which:

- 130 water bodies (representing 52.84% of the natural water bodies and 46.76% of the total of 278 water bodies) are in good ecological status and 11 water bodies (representing 34.37% of water bodies heavily modified / artificial and 3.95% of the total of 278 water bodies) are in good potential; the remaining 137 water bodies don't have an equally good ecological status or ecological potential;
- 230 water bodies (representing 93.50% of the natural water bodies and 82.73% of the total of 278 water bodies) have good chemical status and 30 water bodies (representing 93.75% of water bodies heavily modified/artificial and 10.79% of the total of 278 water bodies) are in good chemical status; the remaining 18 water bodies have a bad chemical status.

Prut - Barlad hydrographic area consists of middle and lower basin of Prut river, Barlad hydrographic basin and left side tributaries of the Siret river in Botosani and Galati counties (fig. 4.2).

Prut River Hydrographic Basin is located in the north- east side of the Danube basin, bordering northwest Tisa River Basin and Siret River Basin to the west and Nister in north and east. The total area of the basin is of 27,500 km² and is spread on the territory of three countries: Ukraine, Romania and Republic of Moldova. The second longest tributary of the Danube, Prut River (952.9 km) forms the border between Romania and Ukraine, 31 km and between Romania and Republic of Moldova on 711 km.

Barlad river basin, left side tributary of the Siret River, is bounded in the north and east by the Prut river basin.

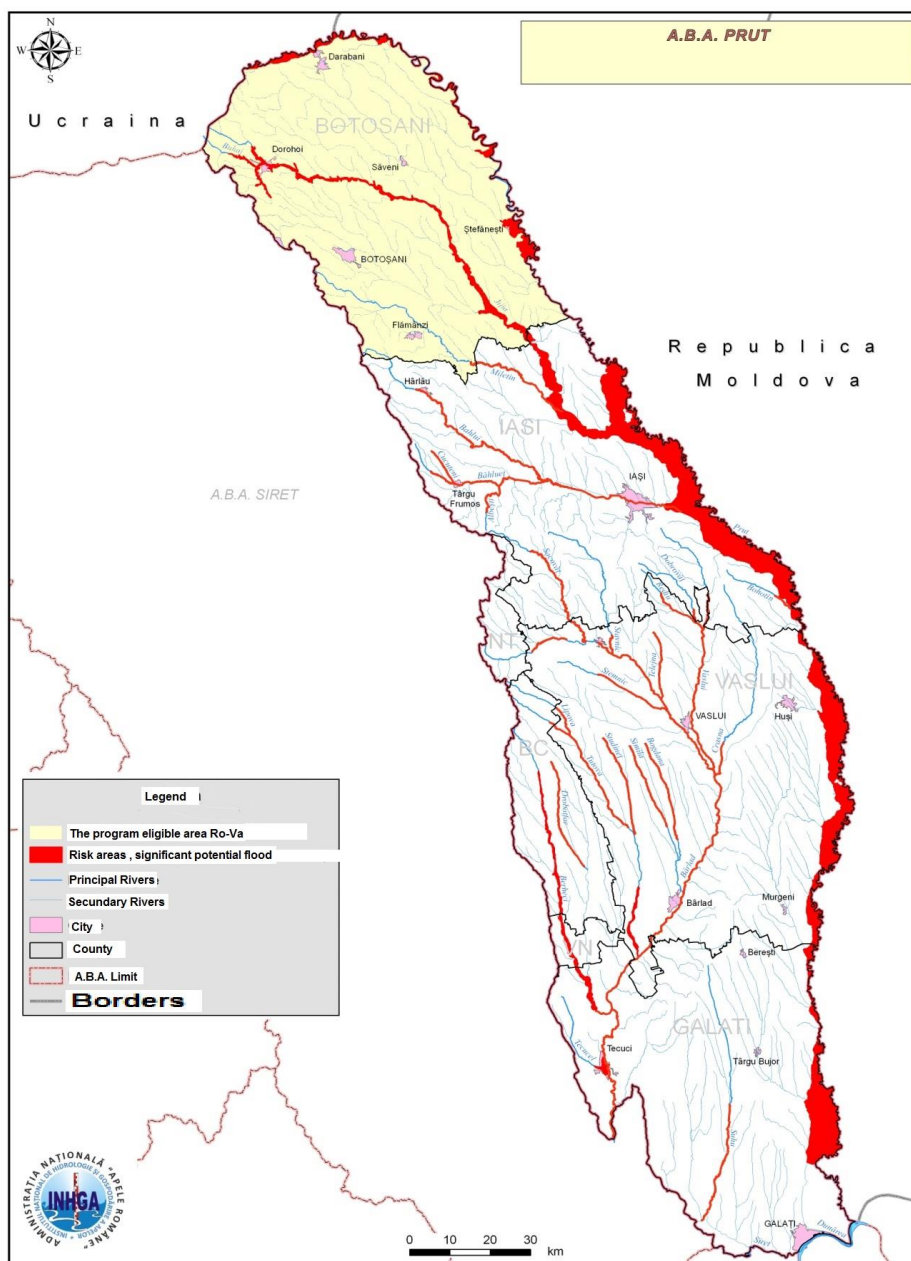


Figure 4.2 Prut – Bârlad River Bazine

From the administrative point of view, hydrographic area of the river Prut - Barlad occupies almost entirely the counties of Botosani, Iasi, Vaslui and Galati and partly counties of Neamt, Bacau and Vrancea. Prut River Hydrographic Basin in Romania has a reception area of 10,967 km² (approximative 4.6% of the surface of the country). Barlad River, the largest tributary of the Siret left, has a catchment area of 7,220 km².

As a feature of the hydrographic space Prut - Barlad, 80% of the hydrographic network is made up of non-permanent courses out of which 60% are temporary (drying up phenomenon occurring in the upper course due to periods without rainfall) and 18% are semi-permanent courses, the flow being registered only during rainfall periods.

Hydrography

The total surface of the Prut - Barlad hydrographic area is of 20,267 km² representing a share of approx. 8.7% of the country's surface. The hydrographical network comprises a number of 392 registered watercourses, with a total length of 7,679 km and an average density

of 0.38 km/km². In Romania, the Prut - Barlad hydrographic area includes the following sub-basins: the middle and lower basin of the Prut river, Barlad river basin and left tributaries of the Siret river in Botosani and Galati county with a total of 392 registered watercourses.

Land Use

Use of the land within the catchment area Prut - Barlad is influenced by physical and geographical conditions and anthropogenic factors.

Arable land predominates both in the river Prut basin (54.7%) and in the river Barlad basin (46%). Forests, occupying 21.4% in the river Prut basin and 27%, in the Barlad river basin are developed especially in areas of contact with high plateau relief.

Perennial crops have a relatively uniform development occupying 13.3% in the river Prut and 16.1% in the river Barlad basin. Other areas occupy much smaller areas. The water bodies occupy a share of 1.19% in the river Prut hydrographic basin and 0.26 in the river Barlad hydrographic basin.

Water resources

Total resources of surface water in the hydrographic basin Prut - Barlad amount to about 3661 million m³/year, out of which about 960 million m³/year are usable. The stock of 3,661 million cubic meters/ year, representing about 94% of total resources and consists mainly of rivers Prut , Barlad and their tributaries. The water resources of the natural lakes are very low.

In the Prut - Barlad hydrographic area, there are 72 main accumulations (greater than 0.5 km²) out of which 49 have complex usage and have a total volume of 614.85 million m³.

Relative to the basin population, specific usable resource is 437.16 m³/person/year and the specific resource determined as stock available theoretically (multiannual average) amounts to 1667.12 m³/person/year. Water resources stationed in the Prut - Barlad hydrographic area might be considered low and unevenly distributed in space and time.

The average multi-annual flow rates for major rivers in the hydrographical river area are: Prut 105 m/s (3.314 mil. m³/year) to Danube confluence, Jijia is 10 m/s (316 mil. m³/year), Barlad to 11 m/s (347 mil. m³/year to Siret confluence, Vaslui 1 m/s (31.56 mil. m³/year), Tutova 1 m / s (31.56 mil. m³/year).

Of the total length of registered watercourses in the hydrographic area Prut - Barlad, temporary watercourses represent about 80%.

In the Prut - Barlad hydrographic area the usable underground water resources are estimated at 251.4 mil. m³ (7.97 mc/s) aut of which 34.7 mil. m³ (1.1 m/s) mil. are from phreatic sources and 216.7 mil. m³ (6.87 m/s) are from deep underground sources.

Categories of surface water

In the Prut - Barlad river area –417 rivers are identified with surfaces greater than 10 km², 7 natural lakes with surface greater than 0.5 km², one natural lake substantially modified, 72 lakes (reservoirs and a natural lake) with areas greater than 50 ha and 262 pools.

Characterization of the ecological and chemical state of the waters in the PRUT – BÂRLAD basin

In the Prut – Bârlad hydrographical area were analyzed and characterized from the status/ecological potential point of view 322 water bodies (228 naturals and 94 heavily modified natural/artificial) out of which: 75 (32.89%) water bodies are in good ecological status, 16 (17.02%) water bodies have a good ecological potential; the remaining 231 (71.73%) water bodies having a moderate ecological status or moderate ecological potential.

Ecological state and potential on categories of water bodies is presented below:

- 228 natural water bodies out of which 75 (32.89%) have a good ecological status and 153 (67,1%) have a moderate ecological status;
- 91 substantially modified water bodies out of which 17 (18.68%) have a good ecological potential, 51 (56,04%) have a moderate ecological potential and the evaluation for 23 (25.27%) substantially modified water bodies is irrelevant;
- 3 (100%) artificial water bodies with a moderate ecological potential

Siret hydrographical river area is situated in the east, north east of the country, bordered by the Siret River, adjoining Someș - Tisa, Mureș River river basins to the west, by Ialomița - Buzău basins to south and by Prut basin to east (Fig. 4.3).

Siret River Basin is located in the east - north - east of the country and is the largest river basin in Romania. Siret River is the most important Danube tributary with an annual average flow, at spill, of approx. 250 m/s and represents the largest river basin in Romania.

Siret River Basin has a total area of 44.811 km² out of which 42.890 km² in Romania.

From the administrative point of view, the Siret hydrographic space fully occupies the Suceava county, almost entirely Neamț, Bacău and Vrancea counties and partially Botoșani, Iași, Galați, Buzău, Covasna, Harghita, Bistrița-Năsăud, Maramureș.

Hydrography

In Romania the total surface of the Siret river hydrographical area is 28,116 km² representing a share of 11.8% of the country surface. The hydrographical network comprises of 735 watercourses surveyed, with a total length of 10,280 km and an average density of 0.36 km/km². In Romania, Siret river area includes part of the Siret basin with a total of 735 registered watercourses.

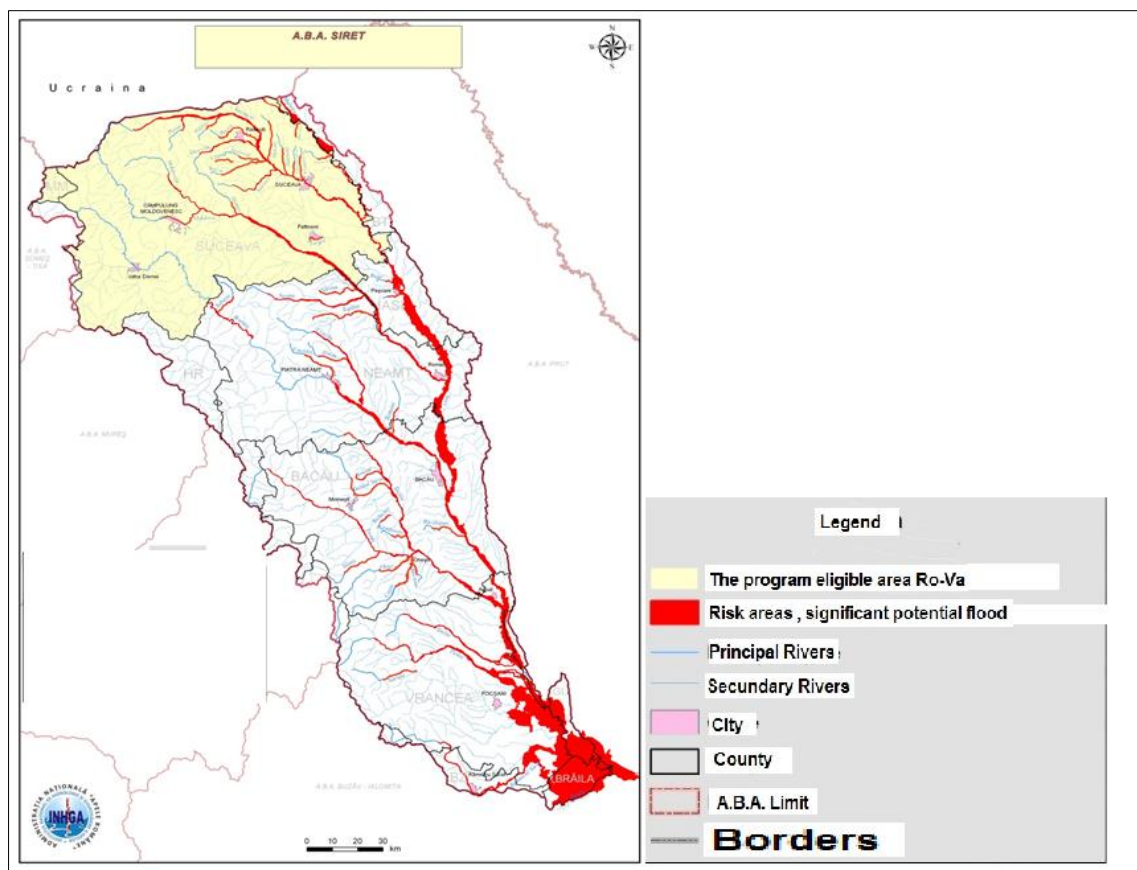


Figure 4.3. Siret River Bazine

Characterization of the ecological and chemical state of the waters in the SIRET basin

Rivers

In the Siret hydrographical area were analyzed and characterized from the ecological state/ potential point of view 362 water bodies (333 naturals and 29 heavily modified /artificial) out of which:

- 230 water bodies (representing 69,06 % of natural water bodies and 63.5% of 362 water bodies) are in very good and good ecological status and 17 water bodies (representing 58.62 % of heavily modified/ artificial water bodies and 4.7% of 362 water bodies) have a maximum and good ecological potential; 115 water bodies have a less than good ecological status/ potential.
- 333 water bodies (representing 100% of the natural water bodies and 91.98 % of the 362 water bodies) are in good chemical state and 29 water bodies (representing 100% of the water bodies heavily modified/artificial and 8.02% of 362 water bodies) are in good chemical state.

Land use

Use of the land in the Siret River Hydrographic Basin is influenced by existing physical and geographical conditions as well as by the main economic activities developed in this area and have the following distribution: 58,29% forests, 12.17% grasslands, 22,7 agriculture land, 0.59% water surface

The areas of forests and shrubs are predominant (58.29 %); and developed on compact and extended areas in areas with high relief. Perennial crops and heterogeneous agricultural areas (12.17 %) have a relatively uniform development throughout the basin area. The areas of

arable land lie in the east side of the basin in the plateau area and along the Siret river meadow at the rate of 22.7 %.

Water resources

Total surface water resources of the Siret river area account to approx. 6,868 mil. m³/year out of which usable resources are about 2,655 mil. m³/year. These are approx. 38.6% of total resources and are mainly formed by the rivers Siret, Moldova, Bistrita, Trotuș and their tributaries.

The Siret river area comprises 21 major reservoirs (with area more than 0.5 km²), with complex usage and accounting for a useful volume of 1206.121 mil.m³.

Relative to the basin population, specific usable resource is of 1,025 m³/person/year and the specific resource determined as stock theoretically available (multiannual average) amounts to 2.651 m³/person/year. Water resources stationed in the Siret river area might be considered moderate from quantitative point of view and unevenly distributed in space and time.

The average multi-annual flow rates for major rivers in the Siret river hydrographical area are:

- Siret River, has when entering the country in Siret Section a multiannual average flow of 13.0 m³/s. Flows are increasing in downstream especially after major confluences. Thus, at Lespezi (downstream of the Suceava confluence) is 36.5 m³/s, at Drăgești (downstream of the Moldova confluence) is 75.1 m³/s, at Răcățoiu (downstream of Bistrita confluence) is 140 m³/s and at Lungoci (downstream of the confluence with Trotuș and Putna) - 210 m³/s;
- Moldova River, where water flow and silt grow lengthwise, so that annual average flows (multiannual values) are: 3.75 m³/s at Fundu Moldova, 7.56 m³/s at Prisaca Dorna, 18.1 m³/s at Gura Humorului, 35.5 m³/s at Tupilati and the same value at Roman;
- Bistrita River, is the most important Carpathian tributary of the Siret River. Due to the fact that its hydrographical area drains the highest mountain establishments in the Eastern Carpathians, the water flow is rich. Multiannual average flow at the Bistrița confluence with Siret is, 62.5 m³/s;
- Trotuș River has multiannual average flows of 0.773 m³/s at Lunca de Sus, 3.52 m³/s at Ghimeș Faget, 6.38 m³/s at Goioasa, 17.0 m³/s at Tg. Ocna, 25.1 m³/s at Onesti and 35.2 m³/s at Vrancea.

Of the total length of registered watercourses in the Siret river hydrographic area, temporary watercourses area is about 5.3.%.

In the Siret river hydrographical area the groundwater resources are estimated at 700 mil.m³ (usable resource), of which 578 mil.m³ are from phreatic sources and 122 mil.m³ are from deep underground water.

CHARACTERIZATION OF SURFACE WATER

In the Siret river hydrographical area 695 rivers are identified with areas greater than 10 km² and 21 accumulation lakes with areas greater than 50 ha.

Rivers

Siret River, which is part of the cross-border Rivers, springs from the Carpatii Padurosi Mountains and after entering the territory of Romania collects all tributaries that descend from the eastern slopes of the Eastern Carpathians.

Siret has a total length of 647 km from its source under Obcina Lungru to the place where it flows into the Danube near Galati (at Şendreni).

Suceava River - springs from the mountains Bucovina (Suceava County) and flows into the river Siret near the village Liteni (Suceava County), having a length of 173 km. Suceava River Hydrographical Basin has an area (in Romania) of 2,298 km² and contains a number of 72 encoded waterstreams. The main tributaries of the river Suceava are: Putna, Pozen, Sucevița, Şomuz, Solca, Hora, Soloneț Hătnuța, Dragomirna.

River Moldova - Moldova River has a length of 213 km and an area of the hydrographic basin of 4,299 km², with an average altitude of 674 m. It springs from the northern side of Obcina Lucina - Mestăcaniș at an altitude of 1,116 m and flows into Siret river downstream from the Roman (Neamt county), having a length of 213 km and an area of 4,299 km².

The main tributaries of the river Moldova are: Sadova, Moldova, Suha, Humor, Suha Mica, Suha Mare, Rasca, Neamt, Nemțisor, and Toplița.

Bistrita River - springs from Rodnei Mountains (Suceava County) and flows into river Siret downstream of the Bacau municipality. It is the largest tributary of Siret River and has a length of 283 km and collects water from an encoded hydrographic network with a number of 193 watercourses. Bistrita river basin covers an area of 7,039 km².

The main tributaries of the river Bistrita are: Dorna, Neagra, Borca, Sabasa, Bistricioara, Putna, Bicaz, Damuc, Tarcău, Cracău, Romani, Trebes.

Trotuș River - springs from the mountains Ciuc (Harghita County) and flows into the Siret River downstream from the city of Adjud (Vrancea). It has a length of 162 km and an area of the hydrographic basin of 4,456 km². Among the major tributaries of Trotuș are: Uzul, Slănicul, Oituzul, Cașinul, Tazlăul.

Putna River - springs from Vrancea Mountains and flows into the Siret River in Vrancea County. It has a length of 153 km and a catchment area of 2,480 km². The hydrographic network includes a number of 62 encoded water streams. Of these the most important are: Zabala, Sturza, Milcov, Ramna, and Naruja.

Ramnicu Sarat River - stems from Subcarpații de Curbură (Buzau County) and flows into the river Siret in the Maicanesti - Nămolosa area (Vrancea County). It has a length of 137 km and a catchment area of 1,063 km². The hydrographic network has a total of 16 encoded waterstreams. The main tributaries of the river are: Greaban, Cotatcu, Viraaao, Slimnic.

Natural Lakes

In Siret river hydrographical area there are no natural lakes with a surface less than 0.5 km².

Dobrogea hydrographical area, Danube Delta and coastal waters are located in the south-east part of the country, being bounded as follows:

- Dobrogea Basin Area: north and north - east by the Danube Delta, east by the Black Sea coastal waters, south by the border with Bulgaria, and west by the Danube River;

- Danube Delta: north by the border with Ukraine, by the Black Sea to the east, at south and west by Dobrogea Hydrographic Area;
- Coastal Waters: north of the border with Ukraine, east of the Black Sea, south of the border with Bulgaria and west of Dobrogea Hydrographic Area and the Danube Delta Basin Area.

From the administrative point of view, Dobrogea and the Danube Delta Basin Area comprise the territories of two counties, namely: Constanta and Tulcea.

Romanian Black Sea coastal waters are represented by surface water situated between land and the 1 nautical mile distance from the nearest point of the baseline (baseline is defined by nine points in the territorial sea of Romania, as specified in Law no. 17/1990 with subsequent amendments and supplements), being located between Chilia and Vama Veche.

Danube river hydrographic basin covers about 10% of the surface of the continent. By its length of 2,780 km, catchment area of over 801,463 km² and annual average flow of about 6,500 m³ / s, the Danube is, after the Volga, the second river in Europe. 97.4% of Romania is located in the Danube river basin, which is 29% of the Danube hydrographic basin, being the country with the largest area in the Danube basin. Also 37.7% of the Danube's length flows on Romanian territory. Due to physico - geographical distribution and character of the hydrological regime, the Danube is divided into three sections: the upper Danube (source - Vienna), Middle Danube (Vienna - Portile de Fier) and Lower Danube (Portile de Fier - Black Sea). The lower course of the Danube forms the state border between Romania and Serbia and Romania and Bulgaria.

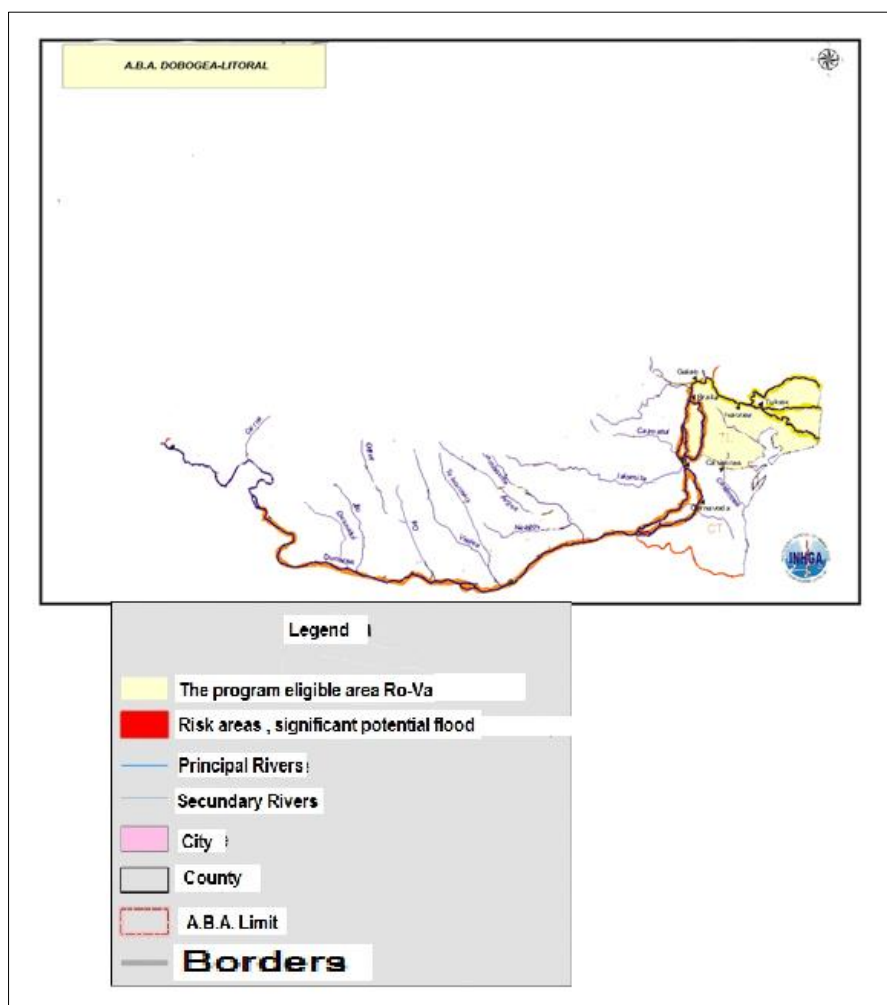


Figure 4.4 Danube River, Danube Delta, Dobrogea hydrographical area and Coastal Waters

Important tributaries of the Danube river are the rivers: Timoc, Lom, Ogosta, Iscar, Vit, Osam and Iantra on the right shore and Jiu, Olt, Arges Vedeia, Ialomita, Siret and Prut, on the left. Danube's water resources in Baziaş section are 175.6 billion m³ out of which 30 billion m³ are technically usable resources.

Land use

The land use of Dobrogea hydrographical area is influenced by physical and geographical conditions as well as by antropogenic factors and has the following distribution: 20.33% forests, 1.02% grasslands, 71.09% agriculture land, 2.49% water surface, etc.

In Danube Delta the forests represent a share of 11.66%, grassland 1.3%, agricultural land 12.70%, and the water surface accounts for the main share of 73.14%.

Water resources

Total surface water resources of the Danube river area (Chiciu – Isaccea sector) Danube Delta and Dobrogea hydrographical area account for approx. 404,136.4 mil.m³/year out of which usable resources are about 51,380.8 mil.m³/year. These are approximative 12.71% of total resources and are mainly formed by the Danube River.

Dobrogea hydrographical area comprises 4 major reservoirs (with area greater than 0.5 km²), with complex usage and accounting for a useful volume of 24.45 mil.m³.

Relative to the Danube Delta and Dobrogea hydrographical area population, specific usable resource is 53,138 m³/person/year and the specific resource determined as theoretically available stock (multiannual average) amounts to 417,961 m³/person/year. Water resources stationed in Dobrogea hydrographical area might be considered low and unevenly distributed in space and time.

The average multi-annual flow rates for major rivers in the Dobrogea hydrographical area are: 0.486 m³/s – Taiţa, 0.632 m³/s – Casimcea, 0.305 m³/s – Topolog, etc.

Of the total length of registered watercourses in Danube River, Danube Delta, Dobrogea hydrographical area and Costal Waters, temporary watercourses represent about 6%.

In Dobrogea hidrographical area the underground water resources are estimated at 2,090.818 mil.m³ (usable resource), out of which 372.27 mil.m³ are from phreatic sources and 1,718.54mil.m³ are from deep underground water.

Characterization of surface waters

The categories of surface waters considered are Danube River and accumulation lakes Porţile de Fier I and II.

The Danube River

The hydrological regime of the river Danube is relatively uniform; the ratio between the minimum flow and maximum flow rate is of 1/10, compared with the regime of inland courses for which the previously mentioned report varies between 1/200 and 1/2000.

Porţile de Fier

Porțile de Fier Lake was developed in 1972 and has a volume of 2.1 million m³ and Lake Porțile de Fier II was opened in 1986 and has a volume of 800 million m³. These lakes have retention times < 1 day.

General characterization of the Danube Delta: Danube Delta, the youngest geographical unit in Romania (the first embryo appeared 12,000 years ago) and the second largest deltaic unit in Europe (after the Volga Delta) is a unique complex of ecosystems. In the Danube Delta there are distinguished on the one hand positive forms of relief, made up of promontories of Bugeac plateau, fluvial, coastal storage formations formed by the juxtaposition of numerous ancient coastal belts (marine areas) and the actual sea banks, and on the other negative form of relief covered by water, that make up the Delta river hydrographic network..

Danube Delta covers an area of 4,757 km², accounting for a share of 2% of the country surface. Danube Delta existing hydrographic network is represented by the three branches of the Danube River with a total length of 290 km and an average density of 0.06 km/km². In addition to the three arms of the Danube River, there is a network of canals, streams, creeks, low hollows, unregistered, linking Delta's lakes and the three arms of the Danube River.

Danube Delta Biosphere Reserve lies on Romanian territory over an area of 5,800 km² and on the Ukrainian territory on an area of 465 km². The components of the Danube Delta Biosphere Reserve on Romanian territory are:

- 3,510 km², Actual Delta (Romanian sector);
- 1,145 km², Razim – Sinoie lake complex;
- 1,030 km², marine waters (up to isobaths - 20 m to the southern tip, Cape Midia);
- 13 km², Danube riverbed between the Cotul Pisicii and Isaccea (Romania);
- 102 km², Danube floodplain between Isaccea and Tulcea.

Hence, the characteristics of water flow depend on the structure of territorial geographic units. The waters that reach the Delta are:

- Chilia Arm, through the canals: Sireasa, Șontea, Pardina;
- Sfântu Gheorghe Arm, through the canal Litcov;
- Sulina Arm, through side canals,

Characterization of the ecological and chemical state of the DANUBE RIVER, DANUBE DELTA, DOBROGEA hydrographic area and coastal waters

Rivers

In the Danube River, Danube Delta and Dobrogea hydrographic area out of the 115 water bodies there have been analysed and characterized from ecological state/potential point of view: 93 (81%) water bodies (79 natural (69%) and 14 heavily modified/ artificial (12%)), out of which:

- 57 (61%) water bodies have a good ecological status;
- 8 (9%) water bodies have a maximum and good ecological potential;
- The remaining 22 water bodies are lakes used for fishing and treatment, and that is why their ecological status has been considered irrelevant and unapplicable to these Water Bodies having a special situation, until new environmental objectives will be defined.

At the level of the Danube River, Danube Delta, Dobrogea hydrographical area and Coastal Waters Area, all 115 water bodies were analyzed and characterized chemically, out of which 112 (97%) water bodies reach good chemical status and 3 (3%) do not reach the status from a chemical point of view.

4.1 Botoșani County

➤ AIR

Sulphur dioxide (SO₂)

In 2013 total SO_x emissions were 115,603 Mg resulted mainly from residential heating combustion and food cooking (95%), commercial and institutional heating (3%).

SO_x emissions increased in 2013 due to the inventory inclusion of a large number of municipalities (10 municipalities in 2012 and 42 in 2013).

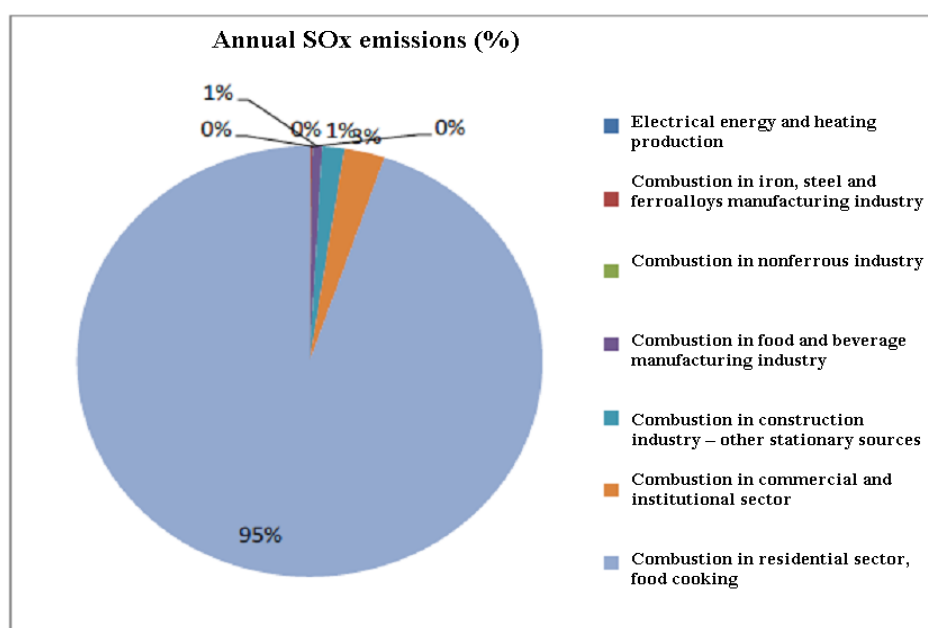


Figure 4.1.1 Annual SO_x emissions (%)

Nitrogen oxides (NO_x)

In 2013 the total NO_x emissions were 1335.530 Mg, mainly resulting from road traffic (68%), combustion for residential heating and food cooking (24%), commercial and institutional heating (7%). Total NO_x emissions decreased from the previous year to 53.06% due to lower emissions from road traffic.

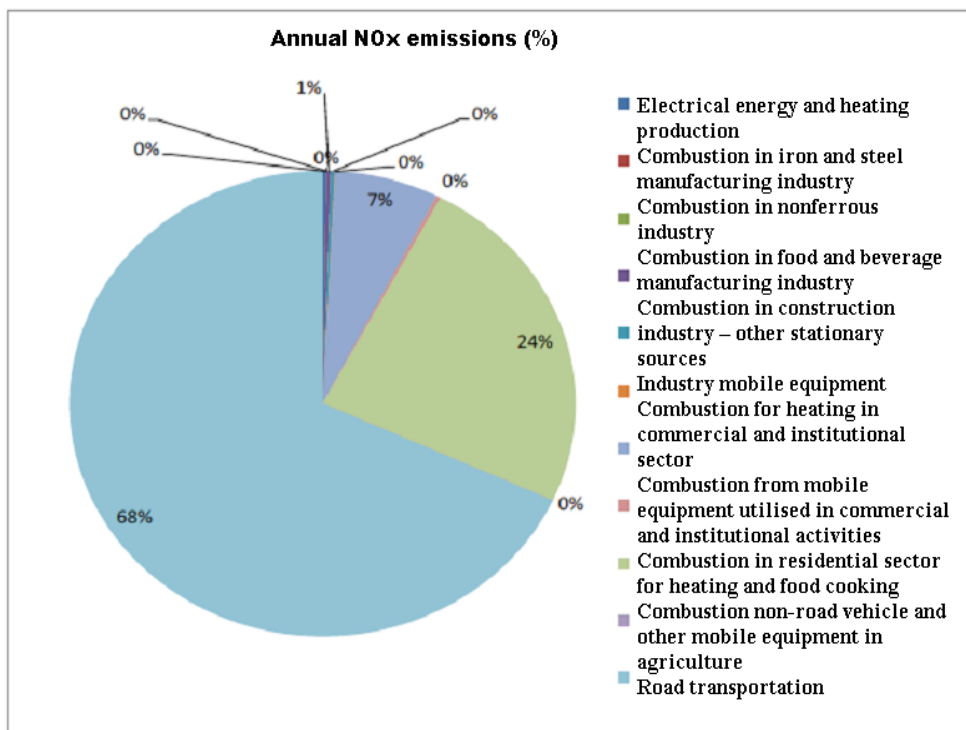


Figure 4.1.2 Annual NO_x emissions

In 2013 the amount of energy produced in cogeneration by SC MODERN CALOR SA was 135,807 MWh of which 73,940 MWh heat and 61,867 MWh electricity.

In the year 2013 air quality monitoring was as follows:

- By continuous measurements performed by the automatic Urban background exposure station for the following pollutants: SO₂, O₃, BTEX- VOCs and PM₁₀;
- Gravimetric measurements - for particulate matter (PM₁₀ and PM_{2.5});
- Rainfall quality measured in EPA Botosani point, with the following pollutants monitored: pH, conductivity, alkalinity / acidity, hardness, SO₄²⁻, NO₂⁻, NO₃⁻, NH₄⁺, Cl, Ca²⁺ and Mg²⁺.

Urban background exposure station is placed in the residential area with high population density located at a sufficient distance from stationary or mobile sources and is designed to assess air quality.

Nitrogen dioxide

In 2013 it was not possible to make continuous measurements through automatic air quality monitoring stations (in Botosani) as the NO_x analyser was defective.

Sulphur dioxide

According to Law no.104/2011 on air quality, recorded sulphur dioxide values were well below the hourly limit (350 µg/m³) and also under the daily limit value (125 µg/m³) for the protection of human health.

There was no exceeding of the alert threshold of 500 µg/m³, measured during three consecutive hours.

Particulate matter

In 2013, the frequency of exceeding the daily limit value for PM₁₀ protection of human health (50 µg /m³) was 6.86% and 14.09% for PM₁₀ nephelometry. During 2013 there were 23 overflows of particulate matter determined by the gravimetric method.

Encountered exceedings were due to: traffic, road works, thermal plants operation and weather conditions (atmospheric calm), that favoured keeping pollutants close to the ground.

In 2013 there were no accidental pollutions with major impact on the environment and citizens.

➤ SOIL

According to data provided by the Department of Agriculture and Rural Development Botosani, changes in the distribution of land use by categories in the period 2008 - 2013 were as follows:

Tabele 4.1.1 Evolution of the distribution of agricultural land by category of use

	Category of use	Area (ha)					
		2008	2009	2010	2011	2012	2013
1	Arable	298,774	298,762	298,762	298,739	298,747	298,742
2	Grassland	75,381	75,146	75,146	75,146	75,146	75,146
3	Meadows and natural grassland	14,635	14,635	14,635	14,635	14,635	14,635
4	Vineyards	1,690	1,690	1,690	1,690	1,680	1,680
5	Orchards	2,559	2,559	2,559	2,559	2,559	2,559
Total land		393,039	392,762	392,792	392,769	392,767	392,762

Source: INSSE-Tempo online

In relation to the suitability for field crops, arable land is grouped in 6 suitability classes which take into account the nature and intensity of restrictive factors for production. The situation in Botosani County in 2013 is presented below:

Tabel 4.1.2 Division of agricultural lands depending on soil types in Botoşani county

No.	Specification	M.U.	Soil Worthiness classes						
			I	II	III	IV	V	VI	Total (ha)
1	Arable	ha	14,379	110,009	119,055	36,973	18,331	0	209,739
2	Grassland	ha	1,503	12,775	8,266	48,845	3,757	0	75,146
3	Meadows	ha	293	2,488	1,609	9,513	732	0	14,635
4	Vineyards	ha	0	0	23	600	1,067	0	1,680
5	Orchards	ha	33	395	11	117	2,003	0	2,556
	TOTAL	ha	16,208	125,667	128,956	96,048	25,890	0	392,769

Source: DA Botosani

During 2013, in Botosani County did not occur major environment pollution accidents leading to soil contamination.

4.2. Maramureş County

➤ AIR

Sulphur dioxide (SO₂)

In 2013, from the analysis of inventory of emissions of pollutants into the atmosphere in the Maramures County didn't result any SO₂ emissions. Evolution of the annual emissions of the sulphur dioxide into the atmosphere over the past ten years is shown in **Table 4.2.1**:

Table 4.2.1 Annual emission of SO₂

Maramures county total	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual emission SO ₂ (t/year)	726	618.8	353.5	2,426.2	1,098.5	1,197.9	1,049.3	481.4	2.76	0

Nitrogen oxides (NO_x)

The main sources of emissions of nitrogen oxides are combustion in residential facilities and road traffic. In 2013 the emissions resulted from the inventory of pollutant emissions into the atmosphere in the county of Maramures was of 3107.87 tons of nitrogen oxides. Evolution of annual emissions of the nitrogen oxides in the atmosphere over the past ten years is shown in **Table 4.2.2**:

Table 4.2.2 Annual emission of NO_x

Maramures county total	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual emission NO _x (t/year)	1,983	1,741	1,680.3	2,470.2	2,873.9	2,253.5	3,199.3	4,130.7	4,048.9	3107.87

Particulate matter

The main sources of particulate matter emissions come from burning in the residential sector (especially boilers that use as type of fuel wood and wood waste) and the sector of production of asphalt and asphalted roads and from woodworking activities. Emissions of particulate matter from road traffic were also inventoried, but they are much lower than in other sectors.

In the year 2013, 8,104 tons of total suspended particulate emissions were inventoried (22.6% from industry and 77.4% from institutional-residential combustion, including emissions from the combustion of firewood in households).

Evolution of annual emissions of total particulate matter during 2004 ÷ 2013 is presented in Table 4.2.3:

Table 4.2.3 Annual emission of particulate matter

Maramures county total	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual emission (t/year)	1,696.4	2,020.9	2,255.5	1,524	1,125.2	1,691.6	3,262.8	1 398.2	3,355.5	8,104

Air quality monitoring in Baia Mare agglomeration was done by 5 automatic stations and a manual monitoring system.

The statistics data for 2013 recorded at the automatic monitoring stations for air quality in Baia Mare agglomeration are shown in **Table 4.2.4**.

Table 4.2.4 - Relevant data regarding functioning of automatic air quality networking in Baia Mare agglomeration – year 2013

City	Station	Station type	Pollutant type	No. of determinations	The annual average concentration $\mu\text{g}/\text{m}^3$
Baia Mare	MM1	traffic	SO ₂ (1h)	7776	7.200
			SO ₂ (24h)	334	7.200
			NO ₂	8,024	22.900
			CO	5,862	0.160
			Benzene	4,490	2.460
			PM ₁₀ (nephelometry)	325	21.200
			PM ₁₀ (gravimetric)	324	0.015
			Pb	264	0.320
	MM2	Urban exposure	Cd	6,577	4.100
			SO ₂ (1h)	6577	4.1
			SO ₂ (24h)	281	4.1
			NO ₂	6965	20.1
			CO	6697	0.22
			O ₃	7045	33.6
			Benzene	-	-
			PM ₁₀ (nephelometry)	315	21.3
			PM ₁₀ (gravimetric)	273	20.1
			PM _{2.5} (gravimetric)	301	18.7
			Pb	287	0.016
			Cd	266	0.36 ng/m ³
	MM3	Residential exposure	SO ₂ (1h)	7119	5.5
			SO ₂ (24h)	308	5.5
			NO ₂	227	6.4
			CO	7067	0.27
			O ₃	7212	30.6
			Benzene	4197	3.75
			PM ₁₀ (nephelometry)	208	21.6
			PM ₁₀ (gravimetric)	324	27.1
			Pb	324	0.015
			Cd	278	0.36 ng/m ³
	MM4	Industrial	SO ₂ (1h)	3466	6.1
			SO ₂ (24h)	148	6.1
			NO ₂	1852	11.0
			CO	2248	0.30
			O ₃	2965	31.5
			PM ₁₀ (nephelometry)	98	24.8
			PM ₁₀ (gravimetric)	100	22.3
			Pb	100	0.035
	MM5	Industrial	Cd	86	0.66 ng/m ³
			SO ₂ (1h)	3205	6.6
			SO ₂ (24h)	134	6.6
			NO ₂	2674	11
			CO	3020	0.31
			O ₃	3498	39.6
			PM ₁₀ (nephelometry)	126	27.2
			PM ₁₀ (gravimetric)	120	27.1
			Pb	120	0.027
			Cd	112	0.61 ng/m ³

Nitrogen oxides (NO_x)

Compared to the limit values stipulated in Law no. 104/2011, for an averaging time of 1 year (VL = 40 µg/m³), annual average concentrations recorded in 2013 were between 6.4 µg/m³ at MM3 station and 22.9 µg/m³ at MM1 station. There was no exceedance of annual and hourly limit values, maintaining the same trend of development as in the previous year.

Sulphur dioxide (SO₂)

Reported to the accepted limit values stipulated in Law no. 104/2011 on ambient air quality for sulphur dioxide (350 µg/m³ hourly average concentrations and 125 µg/m³ daily average concentrations) in year 2013 there were no exceedances in these 5 stations.

The annual average values determined were between 4.1 µg/m³ at MM2 station, and 7.2 µg/m³ at MM1 station.

Particulate matter

In 2013 gravimetric and automatic determinations were made for PM₁₀ at all stations and gravimetric determination were conducted for PM_{2.5} at MM2 station.

The unavailability of data for certain periods is due to technical problems encountered during the year at the 5 stations. Since June 2013 MM4 and MM5 stations have not worked, being stopped indefinitely.

Average annual concentration for PM₁₀ resulted from measurements using nephelometric method is between 21.3 µg/m³ at MM2, and 27.2 µg/m³ at MM5 station; with no exceedance of the annual limit value.

For PM₁₀ gravimetric determinations average annual values ranged between 20.1 µg/m³ at MM2 station, 27.1 µg/m³ at MM3, and MM5 stations without exceeding the annual limit value.

Average daily concentrations values higher than the limit value of 50 µg / m³ were recorded mainly due to the fuel combustion for residential heating in winter only.

Compared to the 35 average daily concentrations values higher than the limit value of 50 µg / m³ accepted, no exceedances were recorded (MM1 - 6 overruns; MM2 station - 7 overruns; MM3 Station - 30 overruns; MM4 station - no overruns; MM5 station - 5 overruns).

In 2013 there was no accidental pollution, with major impact on the environment and citizens.

➤ SOIL

Evolution of the distribution of agricultural land in Maramures County during 2009 - 2013 is presented in Table 4.2.5.

Table 4.2.5 Distribution of agricultural land by usage class in Maramures

No.	Usage class	Aria, ha				
		2009	2010	2011	2012	2013
1	Arable	83,795	83,784	82,855	81,619	81,206
2	Grassland	99,734	98,279	96,495	96,654	96,888
3	Meadows	119,935	119,730	120,260	120,658	120,937
4	Vineyards	243	243	243	248	243
5	Orchards	6,590	6,304	6,339	6,199	6,254
Total agricultural land		31,297	309,325	306,192	305,373	305,528

Source: County Directorate for Agriculture Maramures

Compared to 2012, there was a slight improvement of the surface, according to the categorization of the total agricultural use, this having a positive impact on the environment.

In 2013 year, in Maramures County there was no accidental pollution of soil.

4.3. Satu Mare County

➤ AIR

Sulphur dioxide (SO₂)

In 2013, in Satu Mare County at the development of emission's inventory based on Corinair factors, a total of 408.5 tons of SO₂ emitted were obtained compared with 108.3 tons in 2012.

Table 4.3.1 Annual quantities of sulphur dioxide

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2103
SO₂ Annual emission (t/year)	1,309.9	1,364.7	1,060.6	1,348.2	2,163.8	763.4	715.4	39.5	59.036	108.3	408.5

The main activities which result in significant amounts of emissions of sulphur dioxide are related to road transport activities, combustion in manufacturing industry and non-industrial combustion plants.

Nitrogen oxides (NO_x)

The total quantities of nitrogen oxides emissions in 2013 are 3014 tons/year of which 1346 tons come from road traffic.

Table 4.3.2 - Annual quantities of nitrogen oxides (tons/year)

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2103
NO_x Annual emission (t/year)	1310	1,364.7	1,060.6	1,348.2	2,163.8	2,451.5	2,587.3	368.8	428	458.08	3,014

In the year 2013, in Satu Mare County, the air quality was monitored through automated air quality monitoring stations that are part of the National Network for Monitoring Air Quality.

In 2008 an urban background station was placed in Satu Mare - SM1 and in 2009 a suburban station / traffic was placed in Carei - SM2.

Sulphur dioxide (SO₂)

In Satu Mare, at the SM1 station the average annual value was 6.58 µg /m³, with an 80.0% data capture. The values from SM2 station present a data capture of 40.8%; the annual

average is $5.61 \mu\text{g}/\text{m}^3$. Small capture of data is due to SO_2 analyzer failure, SM2 station was stopped on 28.07.2013.

Nitrogen oxides (NO_x)

Annual average concentration determined at SM1 is $17.91 \mu\text{g}/\text{m}^3$ obtained with a data capture of 13.30% and the average value at SM2 is $10.98 \mu\text{g}/\text{m}^3$ with a data capture of 40.5%. Small capture of data is due to NO_x analyzer failure in SM1 station (from 11.03.2013) and SM2 station was stopped on 28.07.2013.

Particulate matter

Particulate matter PM10 fraction are determined by both monitoring stations, PM2.5 fraction of particulate matter is determined only at SM1 station from Satu Mare.

The gravimetric PM2.5 has a data capture of 76.7%, the annual average value is $15.08 \mu\text{g}/\text{m}^3$. The maximum value determined gravimetrically is $44.65 \mu\text{g}/\text{m}^3$, on 18 December 2013. Particulate matter fraction 10 micrometers, taken at SM1 station recorded a data capture of 67.10%. In Carei, at SM2 station, because of a failure of the sampler a data capture of 28.2% to nephelometry was recorded with average annual value of $19.28 \mu\text{g}/\text{m}^3$, gravimetrically a data capture of 35.3% was obtained with an average annual value of $24.19 \mu\text{g}/\text{m}^3$. The maximum value gravimetrically obtained is $48.53 \mu\text{g}/\text{m}^3$ at station SM1, on 27.01.2013; a similar situation is found at station SM2 - Carei with maximum gravimetrically value obtained of $48.53 \mu\text{g}/\text{m}^3$ on 28.01.2013.

In 2013 on the county's territory no major environmental accidents affecting air quality were registered.

➤ SOIL

Soils repartition in Satu Mare County by use categories of farmland includes: arable land, pastures, meadows, vineyards and orchards.

In Satu Mare County an agricultural area of 318,454 ha was recorded in 2013.

Arable lands and grasslands have the largest share of the agricultural land, 72.2% and 24.44% respectively.

Table 4.3.3 Land use in Satu Mare County

No.	Usage class	Area, ha					
		2008	2009	2010	2011	2012	2013
1	Arable	221,653	221,577	227,853	229,775	229,775	229,775
2	Grassland Pastures	85,296	85,111	79,176	77,821	77,821	77,821
3	Orchards	7,122	7,159	6,800	7,433	7,433	7,433
4	Vineyards	3,385	3,425	3,662	3,425	3,425	3,425
Total agriculture land		317,456	317,278	317,491	318,454	318,454	318,454

Source: Directorate for Agriculture Satu Mare

In 2013 there was no major environmental pollution or accidental pollution.

4.4. Suceava County

➤ AIR

Sulphur dioxide (SO₂)

Evolution of total emissions of sulphur dioxide inventoried in Suceava County in 2011 ÷ 2013, is presented in **Table 4.4.1**.

Table 4.4.1 Annual emissions of sulphur dioxide (tone/year)

Year	2011	2012	2013
SO ₂	1,242	1414	853

In 2013, a percentage of 75.7% of total emissions of SO₂ from the county resulted from the NFR activity code 1.A.1.a "electricity and heat production", that is, from the coal burning plant belonging to SC TERMICA SA Suceava (Suceava power plant).

Inter-annual variability of total emissions of SO₂ is given mainly by fluctuation in annual quantities of coal used in CET Suceava and its sulfur content, considering the major contribution of this system to the total SO₂ emissions in the county.

Decrease of SO₂ emissions in 2013 compared to 2012 is due to the fact that SC TERMICA SA Suceava (CET on coal) worked only until April 2013.

Nitrogen oxides (NO_x)

Evolution of total emissions of nitrogen oxides inventoried in Suceava County from 2011 ÷ 2013 is presented in Table 4.4.2:

Table 4.4.2 Annual emissions of nitrogen oxides

Year	2011	2012	2013
NO _x	5,722	5,783	4,448

* In 2013 the methodology for estimation of traffic emissions was changed compared to 2012. The new methodology is directly correlated with mileage reported by Romanian Auto Register, on type of vehicles in the county of Suceava. Consequently, the annual NO_x emissions related to road transport significantly decreased in 2013, compared to the previous year.

The major share in total NO_x emissions is related to road transport (the exhaust gases) representing approx. 65% of the total county emissions in 2013, out of which approx. 55% is due to heavy traffic.

Other activities that contributed to the total NO_x emissions in 2013 are:

- residential combustion plants, NFR code 1.A.4.b.i., with 14% at county level
- producing electricity and heat in combustion plants, of the SC TERMICA SA Suceava, code NFR 1.A.1.a, with 8,5% at county level;
- combustion in manufacturing industries and construction - other stationary sources; code NFR 1.A.2.f.i., with 5,7% from all county;

- Non-road mobile machinery and equipment manufacturing and construction industries, NFR code 1.A.2.f.ii., with 4% at county level, etc.

Particulate matter

About 96 % of total particulate emissions inventoried in 2013 in Suceava, meaning about 90% of the total PM 10 and about 96% of PM2.5, come from residential installations for heating and cooking (area sources) included in NFR code 1.A.4.b.i, mainly from burning of wood. The contribution of emissions from road transport was about 2.3 % for PM10 particulates and 2% for PM2.5 fraction.

Table 4.4.3 Quantities of particulate matter emitted to air

Year	Total Particulate Matter	PM2.5 particulate matter	PM10 particulate matter
2011	3,843	3,674	3,887
2012	1,387	1,246	1,284
2013	4,606	4,378	4,680

* Lower values of the particulate emissions in 2012 are due to lack of reporting by 2/3 of the mayoralties of the county regarding the wood usage by the population of the respective localities (especially in rural areas)

In 2013, the monitoring of air quality was performed in Suceava with four automatic monitoring stations belonging to the National Network for Monitoring Air Quality, addressing the following pollutants regulated by Law no. 104/2011 and meteorological parameters:

- SV1 urban background station: sulfur dioxide (SO₂), nitrogen oxides (NO, NO₂, NO_x), carbon monoxide (CO), ozone (O₃), benzene (C₆H₆), toluene, ethylbenzene, o-, m-, p-xylene, particulate matter PM_{2.5} (gravimetric), PM₁₀ (gravimetric and automatic) and meteorological parameters (wind speed and direction, pressure, temperature, solar radiation, relative humidity, precipitation).
- SV2 industrial station: sulfur dioxide (SO₂), nitrogen oxides (NO, NO₂, NO_x), particulate matter PM₁₀ (gravimetric) and meteorological parameters (wind speed and direction, pressure, temperature, solar radiation, relative humidity, precipitation).
- SV3 traffic station: nitrogen oxides (NO, NO₂, NO_x), particulate matter PM₁₀ (gravimetric and automatic) and meteorological parameters (wind speed and direction, pressure, temperature, solar radiation, relative humidity, precipitation).
- EM-3 regional background station: sulfur dioxide (SO₂), nitrogen oxides (NO, NO₂, NO_x), ozone (O₃), particulate matter PM₁₀ (gravimetric) and meteorological parameters (wind speed and direction, pressure, temperature, solar radiation, relative humidity, precipitation).

Sulphur dioxide (SO₂)

Measurements made in 2013 to sulphur dioxide, showed that the air quality in this region was excellent too good at SV2 Suceava stations and excellent at EM3 Poiana Stampei.

Nitrogen oxides (NO_x)

Measurements made in 2013 to nitrogen dioxide showed that the air quality is from excellent to good in SV2 Suceava and SV3 Siret stations and excellent at EM3 Poiana

Stampeii.

Particulate matter

As for the particulate matter, the highest values of daily average concentrations of PM10 were recorded at the station SV2 industrial environments.

The daily average concentrations of PM10 recorded in the cold season (October-March) were higher than in the warm season (April-September), concentrations higher than the limit value being recorded during the winter in all four monitoring stations in the county, except for one value measured at SV2 station. The value of 51.97 µg/m³ was registered in 29.07.2013 in calm atmospheric conditions and lack of rainfall, weather phenomena favoring stagnation and accumulation of dust at SV2 station.

The annual limit value for the protection of human health (40 µg / m³) was not exceeded in any monitoring station, the highest annual average concentration was 29.1 µg / m³ recorded at SV2 .

In 2013 in Suceava county no major environmental accidents that could affect air quality were registered.

➤ **SOIL**

The evolution of the distribution of use of agricultural land in Suceava County, during 2009 - ÷2013 is shown in the table below

Table 4.4.4 Evolution of land use in Suceava County

Type of land	Surface (ha)				
	2009	2010	2011	2012	2013
Arable	181,127	180,972	180,678	180,372	180,240
Grassland	91,167	91,596	90,274	90,570	90,547
Meadows and natural pastures	74,394	74,136	73,960	74,053	73,898
Orchards	2,801	2,776	3,008	2,810	2,959
TOTAL	349,489	349,480	347,920	347,805	347,644

In terms of soil degradation, the critical areas in 2013, were those affected by deep erosion and active landslides, such as Todireşti - Osoi Hill, part of the second order monitoring.

No major environmental pollution or accidental pollution were registered in 2013.

4.5. Tulcea County

➤ **AIR**

Sulphur dioxide (SO₂)

In 2013, the amount of SO₂ emitted in the atmosphere (amount resulting from the calculation methodology CORINAIR 2009) was of 9.137 tonnes, out of which:

- Combustion in energy and transformation industries 2.069 t;
- Non-industrial combustion plants 4.909 t;
- Combustion in manufacturing industry 0.411 t;
- Production processes 0.349 t.

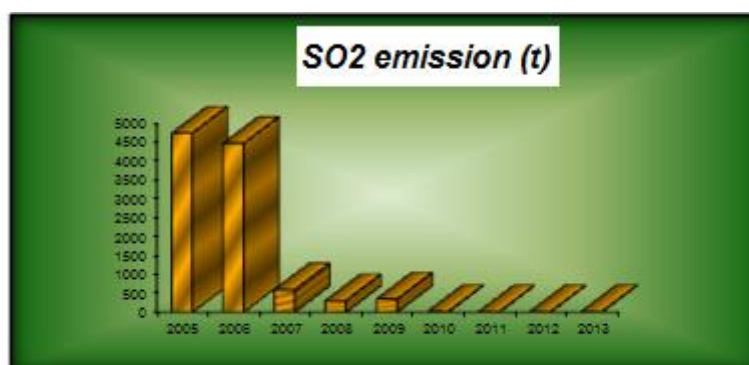


Figure 4.5.1 Emission of SO₂

A decrease of SO₂ emissions by 6.9% from the previous year can be noticed. This decrease is mainly due to the use of natural gas instead of liquid fuels.

Nitrogen oxides (NO_x)

NO_x emissions mainly come from:

- Combustion in energy and transformation industries 19%;
- Non-industrial combustion plants 27%;
- Combustion in manufacturing industry 7%;
- Road transport 32%;
- Mobile sources and machinery 15%.

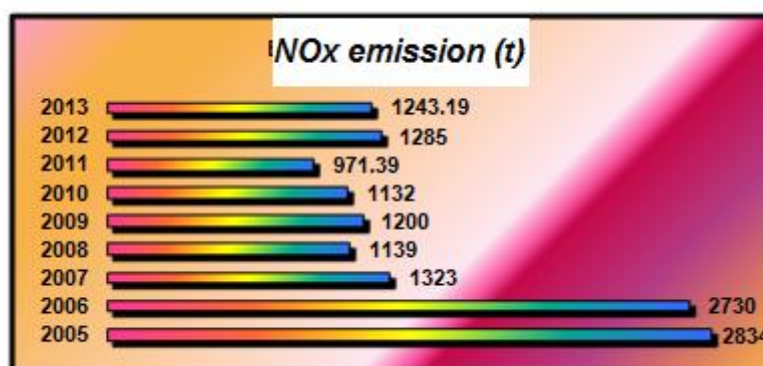


Figure 4.5.2 Emission of NO_x

There is a decrease of 3.3% of NO_x emissions in 2013 comparing with the previous year. A cause of this phenomenon is the use of low NO_x burners at SC Energoterm SA Tulcea.

Three air quality automatic monitoring stations, part of the National Network for Air Quality Monitoring (RNMCA) are located in Tulcea County, in accordance with criteria set by

the European directives on air quality to protect human health, vegetation and ecosystems, to assess the influence of different types of sources of emissions.

To the above mentioned stations other laboratory equipment is used to measure the concentrations of heavy metals: lead (Pb), cadmium (Cd), arsenic (As), nickel (Ni), particulate matter concentrations of aerosols and deposits (PM₁₀).

Table 4.5.1 Air quality monitoring stations

Type of stations	Number	Location
Traffic	1	The station is located about 10 m from the intersection, with intense traffic intersection
Industrial	1	The station is located about 1 km from industrial platform Tulcea Vest
Suburban/traffic	1	The station is located on Route 22 out of Isaccea town

Sulphur dioxide (SO₂)

Determining the level of air pollution with sulphur dioxide was performed in 2013 by permanent monitoring of air quality by the monitoring automatic stations: TL1 - Ciuperca Trafic, TL2 - Public Transport and TL3 - Isaccea.

Measurements of sulphur dioxide carried in Tulcea, reveals the following aspects:

- no certain problems were registered, the hourly values recorded in 2013 falls below the limit value (350 mg/m³)
- Annual averages of the values measured by the three stations were under LV for ecosystems of 20 µg/m³
- The alert threshold of 500 (µg/m³) was not exceeded at any of the monitoring stations.

Nitrogen oxides (NO_x)

Determining the level of air pollution with nitrogen dioxide was performed in 2013 by air quality monitoring stations TL2 Public - Transport and TL3 Isaccea.

Hourly average values for NO₂ were under the hourly limit value of 200 µg/m³.

Following the analysis of NO₂ measurements it appears that in 2013 the alert threshold of 400 µg/m³ and the annual limit value of 40 µg /m³ were not exceeded.

Particulate matter

In 2013, measurements for PM₁₀ were made at two automatic air quality stations: TL1 Ciuperca – traffic station and TL 3 Isaccea, together with gravimetric determinations.

The annual limit value and the hourly limit value for health protection were not exceeded in any of the automatic stations located in Tulcea.

During 2013 no major environmental incidents with impact on air quality were recorded

➤ SOIL

Table 4.5.2 shows the distribution of land uses in different categories.

Table 4.5.2 Distribution of soil by use

Year	Use category (ha)				
	Arable	Pasture and meadow	Vineyard	Orchards	TOTAL
2008	291,923	62,806	8,202	1,010	363,941
2009	294,039	60,688	8,202	1,012	363,941
2010	291,866	62,980	8,274	821	363,941
2011	294,039	60,869	8,202	831	363,941
2012	194,039	60,869	8,202	831	363,941
2013	294,180	60,869	8,102	790	363,941

Source: Department for Agriculture Tulcea County

In 2013 there was no major environmental pollution or accidental pollution.

II. UKRAINE

Information regarding environmental description in Ukraine are based on documents available on the websites:

<http://eng.menr.gov.ua/index.php/normbaza>

http://www.kmu.gov.ua/control/en/publish/article?art_id=91651

➤ AIR

Lately, in Ukraine there was a reduction of pollutants in the atmosphere, due to the economic crisis and recession. Moreover, the country has made significant steps to protect air quality, reducing the rate of emission of greenhouse gases (Figure 4.6.1).

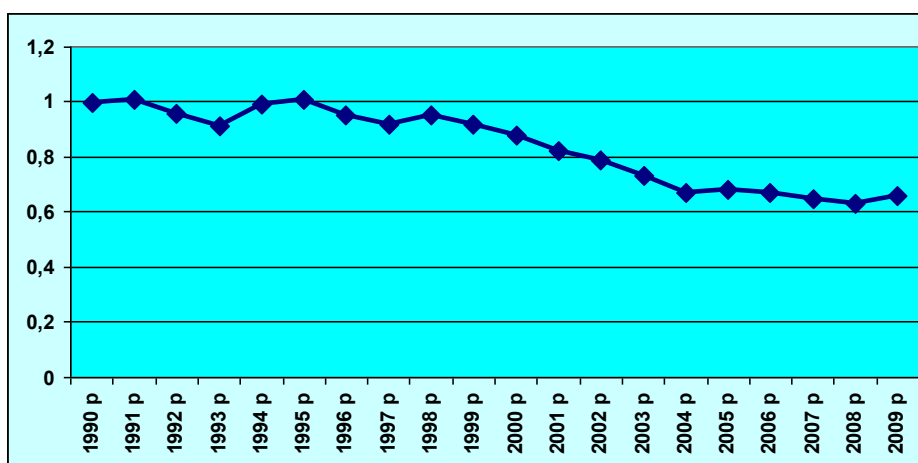


Figure 4.6.1 Changes in atmospheric emissions per unit GDP, 1990 ÷ 2009

Emissions of pollutants in Ukraine into the atmosphere came mainly from industrial sources, around 62%, while the remaining emissions come from stationary and mobile sources (Table 4.6.1).

Stationary and mobile sources

Table 4.6.1 Variation of atmospheric pollutants from stationary and mobile sources for 2000 ÷ 2011

Year	The amount of emissions of pollutants (thousand tons)			CO ₂ emissions (thousand tons)		
	Total	Stationary sources	Mobile sources	Total	Stationary sources	Mobile sources
2000	5,908.6	3,959.4	1,949.2	...	...	...
2001	6,049.5	4,054.8	1,994.7	...	...	...
2002	6,101.9	4,075.0	2,026.9	...	...	...
2003	6,191.3	4,087.8	2,103.5	...	...	...
2004	6,325.9	4,151.9	2,174.0	126.9	126.9	...
2005	6,615.6	4,464.1	2,151.5	152.0	152.0	...
2006	7,027.6	4,822.2	2,205.4	178.8	178.8	...
2007	7,380.0	4,813.3	2,566.7	218.1	184.0	34.1
2008	7,210.3	4,524.9	2,685.4	209.4	174.2	35.2
2009	6,442.9	3,928.1	2,514.8	185.2	152.8	32.4
2010	6,678.0	4,131.6	2,546.4	198.2	165.0	33.2
2011	6,877.3	4,374.6	2,502.7	227.7	202.2	25.5

In terms of air pollution in Ukraine - 14 cities exceed 100 thousand tons. The total amount of emission of pollutants into the atmosphere in these cities represents 54.2 % of total emissions.

Table 4.6.2 Variation of emissions of pollutant in atmosphere in cities in Ukraine (thousand tons)

No	Cities	2000	2005	2007	2008	2009	2010	2011	Percentage of the total area
1.	Burštín	118.9	176.5	246.1	218.3	191.2	146.8	198.7	4.5
2.	Debaltseve	108.6	95.5	101.9	114.9	119.2	112.8	127.0	2.9
3.	Dnipropetrovsk	97.3	128.8	122.8	120.3	105.6	110.0	110.0	2.5
4.	Dniprodzerjinsk	105.0	126.1	120.7	110.3	110.8	108.5	124.7	2.8
5.	Zaporijjea	135.5	153.9	147.5	130.4	94.3	109.6	117.1	2.7
6.	Zelenodolsk	79.4	108.6	142.6	146.0	133.6	173.4	205.3	4.7
7.	Enerhodar	80.8	98.4	75.5	80.6	79.2	100.3	104.9	2.4
8.	Komsomolske	95.2	104.4	98.8	115.5	95.1	108.1	126.2	2.9
9.	Krivoi Rog	443.4	523.9	608.5	449.4	321.6	395.0	358.6	8.2
10	Kurahove	117.2	103.4	160.2	162.8	121.9	123.9	166.2	3.8
11	Luhansk	144.2	118.8	150.6	175.8	150.4	160.7	142.6	3.3
12	Mariupol	340.4	425.7	421.1	359.3	283.9	364.3	382.4	8.7
13	Novi Svet	121.8	123.7	108.6	98.1	104.8	109.9	105.4	2.4
14	Hartfyzk	88.4	68.9	91.4	73.3	73.0	75.4	103.1	2.4
	Total	2,076.1	2,356.6	2,596.3	2,555.0	1,984.6	2,198.7	2,372.2	54,2

Emissions of pollutants from stationary sources are:

- The amount of emissions of SO₂ is 1,342,600 tons/year (representing 30.7% of the total pollutants);
- The amount of emissions of CO is 1,066,100 tons/year (representing 24.4% of the total pollutants);
- The amount of emissions of CH₄ is 878,200 tons/year (representing 20.1% of the total pollutants)
- The amount of emissions of particulate matter is 606,600 tons/year (representing 13.9% of the total pollutants)
- The amount of emissions of NO_x is 381,900 tons/year (representing 8.7% of the total pollutants)

Table 4.6.3 - Emissions of pollutant from stationary sources

Pollutants	Number of emissions unities		Emissions Volume			
	Unities	% until 2010	Tons	% until 2010	Increase, decrease compared with 2010	Variation %
Metals and their compounds	4,840	96.0	32.660.57	98.5	-491.994	0.7
Arsenic and its compounds	421	96.3	56.78	108.7	4.56	0.0
Lead and its compounds	37	88.1	5.147	108.4	0.399	0.0
Particulate matter	6,674	95.7	606,615.34	107.9	44,548.537	13.9
NO _x	7,906	95.7	381.882.87	110.9	37,631.951	8.7
SO _x	4.306	96.9	1,342,561.90	110.4	126,689.053	30.7
CO	7,400	96.0	1,066,118.40	100.2	2,287.411	24.4
Ozone	68	107.9	14,783.00	105.1	0.712	0.0
NM VOC	5,179	94.7	65,213,128.00	98.8	-802.787	1.5
Formaldehyde	404	101.30	284,405.00	109.4	24.369	0,0
CH ₄	4,005	100.70	878,159.56	103.9	33,341.908	20,1
POPs	153	90.0	266,938.00	59.9	-178.618	0,0
Benzo (a) pyrene	32	100.0	0.773	100.8	0.006	0,0
Fluorine and fluorine compounds	734	96.6	209.61	72.2	-80.820	0,0
Cyanide	73	104.3	272.95	106.3	16.183	0,0
Freon	212	104.4	80,534	74.7	-27.238	0,0

Industrial sources

In Ukraine, the total emissions of industrial sources represent about 25.2%, higher by 2.3% compared to 2010. After manufacturing, mining represents 19.6 % of total emissions which is higher by 0.5% more than previous year, according to Table 4.6.4.

Table 4.6.4 – Emissions from industrial sources

	Number of enterprises	Emissions			
		Pollutants		CO ₂	
		Thousands tons	%	Thousands tons	%
Agriculture	946	72.7	102.5	790.5	121.6
Forestry and related services	121	2.0	91.4	33.6	105.1
Fishing	12	0.1	81.7	0.5	327.4
Extractive Industry	511	856.0	100.5	3,784.9	156.4
Fossil fuel extraction	258	743.2	100.7	2,329.7	110.2
Minerals	253	112.8	99.4	1,455.2	476.0
Manufacturing industry	3,337	1,387.3	103.0	89,501.4	151.3
Including food production food, drink and tobacco products	1,010	31.9	97.9	2,674.3	107.2
Coke, refinery products	42	93.2	107.5	5,749.9	99.1
Chemical and petrochemical industries	160	67.8	106.6	7,190.7	124.5
Production of non-metallic products	501	55.3	106.3	7,133.9	200.5
Production of metal	305	1,102.3	102.3	64,071.3	162.3
Factory equipment	384	10.3	110.4	1,198.9	241.0
Production and distribution electricity, gas and water	614	1,804.5	112.7	100,531.2	105.1
Industry of transport	951	195.4	99.4	5,710.6	102.0
Other industries	1,656	35.3	98.1	1,249.5	177.4

According to the State Statistics Service of Ukraine, in 2011, 8,699 enterprises emitted pollutants into the atmosphere. Most of these companies are concentrated in the Donetsk region - Nipru, especially in Donetsk regions (11.4 %), Lugansk (6.5 %), Dnipropetrovsk (5%).

➤ WATER

Currently, the annual demand of water resources for the population and industry is about 15 billion EURO. Water is mainly extracted from the Nipru River, about 8.7 km³, from Seversky Donets about 1.5 km³, the Southern Bug about 0.4 km³ and 0.6 km³ from Nistru. In 2011 almost all regions of Ukraine recorded an increased intake of water consumption. The major users of water areas are: Dnipropetrovsk, Donetsk, Zaporizhzhya, Kiev, Kherson and Autonomous Republic of Crimea.

In 2011, the big consumers of water were industrial enterprises, which raises the consumption to 5.6 billion m³ representing 38 % of total intake in the country (including power plants, nuclear power plants, combined steel and mining), agriculture 40%, and utility 21%.

Losses during transport amounted to 2.3 billion m³ (15 % of consumption).

Distribution of water sources (million m³) of the territory of Ukraine is shown in Table 4.6.4.

Table 4.6.4 Water sources distribution

Unit	2000	2005	2006	2007	2008	2009	2010	2011
Amount of sewage	18,282	15,083	15,327	16,352	15,729	14,478	14,846	14,651
Groundwater quantities	2,987	2,449	2,408	2,315	2,175	2,007	2,023	1,961
Process water	6,957	5,706	5,783	6,162	5,970	5,149	5,511	5,514
Water	3,311	2,409	2,298	2,192	2,103	1,956	1,917	1,860
Water treatment plants	7,992	7,688	8,104	7,768	7,518	7,581	7,425	7,687

Following the analysis of the data, it appears that the major polluters of water are steel and coal industries. The use of water in industrial sectors leads to contamination of drinking water. The most contaminated waters are Seversky Donets Basin and the Black Sea rivers.

Table 4.6.4 - Pollutants in surface waters

Rivers	Pollutants	Pollutants from waste water
Bug Western	Ammonia, nitrite , iron and total chromium	Lead
Danube	Ammonia , nitrite , iron, zinc and chromium total	BSK ₅
Nistru	Ammonia , nitrite , iron, zinc and total chromium , and nickel detergents	COD and BSK ₅
Dnipro	Ammonia and nitrites, zinc , chromium, iron and total chromium , nickel, phenols and oil products	BSK ₅ and COD, ammonia nitrogen and nitrate
Southern Bug	Ammonia nitrogen and nitrite	
Seversky Doneț	Ammonium, nitrite and nitrate , phenols, total iron	COD
Priazovskiye River	Ammoniac nitrogen , total chromium and petroleum products	
Rivers flowing into the Black Sea	Nitrogen , nitrite and total iron	BSK ₅ and COD
Black Sea	Nitrite and ammonium nitrogen	
Azov Sea	Total iron oxide and nitrite	

Azov and Black Sea are located on the southern border of Ukraine. The degree of human impact on marine ecosystems is primarily due to commercial activities such as industry, agriculture and transport.

➤ SOIL

The area of land in Ukraine is 60,354,800 ha. According to the State Agency of Land Resources of Ukraine, the country's land area distributed according to the type of land is presented in Table 4.6.5. These types of land represent about 70.9 % of the total area.

Table 4.6.5 – Type of land

Type of land	Land area	
	Thousands, ha	%
Agricultural lands	42,776.9	70.9
of which: agricultural lands	41,557.6	68.9

Arable lands	32,498.5	53.8
Other agricultural lands	1,219.3	2.0
Forest of which:	10,611.3	17.6
Covered by forest	9,683.3	16.1
Not covered with forest vegetation	208.7	0.3
Other forest land	315.6	0.5
Shrubs	403.7	0.7
Built- up Land	2,523.2	4.2
For building	473.5	0.8
Industrial Lands	223.2	0.4
Personal Lands	152.3	0.3
Commercial Land	54.5	0.1
Land for public use	282.1	0.5
Mixed land use	29.0	0.0
Land used for communication and transport	495.1	0.8
Land used for technical infrastructure	68.1	0.1
Land used for camping	745.4	1.2
Wetlands open	980.1	1.6
Steppe	17.7	0.0
Sand, grottos	1,022.9	1.7
Total land	57,932.1	96.0
Territory covered by surface water	2,422.8	4.0
Total (zone)	60,354.9	100.0

Ecological fund is significantly affected by land use, leading to a depletion of wild flora and fauna.

The main impact of anthropogenic factors comes from the land degradation, soil contamination and agricultural development.

Soils in cities are polluted due to industrial sources, vehicles. Accidental pollution is also a problem for soil quality.

5. ANY EXISTING ENVIRONMENTAL PROBLEMS WHICH ARE RELEVANT TO THE PLAN OR PROGRAMME INCLUDING, IN PARTICULAR, THOSE RELATING TO ANY AREAS OF A PARTICULAR ENVIRONMENTAL IMPORTANCE, SUCH AS AREAS DESIGNATED PURSUANT TO DIRECTIVES 79/409/EEC AND 92/43/EEC

ROMANIA

Information regarding Sites of Community Importance and Special Protection Areas for avifauna from the territory of four counties in the eligible area were taken from the MMAP Romania web site- <http://www.mmediu.ro/articol/date-gis/434>.

The sources of photos are: Environmental Status Reports concerning Botoşani, Maramureş, Satu Mare, Suceava and Tulcea Counties, corresponding to year 2013, published on the websites of Counties Environmental Protection Agencies .

Botoşani County

In Botosani County have been established 7 Sites of Community Importance (SCI), 4 Special Protection Areas (SPA) and nature reserves. **Figure 5.1** shows the distribution of SCI, SPA and nature reserves in the Botosani County.

Natural Reserves are divided into forest and floristic reserves type.

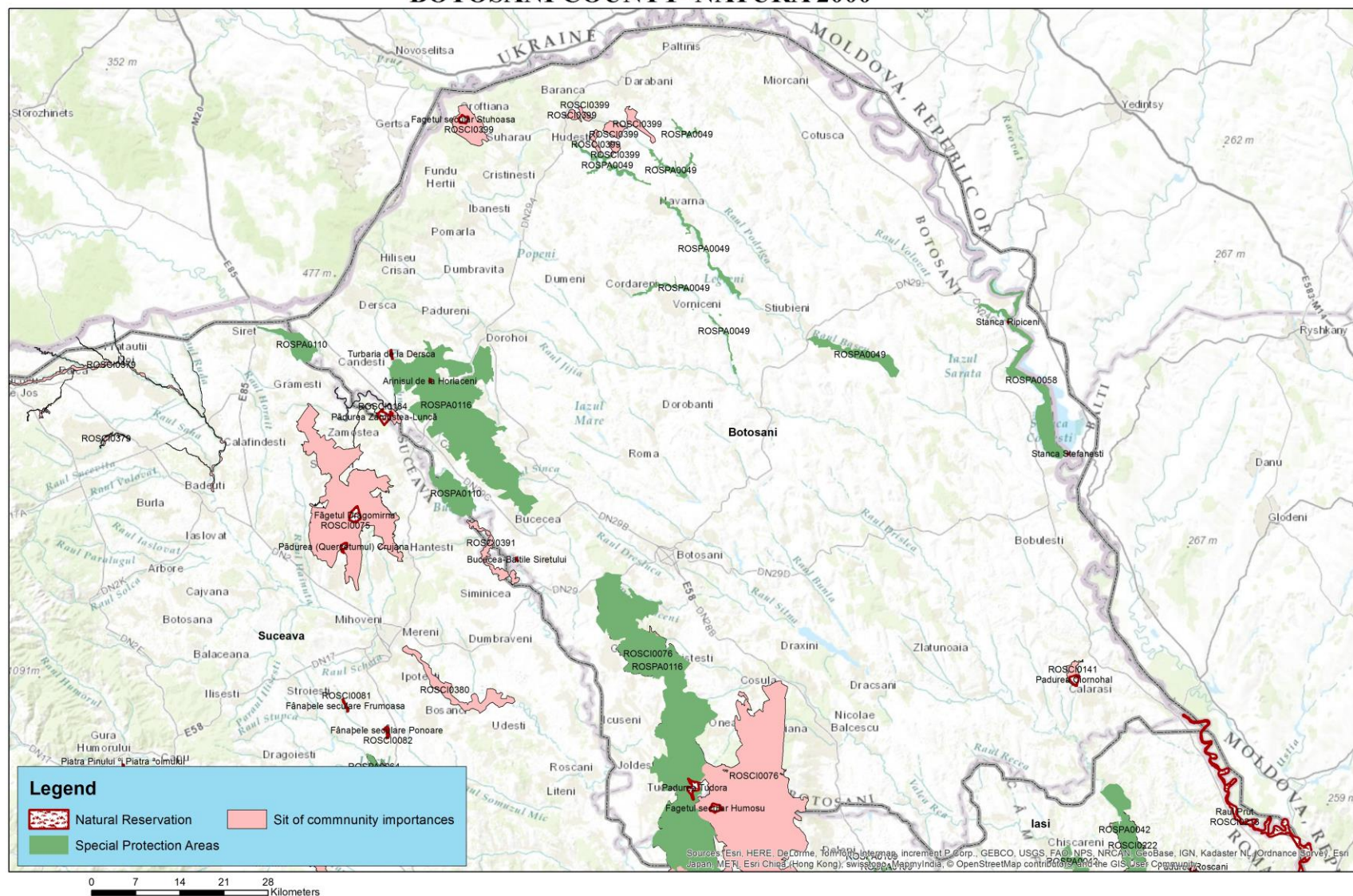
➤ **Forest type**

➤ Tudora Forest	119,0 ha;
➤ Ciornohal Forest	76,5 ha;
➤ Arinis from Horlăcenii	5,0 ha;
➤ Fagetul Secular Stuhuosa	0, 5 ha.

➤ **Floristic type**

➤ Rabies from Dersca (Lozna)	10,0 ha;
➤ Bucecea Baltile Siretului	2,0 ha;
➤ Floristic Reserve Stanca - Ştefăneşti	1,0 ha;
➤ Floristic Reserve Ripiceni	1, 0 ha.

BOTOSANI COUNTY- NATURA 2000



I. SPECIAL PROTECTION AREAS –SPA

In Botosani County 4 SPA, with a total area of 29453.68 are declared.

➤ ROSPA0058 Lake Stâncă Costești

Location – lands of Stefanestitown and Ripiceni and Manoleasa villages .

Protected species: 44 species of wild birds mentioned in Annex 1 of the Birds Directive, spotted eagle (*Aquila clanga*), yellow heron (*Ardeola ralloides*), the diver winter (*Podiceps auritus*), ferruginous duck (*Aythya nyroca*), honey buzzard (*Penis auritus*).

Surface: 2,161 ha.



ROSPA0058 Lake Stâncă Costești

➤ ROSPA0049 – Ponds on Ibăneșei -Baseului- Podriga Valley

Location : lands of Darabani and Saveni town and Cordăreni, Hănești, Hudești, Havârna, Mileanca, Vorniceni, Ungureni, Știubieni, Vlăsînești and Concești villages.

Ponds: Negreni, Mileanca, Cal Alb, Ibaneasa, Vorniceni, Havirna, Hanesti;

Protected species: 20 species of birds listed in Annex I of the Birds Directive, Increase gray (*Porzana parva*), great egret (*Egret*), heron (*Ardea purpura*), Rent pond (*Sterna hirundo*).

Surface: 2705 ha



Acumulare Cal-Alb-*Ciconia nigra*

Hanești-*Phasianus colchicus*

Ibăneșei -base- Podriga Valley Ponds

➤ **ROSPA0110 - Rogojești Bucecea Accumulations**

Location: Botoșani County, Mihăileni and Varful Campului villages , and lands of Suceava County.

Protected species: 22 species listed in Annex 1 of the Birds Directive.

Surface: 1,537. 38 ha



➤ **ROSPA0116 - Dorohoi Șaua Bucecei**

Location: Lands of Suceava, Iasi and Botosani counties.

Protected species: 15 species of birds listed in Annex 1 of the Birds Directive.

Surface: 23,050.3 ha.

II. SITES OF COMMUNITY IMPORTANCE-SCI

In Botosani County are 7 Sites of community importance.

Total Surface of SCI established: 16,978. 17 ha.

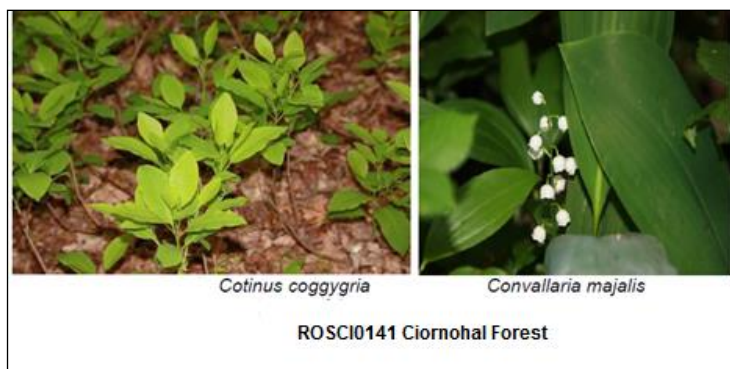
➤ **ROSCI 0141 - Ciornohal Forest**

Location: Călărași village;

Community Habitat type: Dacian oak and hornbeam forests

Floristic species of Community interest: *Iris aphylla* ssp *hungarica*

Surface: 265 ha



➤ **ROSCI0076 - Dealul Mare- Hârlău**

Location: Lands of Botoșani, Iasi and Vaslui counties;

Types of habitats of Community interest: Dacian oak-hornbeam forests, beech forests Fagetum Asperulo.

Surface: 14,565 ha on the Botoșani county – lands of Copălău, Corni, Coșula, Cristești, Curtești Flămânzi, Frumușica, Tudora, Vlădeni, Vorona villages.



➤ **ROSCI0255 Lozna (Dersca) Peatery**

Location: Lozna village

Types of habitats of Community Interest: Natural eutrophic lakes with Hydrocharition or Magnopotamion vegetation and bogs capable of natural regeneration

Floristic species of Community interest: *Angelica palustris*.

Surface: 12 ha



➤ **ROSCI0234 Stâncă Ștefănești**

Location –Stâncă, Ștefanesti town.

Habitat type is identified by the - Communities rupicole calcify or meadows Basify of Alysso-Sedion white.

Surface: 1 ha



ROSCI0234 Stâncă Ștefănești

➤ **ROSCI 0399 - Suharău Darabani**

Location – Lands of Concești, Darabani, Hudești and Suharău.

Habitats of Community interest: Asperulo beech forests Fagetum, oak-hornbeam forests Dacian, Sarmatian steppes Ponto, and Ponto Sarmatian deciduous bushes.

Surface: 1936 ha.

➤ **ROSCI0391- Middle Siret Bucecea**

Location: Lands of from Botosani and Suceava counties. In Botoșani county–Bucecea town 3% and Vârful Câmpului village 1%;

Habitats of Community interest: herb fringe communities of high hydrophilic from the plains to the mountain and alpine.

Fish species listed in Annex 2 of the Habitats Directive *Aspius*, *Gobio kessleri*, *Cobitis taenia*

Surface: 125, 4 ha

➤ **ROSCI0184 - Zamostea Luncă Forest**

Location: Botosani and Suceava Counties. ROSCI0184 in the Botosani County lands of Candesti and Varful Campului villages.

The types of habitats: forests of oak and hornbeam Dacian, mixed riparian forests with *Quercus robur*, along the great rivers *Frasinus excelsior*.

Amphibians and reptiles species from Annex 2 of the Habitats Directive: *Emys orbicularis*;

Surface: 68.77 ha.

➤ **Maramures County**

In Maramures there are established 12 Sites of Community Importance SCI, five Avifaunistic Special Protection Areas SPA, nature reserves and natural parks. Figure 5.2 shows the distribution of SCI, SPA, nature reserves and natural parks in the county of Maramures.

Protected natural areas of national interest in Maramures County are: Pietrosu Mare, Piatra Rea, Morărenilor Lake, Poiana Brazilor Swamp, Ronișoara Forest, Crăiasca Forest, Bavna Forest, Coștiui Larch Forest, Edible Chestnut Arboretum Baia Mare, Lăpuș Canyon Comja Pine Forest, Arcer - Tibleș, Farcău Peak - Mihailescu Peak, Tomnatic – Sehleanu Daffodil Glade, Chiuzbaia Fossiliferous Reserve, Albastru Lake, Văienii Șomcutei Cave, Peștera cu Oase Cave, , Sâlhoi Zâmbroslavele Rockery, Tâul lui Dumitru Lake, Creasta Cocoșului, Tătarului Canyon, Babei Canyon, Boiu Mare Cave, Iezeru Mare Swamp, Coloanele de la Limpede, Rozeta de piatră de la Ilba, Peștera din dealul Solovan Cave, Tâul Negru Swamp, Bătrâna Spring, Peșterea și Izbucul Albastru al Izei, Runc Forest, Maramureșului Mountains National Park.

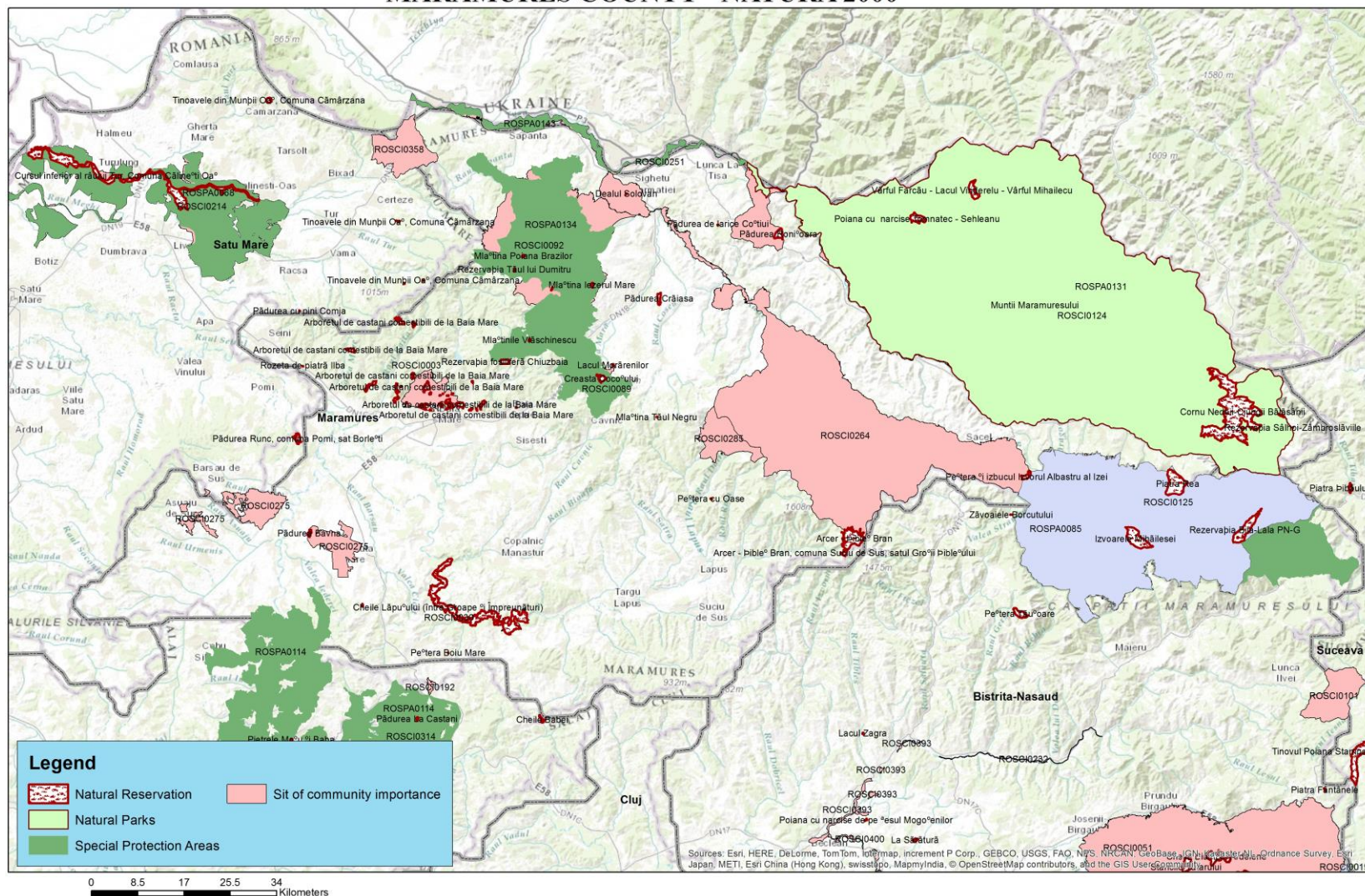
Natural protected areas of international interest

RODNEI MOUNTAINS NATIONAL PARK - BIOSPHERE RESERVE

Rodnei Mountains National Park - Biosphere Reserve is the main objective of natural heritage in the county, with a total area of 47,227 ha, of which 36,974 ha (80%) in Bistrita Nasaud County and 9,798 ha (20%) in Maramures County.

The Reserve was established in 1932 - at first being protected only the surrounding of the Pietrosu Peak (183 ha). Later the reserve area was expanded reaching 3,300 ha.

MARAMURES COUNTY - NATURA 2000



I. AVIFAUNISTIC SPECIAL PROTECTION AREAS –SPA

In Maramures County there are declared 5 Avifaunistic Special Protection Areas..

- ROSPA0085 Rodnei Mountains: administrator Rodnei Mountains National Park;
- ROSPA0131 Maramureşului Mountains: administrator Maramureşului Mountains Natural Park;
- ROSPA0134 Gutâi Mountains: administrator Maramureş Mountains Natural Park;
- ROSPA0143 Upper Tisa: curator Heidenroslein Association;
- ROSPA0114 The Middle Somes–Maramureş and Sălaj Counties.

II. SITES OF COMUNITY IMPORTANCE - SCI

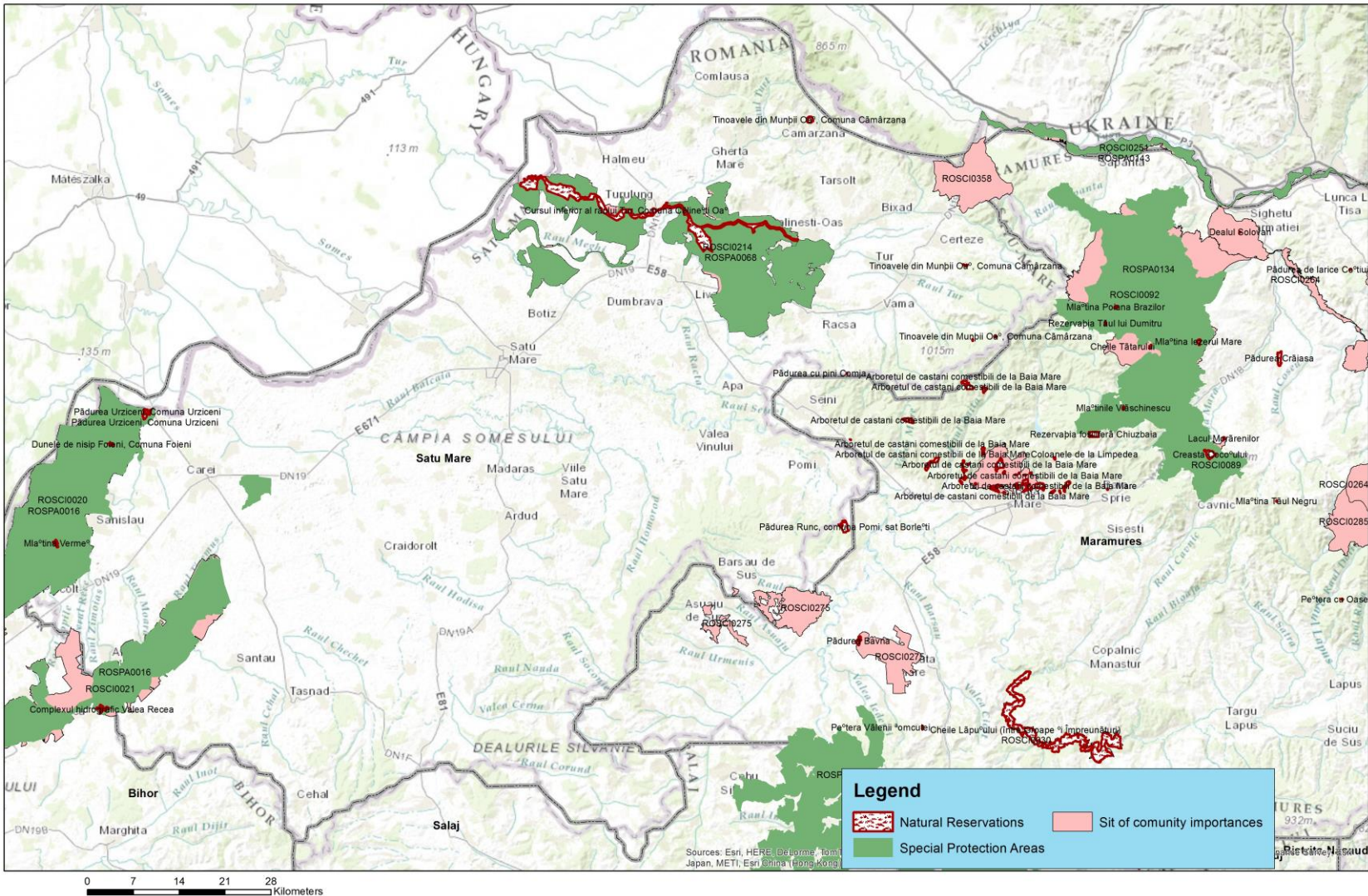
Currently, in Maramures County there are **12** Sites of Community Importance.

- ROSCI0003 Edible Chestnut Arboretum Baia Mare, custodian Municipal Forest District Baia Mare;
- ROSCI0030 Lăpuşului Canyon, Custodian Professional Association Geommed
- ROSCI0089 Gutâi – Creasta Cocoşului – custodian EcoLogic Association;
- ROSCI0092 Igriş - administrator Maramures Mountains Natural Park;
- ROSCI0124 Maramureş Mountains - administrator Maramures Mountains Natural Park;
- ROSCI0125 Rodnei Mountains - administrator Rodnei Mountains National Park;
- ROSCI0251 Upper Tisa - Custodian Heidenroslein Association ;
- ROSCI0264 Iza Valley and Solovan Hill, administrator SC Mircea Mara SRL;
- ROSCI0192 Măgurici Cave - Maramures Conty (10%) and Salaj County, custodian Association Somes Valley Local Action Group;
- ROSCI0275 Bârsău Şomcuta - Maramureş and Satu Mare Counties;
- ROSCI0285 Secular Forests of Strâmbu Băiuţ - custodian WWF Danube Carpathian Programme;
- ROSCI0358 Pricop Huta Certeze - Maramureş and Satu Mare Counties – custodian Heidenroslein Association.

➤ **Satu Mare County**

In Satu Mare County there are established 5 Sites of Community Importance (SCI), 2 Avifaunistic Special Protection Areas (SPA) and natural reserves. The area occupied by the Natura 2000 sites relative to the total area of Satu Mare County(%) is: 10.39 (45,902.16 ha) . **Figure 5.3** shows the distribution of SCI, SPA and nature reserves on the territory of Satu Mare County.

Protected natural areas of national interest from Maramures County are the following: Foeni Sand Dunes, Vermeş Swamp, Oligotrophic Swamps from Oaş Mountains, Urziceni Forest, Tur River, Comja Pine Forest.

SATU MARE COUNTY -NATURA 2000

I. AVIFAUNISTIC SPECIAL PROTECTION AREAS –SPA

In Satu Mare County 2 Avifaunistic Special Protection Areas are declared.

➤ ROSPA0016 Nirului Plain –Ierului Valley

Bihor County: Cherechiu (6%), Curtuișeni (32%), Sălacea (30%), Tarcea (47%), Valea lui Mihai (47%), Șimian (46%). Satu Mare County: Andrid (42%), Carei (7%), Ciumești (76%), Căuaș (5%), Foieni (54%), Pir (18%), Pișcolt (52%), Sanislău (61%), Santău (15%), Tiream (37%), Urziceni (47%);

Surface: 38,682.1 ha

General overview of the site: Continental sands of Nir Plain stretch along the northwestern border of Romania, accounting for a third of the total area of sand in our country. The landform of Nirului Plain is characterized by rows of sand dunes oriented NNE - SSW generally alternating with lowlands of interdune sometimes swampy. The main rivers are: Berea, Valea Neagra, Horea, Ganași Mouca creeks. Within the sands there are also several lakes and ponds having with small areas.

➤ ROSPA0068 Turului Lower Meadow

Satu Mare County: Agriș (19%), Botiz (< 1%), Călinești-Oaș (42%), Gherța Mică (34%), Halmeu (< 1%), Lazuri (20%), Livada (43%), Medieșu Aurit (15%), Micula (54%), Orașu Nou (40%), Porumbesti (22%), Turulung (40%), Turț (2%);

Surface: 20 126.5 ha

General overview of the site: Tur River Basin is divided in two major landform units: mountain (35%) and plain (65%).

Habitat classes: rivers, lakes, swamps, peat bogs, cultures (arable land), grassland, other arable lands, deciduous forests.

Quality and importance: This area is a green corridor showing vegetation with phytocenosis and rare flora species alongside a rich spontaneous flora. The avifauna, reptiles, amphibians and invertebrates are very well represented. Turului Meadow has a rich entomofauna with very rare species of butterflies. During migrations periods the ponds become a passage way for migratory bird presenting a mixture of native species belonging to northern areas (some being rare ornithological or vulnerable species).

Species of global conservation interest - 1 species: Corncrake (*Crex crex*). Important populations of threatened species in the European Union - 4 species: black kite (*Milvus migrans*), Pond Nightingale (*Acrocephalus melanopogon*), Black Stork (*Ciconia nigra*), kite reed (*Circus aeruginosus*).

II. SITES OF COMUNITY IMPORTANCE-SCI

In Satu Mare County there are 5 Sites of community importance.

➤ ROSCI0020 Careiului Plain

Satu Mare County: Ciumești (73%), Foieni (51%), Pișcolt (47%), Sanislău (58%), Urziceni (47%);

Bihor County: Curtuișeni (28%), Valea lui Mihai (47%), Șimian (40%);

Types of habitats: 2190 – Wet interdunal depressions; 2340 - Pannonian Dunes; 3260 - Water courses from the plains to the mountain stage, with *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation; 3270 - rivers with muddy shores and *Chenopodium arieg* and *Bidentation* vegetation; 6120* - xeric grasslands on limestone sands; 6410 - Molinia meadows on calcareous, peaty or clay loam (*Molinia caerulea*); 6430 - hydrophilous tall herb fringe communities from plain to mountain and alpine levels; 6440 – alluvial grasslands of *Cnidion dubii*; 6510 - low altitude meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*); 91F0 – Mixed Forests with *Quercus robur*, *Ulmus laevis*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along riverbanks of major rivers (*Ulmus minoris*); 9110* – Eurosiberian steppe vegetation with *Quercus* spp; 92A0 - groves with *Salix alba* și *Populus alba*;

Mammalian Species: 1335 – *Spermophilus citellus* (European ground squirrel,);

Amphibians and reptiles species: 1188 - *Bombina Bombina* (European fire-bellied toad); 1220 - *Emys orbicularis* (water turtle); 1166 - *Triturus cristatus* (great crested newt); 1993 - *Triturus dobrogicus* (Danube crested newt);

Fish species: 1149 - *Cobitis taenia* (spined loach); 1145 - *Misgurnus fossilis* (European weatherfish or European weather loach); 1134 - *Rhodeus sericeus amarus* (European bitterling); 2011 - *Umbra krameri* (European mudminnow);

Invertebrate Species: 1088 - *Cerambyx cerdo* (great capricorn beetle); 1052 - *Euphydryas maturna* (scarce fritillary); 1083 - *Lucanus cervus* (stag beetle); 1060 - *Lycaena dispar* (large copper); 1059 - *Maculinea teleius* (scarce large blue); 4052 - *Odontopodisma rubripes* (mountain grasshopper);

Plant species: 4068 - *Adenophora lilifolia* (Lilyleaf Ladybell); 1516 - *Aldrovanda vesiculosa* (waterwheel plant) ; 1617 - *Angelica palustris* (marsh Angelica); 4081 - *Cirsium brachycephalum* (spear thistle); 1898 - *Eleocharis Carniola*; 4097 - *Iris aphylla* ssp. *Hungarica* (iris); 4098 - *Iris humilis* ssp. *Arenaria* (yellow dwarf iris); 1428 - *Marsilea quadrifolia* (water clover); 4110* - *Pulsatilla pratensis* ssp. *Hungarica* (small pasque flower).

➤ ROSCI0021 Ierului Plain

Satu Mare County: Andrid (41%), Căuaș (7%), Pir (22%), Pișcolt (<1%), Santău (18%), Tiream (37%);

Bihor County: Cherechiu (58%), Curtuișeni (15%), Diosig (2%), Săcueni (18%), Sălacea (46%), Tarcea (51%), Valea lui Mihai (<1%), Șimian (3%);

Types of habitats: 1530 * - Pannonian and Ponto - Sarmatian halophilous grasslands and swamps; 3130 - oligotrophic to mesotrophic standing waters with vegetation of *Littorelletea uniflorae* and / or *Isoëto - Nanojuncetea*; 3150 - Eutrophic lakes with vegetation type *Hydrocharition* or *Magnopotamion*; 3260 - Water courses from the plains to the mountain level, with vegetation *Callitricho - Batrachion* and *Ranunculion fluitantis*; 3270 - Rivers with muddy banks with vegetation *Chenopodion arieg* and *Bidention*; 40A0 – Peri Panononnnian subcontinental bushes ; 6430 - hydrophilous tall herb fringe communities from plain to mountain and alpine levels; 91F0 - Riparian mixed forests with *Quercus robur*, *Ulmus laevis*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the banks of major rivers (*Ulmenion minoris*); 91I0 - Eurosiberian steppe vegetation with *Quercus spp.*; 92A0 - groves with *Salix alba* și *Populus alb.*

Species of mammals: 1355 - *Lutra Lutra* (European otter); 1335 - *Spermophilus citellus* (European ground squirrel);

Amphibians and reptile species: 1188 - *Bombina bombina* (European fire-bellied toad); 1193 - *Bombina Ariege* (yellow-bellied toad); 1220 - *Emys orbicularis* (water turtle); 1166 - *Triturus cristatus* (great crested newt); 1993 - *Triturus dobrogicus* (Danube crested newt);

Fish species: 1149 - *Cobitis taenia* (spined loach); 1124 - *Gobio albipinnatus* (white-finned gudgeon); - 1145 *Misgurnus fossilis* (European weatherfish or European weather loach); 1134 - *Rhodeus sericeus amarus* (European bitterling); 2011 - *Umbra krameri* (European mudminnow);

Invertebrate species: 4056 - *Anisus vorticulus* (ramshorn snail); 1078* - *Callimorpha quadripunctaria* (Jersey Tiger); 1052 - *Euphydryas maturna* (scarce fritillary); 4036 - *Leptidea walrus* (Fenton's Wood White); 1060 - *Lycaena disappear* (large copper);

Plant species: 1516 - *Aldrovanda* (waterwheel plant); 4081 - *Cirsium brachycephalum* (spear thistle); 1898 - *Eleocharis carniolica*; 1428 - *Marsilea quadrifolia* (water clover).

➤ **ROSCI0214 Tour River**

Satu Mare County: Agriș (19%), Botiz (<1%), Călinești-Oaș (42%), Gherța Mică (34%), Halmeu (3%), Lazuri (20%), Livada (44%), Medieșu Aurit (15%), Micula (55%), Orașu Nou (40%), Porumbesti (22%), Turulung (41%), Turț (2%);

Types of habitats: 3150 - Natural eutrophic lakes with vegetation type *Hydrocharition* or *Magnopotamion*; 3160 - Dystrophic lakes and ponds; 3270 - Rivers with muddy banks with vegetation *Chenopodion rubri* and *Bidention*; 40A0 - Peri Panononnnian subcontinental bushes; 6120 - xeric grasslands on calcareous sands; 6410 - *Molinia* meadows on calcareous, peaty or clay loam soils (*Molinion caeruleae*); 6430 -hydrophilous tall herb fringe communities from plain to mountain and alpine levels; 6510 - low altitude meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*); 9130 - *Asperulo-Fagetum* beech forests; 91E0 - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*); 91F0 - Riparian mixed forests with *Quercus robur*, *Ulmus laevis*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*); 91M0 - Forest Balkan-Pannonian sky and oak; 91Y0 – Dacian oak and hornbeam forests; 92A0 – Bushes with *Salix alba* and *Populus alba*;

Mammalian Species: 1308 - *Barbastella barbastellus* (western barbastelle); 1355 - *Lutra Lutra* (European otter); 1323 - *Myotis bechsteini* (Bechstein's bat); 1307 - *Myotis blythii*

(Lesser mouse-eared bat) ; 1318 - *Myotis dasycneme* (Pond bat); 1321 - *Myotis emarginatus* (Geoffroy's bat); 1324 - *Myotis myotis* (The greater mouse-eared bat); 1304 - *Rhinolophus ferrumequinum* (greater horseshoe bat); 1303 - *Rhinolophus hipposideros* (lesser horseshoe bat);

Amphibians and reptiles species: 1188 - *Bombina bombina* (European fire-bellied toad); 1193 - *Bombina variegata* (yellow - bellied toad); 1220 - *Emys orbicularis* (water turtle); 1166 - *Triturus cristatus* (great crested newt); 1993 - *Triturus dobrogicus* (Danube crested newt);

Fish species: 1130 - *Aspius aspius* (Asp); 1149 - *Cobitis taenia* (spined loach); 1124 - *Gobio albipinnatus* ((white-finned gudgeon); 2511 - *Gobio kessleri* (Kessler's gudgeon); 1145 - *Misgurnus fossilis* (European weatherfish or European weather loach); 1134 - *Rhodeus sericeus amarus* (European bitterling); 1114 - *Rutilus pigus* (pigo); 1146 - *Sabanejewia aurata* (Golden Spined Loach); 1160 - *Zingel streber* (Danube strebel);

Invertebrate Species: 1088 - *Cerambyx cerdo* (great capricorn beetle); 4045 - *Coenagrion ornatum* (Ornate Bluets); 1074 - *Eriogaster catax*; 1065 - *Euphydryas aurinia*; 1082 - *Graphoderus bilineatus* (water beetle); 4036 - *Leptidea morsei*; 1083 - *Lucanus cervus* (stag beetle); 1060 - *Lycaena dispar*; 4038 - *Lycaena helle*; 1059 - *Maculinea teleius* (scarce large blue); 1032 - *Unio crassus* (thick shelled river mussel) .

➤ ROSCI0275 Bârsău – Șomcuta

Satu Mare County: Bârsău (11%);

Maramureș County: Asuaju de Sus (5%), Băița de sub Codru (6%), Fărcașa (3%), Gârdani (63%), Mireșu Mare (<1%), Satulung (17%), Sălsig (16%), Șomcuța Mare (7%);

Types of habitats: 9170 - oak and hornbeam forests *Galio - Carpinetum* type; 91Y0 – Dacian oak and hornbeam forests;

Mammalian Species: 1323 - *Myotis Bechstein* (Bechstein's bat); 1324 - *Myotis myotis* (The greater mouse-eared bat); 1305 - *Rhinolophus ariega* (Mediterranean horseshoe bat); 1304 - *Rhinolophus ferrumequinum* (greater horseshoe bat); 1303 - *Rhinolophus hipposideros* (lesser horseshoe bat) ;

Amphibians and reptiles species: 1193 - *Bombina Ariege* (yellow - bellied toad); 1166 - *Triturus cristatus* (great crested newt).

➤ ROSCI0358 Pricop - Huta – Certeze

Satu Mare County: Bixad (3%), Certeze (13%);

Maramureș County: Remeți (23%), Săpânța(<1%);

Types of habitats: 9130 - beech forests *Asperulo - Fagetum*; 9170 - Forests of oak and hornbeam *Galio- Carpinetum* type; 91V0 - Dacian beech forests (Symphyto - *Fagion*);

Mammalian Species: 1352 - *Canis lupus* (wolf); 1361 - *Lynx lynx* (Lynx); 1304 - *Rhinolophus ferrumequinum* (greater horseshoe bat); 1354 - *Ursus arctos* (brown bear).

Amphibians and reptiles species: 1193 - *Bombina Ariege* (yellow - bellied toad); 1166 - *Triturus cristatus* (great crested newt); 2001 - *Triturus montandoni* (Carpathian newt).

➤ Suceava County

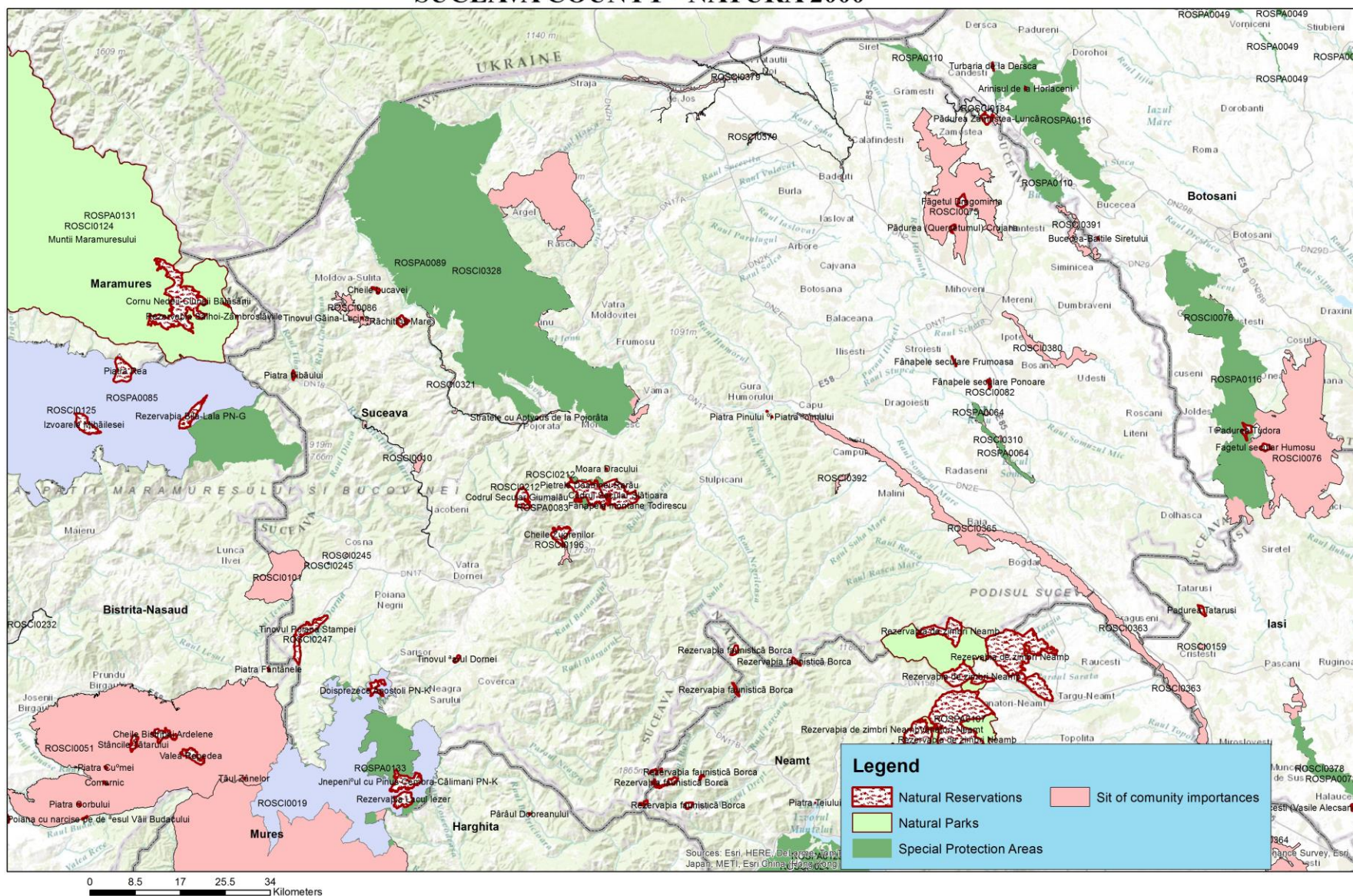
In Suceava County there are established 23 Sites of Community Importance, 6 Avifaunistic Special Protection Areas SPA, nature reserves and natural parks. **Figure 5.4** shows the distribution of SCI, SPA, nature reserves and natural parks in Suceava County.

On the territory of Suceava County there are a total of 29 protected areas of national interest (botanical reserves, forest reserves, geological reserves, paleontological reserves, one scientific reserve, Calimani National Park with a total area of 24,041 ha, of which 10,700 ha on the territory of Suceava county).

Protected natural areas of national interest in Suceava County

Nr. crt.	Name	ANP Category	Surface (ha)
1	Calimani National Park	National Park	10,700.00
2	Ponoare secular meadows	Botanical reserve	24.50
3	Frumoasa secular meadows	Botanical reserve	9.50
4	Pietrele Doamnei Rarău	Mixed type reserve	973.00
5	Zugrenilor Canyon	Mixed type reserve	314.00
6	Slătioara Secular Forrest	forest reserve	1064.20
7	Giulău Secular Forest	forest reserve	309.50
8	Poiana Stampei Oligotrophic Swamp	forest reserve	681.80
9	Șaru Dornei Oligotrophic Swamp	forest reserve	36.00
10	Zamostea Luncă Forrest	forest reserve	107.60
11	Crujana Forrest (Quercetum)	forest reserve	39.40
12	Făgetul Dragomirna	forest reserve	139.40
13	Răchitișul Mare	Botanical reserve	316.40
14	Găina Lucina Oligotrophic Swamp	Botanical reserve	1.00
15	L. Todirescu Mountain meadows	Botanical reserve	38.10
16	Lucavei Canyon	geological reservation	33.00
17	Piatra Pinului and Piatra Șiomului	geological reservation	0.50
18	Piatra Țibăului	geological reservation	20.30
19	Moara Dracului Canyon	geological reservation	1.30
20	Stratele cu Aptychus de la Pojorâta	paleontological	1.00
21	Doisprezece Apostoli (PN-K)	geological reservation	200.00
22	Jnepeniș cu Pinus cembra	forest reserve	384.20
23	Calafindești Secular meadows	Botanical reserve	7.00
24	Roșoșă Forrest	forest reserve	204.80
25	Loben Forest	forest reserve	483.00
26	Voievodeasa Forest	forest reserve	101.90
27	Klipa calcare triasice Pârâul Cailor	Paleontological reserve	0.10
28	Piatra Buhii	geological reservation	2.00
29	Lilieciilor Cave	scientific reserve	6.00

SUCEAVA COUNTY - NATURA 2000



I. AVIFAUNISTIC SPECIAL PROTECTION AREAS – SPA

In Suceava County there are declared 6 Avifaunistic Special Protection Areas.

Tabel 5.1.1 Avifaunistic Special Protection Areas in Suceava County

No.	SPA Name	SPA Location	Surface (ha)		Surface overlapping ANP surface (%)	Occupied surface out of total County surface (%)
			Total	On County territory		
1.	Fălticeni Lakes	Fălticeni, Bunești, Rădășeni	659.8	659.8	Not applicable	0.08%
2.	Obcina Feredeului	Breaza, Brodina, Câmpulung Moldovenesc, Frumosu,	63983.3	63983.3	17.81%	7.5%
3.	Rarău Giumalău Mountains	Câmpulung Moldovenesc, Crucea, Dorna Arini, Stulpicani	2157.3	2157.3	90 %	0.25%
4.	Călimani Mountains	Dorna Candrenilor, Panaci, Poiana Stampei, Șaru Dornei	29048	15395	21%	53%
5.	Acumulările Rogojești-Bucecea	Suceava, Botoșani	2100	567	Not applicable	0.06
6.	Dorohoi - Șaua Bucecei (4% in Suceava County)	Suceava, Botoșani	25330	1013	Not applicable	0.11

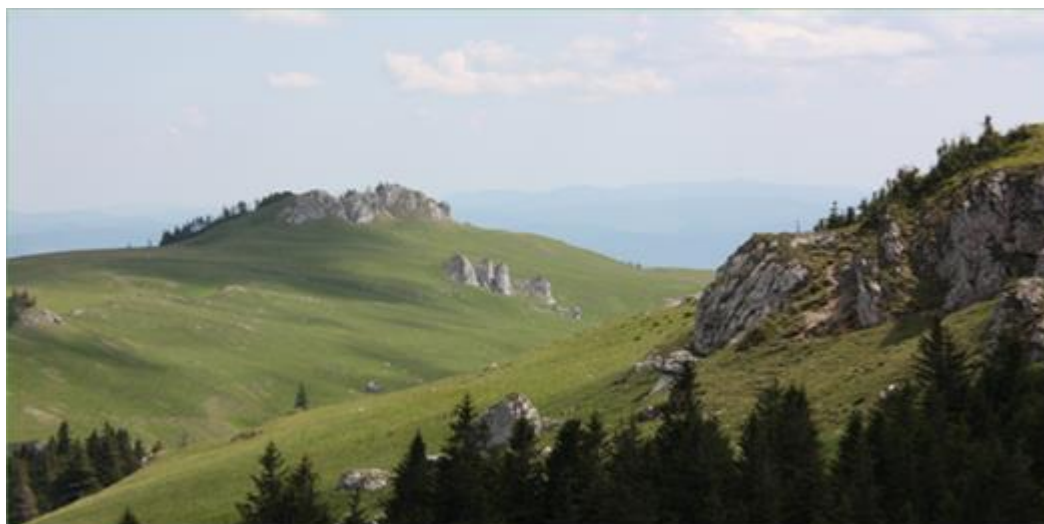


Figure 5.4.1 Rarău – Giumalău Mountains – Avifaunistic Special Protection Area

II. SITES OF COMUNITY IMPORTANCE-SCI

In Suceava County there are **23** Sites of Community Importance.

Table 5.1.2. - Sites of Community Importance in Suceava County

No.	SCI Name	SCI Location	Surface (ha)		Surface overlapping ANP surface (%)	Occupied surface out of total County surface (%)
			Total	Territory of the County		
1	Bistrița Aurie	Cârlibaba, Ciocănești, Iacobenii	375	375	Not applicable	0,04
2	Ponoare Secular meadows	Bosanci	40	40	100	0,004
3	Frumoasa Secular meadows	Moara	10	10	100	0,001
4	Găina – Lucina	Moldova Sulița, Breaza	836	836	0,11	0,09
5	Zamostea – Lunca Forest	Zamostea	135	135	100	0,015
6	Pietrosul Broștenilor –Zugrenilor Canyon	Crucea, Dorna Arini	469	469	90	0,05
7	Rarău – Giumalău	C-lung Moldovenesc, Crucea, Dorna Arini, Pojorâta Stulpicani	2547	2547	100	0,29
8	Românești Oligotrophic Swamp	Coșna	21	21	Not applicable	0,002
9	Poiana Stampei Oligotrophic Swamp	Poiana Stampei	695	695	100	0,08
10	Șaru Dornei Oligotrophic Swamp	Șaru Dornei	41	41	100	0,004
11	Călimani-Gurghiu	Dorna Candrenilor, Panaci, Poiana Stampei	134936	10794	15	1,26
12	Pătrăuți Forrest	Adâncata, Șerbăuți, Pătrăuți, Calafindești, Dărmănești, Grămești, Mitocu Dragomirnei, Suceava, Zamostea, Zvoriștea	8746	8746	1,96	1,02
13	Fălticeni Lakes	Bosanci, Bunești, Fălticeni, Horodniceni, Moara, Rădășeni	895	895	100	0,10
14	Superior Moldova	Breaza, C-lung Moldovenesc, Fundu Moldovei, Pojorâta, Sadova	429	429	Not applicable	0,005
15	Obcinele Bucovinei	Breaza, Brodina, Vama, Putna, Sadova, C-lung Moldovenesc, Frumosu, Moldova Sulița, Moldovița, Vatra Moldoviței	32246	32246	50	3,77

No.	SCI Name	SCI Location	Surface (ha)		Surface overlapping ANP surface (%)	Occupied surface out of total County surface (%)
			Total	Territory of the County		
16	Moldova River between Păltinoasa and Ruși	Baia, Berchișești, Bogdănești, Boroaia, Capu Câmpului, Cornu Luncii, Forăști, Fântâna Mare, Gura Humorului, Mălini, Păltinoasa, Râșca, Vadu Moldovei, Valea Moldovei	5303	5196	Not applicable	0,60
17	Suceava River	Bilca, Dornești, Frătăuții Noi, Frătăuții Vechi, Gălănești, Horodnic de Jos, Horodnic de Sus, Milișăuți, Mușenița, Rădăuți, Satu Mare, Vicovu de Jos, Vicovu de Sus, Voitineli	881	881	Not applicable	0,10
18	Suceava Liteni River	Bosanci, Ipotești, Salcea, Suceava, Udești, Verești	1254	1254	Not applicable	0,15
19	Siretul Mijlociu – Bucecea	Dumbrăveni, Hânțești, Siminicea	570	445	Not applicable	0,05
20	Slatina	Slatina, Valea Moldovei	137	137	Not applicable	0,02
21	Dealul Mare Hârlău	Suceava, Botoșani, Iași	25112	1506	Not applicable	0,17
22	Larion	Suceava, Bistrița-Năsăud	3023	846	Not applicable	0,35
23	Moldova River between Oniceni and Mitesti	Suceava, Iași, Neamț	3215	450	Not applicable	0,05



Figure 5.4.2 Ponoare secular meadows - Site of Community Importance

➤ **Tulcea County**

In Tulcea County there are established **8** Sites of Community Importance SCIs, **9** Avifaunistic Special Protection Areas SPA, natural reserves and natural parks. **Figure 5.5** shows the distribution of SCI, SPA, natural reserves and natural parks in the Tulcea County.

In Tulcea County there are now legislated 34 protected natural areas of national interest namely: Macin Mountains National Park and 33 natural reserves.

Protected natural areas of national interest in Tulcea County are presented in the following table.

Protected natural areas of national interest in Tulcea County

No.	Name	Category	Surface ha
1	Macin Mountains National Park	II National Park	11,321.00
2	"Valea Fagilor" Forest	IV Forest Reserve	154
3	" Korum Tarla " Botanical Reserve	IV Botanical Reserve	2.00
4	Hill Bujoarele Fossiliferous Site	IV Geological Reserve	8.00
5	" Agighiol " Geological Reserve	IV Geological Reserve	9.70
6	Secaru Peak	IV Nature Reserve	34.50
7	"Fântâna Mare" Lilac Reserve	IV Nature Reserve	0.30
8	„Valea Oilor” Lilac Reserve	IV Nature Reserve	0.35
9	" Dealul Bujorului" Natural Reserve	IV Nature Reserve	50.80
10	Niculitel Forest	IV Nature Reserve	11.00
11	Babadag-Codru– Forrest	IV Nature Reserve	524.60
12	Traian Lake	IV Nature Reserve	326.00
13	Muchiile Cernei-Iaila	IV Nature Reserve	1,891.00
14	Beidaud	IV Nature Reserve	1,121.00
15	Mahomencea Valley	IV Nature Reserve	1,029.00
16	Ghiunghiurmez Hill	IV Nature Reserve	1,421.00
17	Chervant-Priopcea	IV Nature Reserve	568.00
18	Călugăru- Iancina	IV Nature Reserve	130.00
19	Consul Mountain	IV Nature Reserve	328.00
20	Sarica Hill	IV Nature Reserve	100.10
21	Beştepe Hills	IV Nature Reserve	415.00
22	Enisala	IV Nature Reserve	57.00
23	Carasan - Teke	IV Nature Reserve	244.00
24	Ostrovului Valley	IV Nature Reserve	61.80
25	Uspenia	IV Nature Reserve	22.00
26	Edirlen	IV Nature Reserve	25.50
27	Casimcea	IV Nature Reserve	137.00
28	Colţanii Mari	IV Nature Reserve	53.00
29	Peceneaga	IV Nature Reserve	132.00
30	Măgurele	IV Nature Reserve	292.00
31	Războieni	IV Nature Reserve	41.00
32	Deniztepe Hill	IV Nature Reserve	305.00
33	Mândreşti Hill	IV Nature Reserve	5.00
34	Cocoş Monastery	IV Nature Reserve	4.60

Areas of international interest

No.	Name	Legal Act	Category of the Protected Area	Surface ha	Surface (ha), at Tulcea County level
1	Danube Delta Biosphere Reserve	Law 82/1993	Biosphere Reserve	580,000	508,851

The Danube Delta is one of the largest deltas of the European continent and the most well preserved wetland in Europe. Danube Delta' ecosystems, diverse and with a discontinuous distribution, "mosaic" type, create a special framework compared to other biomes of our country' territory. The Danube Delta is home to a variety of species of plants and animals, some strictly adapted to the Danube Delta as well as particularly interesting plant associations and communities.

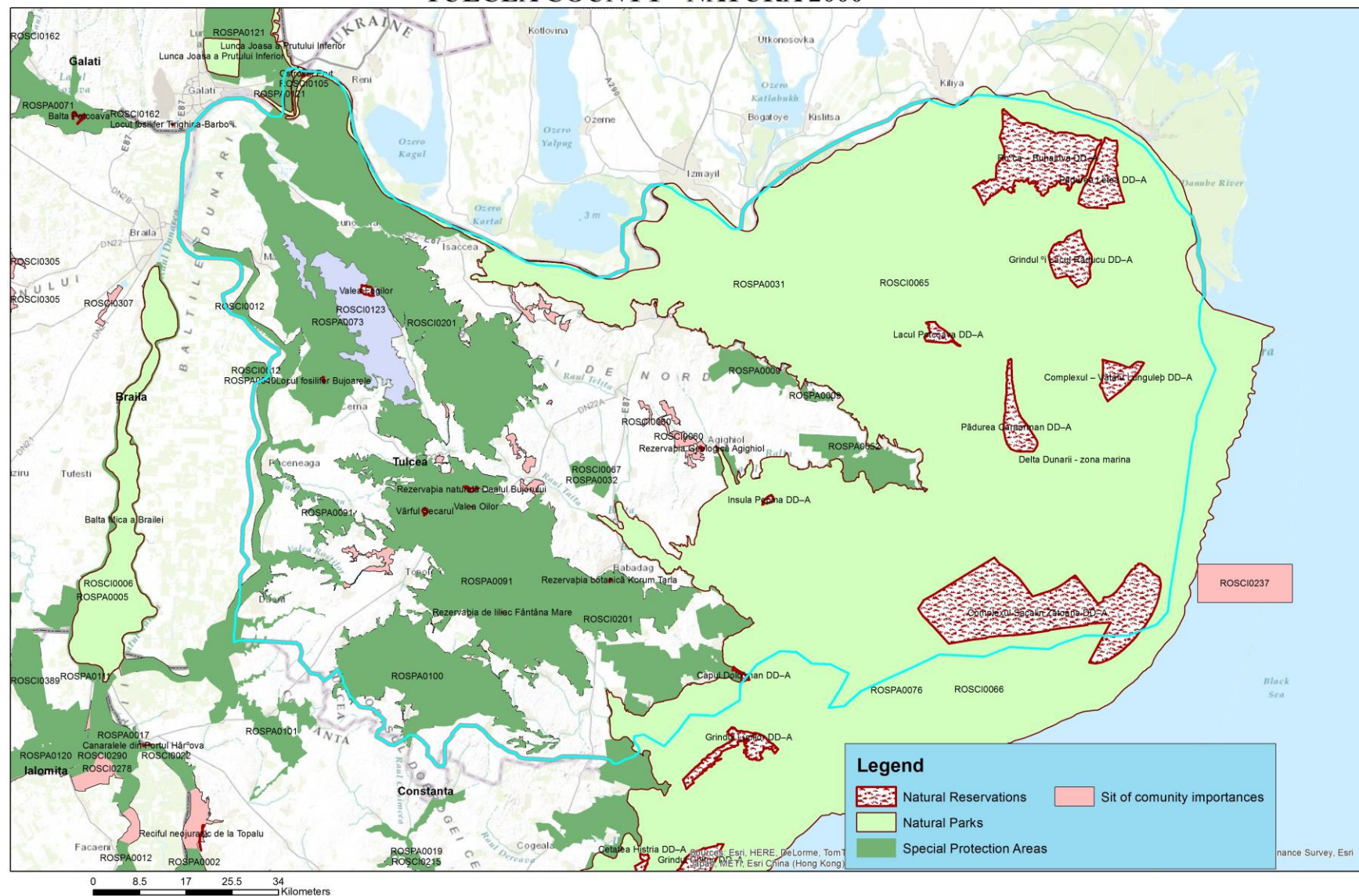
Of the more than 300 species of birds that are found within the reserve all year round or only during certain periods thereof, over half are protected or strictly protected species by International Conventions.

These are just a few features due to which Danube Delta was declared a Biosphere Reserve in 1990 and included in the international network of Biosphere Reserves under the "Man and Biosphere" program launched by UNESCO in 1970.

Danube Delta Biosphere Reserve has a total area of about 580,000 ha. The Reserve' territory includes several physical and geographical units outstanding both morphologically and genetically:

- Danube Delta itself;
- Razelm – Sinoe lagoon complex;
- Black Sea, up to 20 m isobath;
- Maritime Danube up to Cotul Pisicii including Isaccea – Tulcea floodplain;
- Murighiol – Plopu Saltings .

TULCEA COUNTY - NATURA 2000



I. AVIFAUNISTIC SPECIAL PROTECTION AREAS –SPA

In Tulcea County there are declared 9 Avifaunistic Special Protection Areas.

Table 4.1.3 Avifaunistic Special Protection Areas (SPA) in Tulcea County

No	SITE COD	SITE NAME	Surface ha	Surface at the level of County (ha)
1	ROSPA0009	Beştepe – Mahmudia	3,663	3663
2	ROSPA0031	Danube Delta and Razim – Sinoe Complex	512,820	456,410
3	ROSPA 0032	Denis Tepe	1,900	1,900
4	ROSPA0040	Old Danube –Măcin Channel	18,759	8,442
5	ROSPA0052	Beibugeac Lake	470	470
6	ROSPA0076	Black Sea	140,143	Black Sea
7	ROSPA0073	Măcin – Niculiţel	67,361	67,361
8	ROSPA0091	Babadag Forest	58,473	58,473
9	ROSPA0100	Casimcea Steppe	22,226	22,226

➤ ROSPA 0009 Beştepe – Mahmudia

It is an important place for feeding of the nesting raptorial birds as well as those who



are in migration. Examples of rare species of raptorial birds in the area: *Accipiter brevipes* (Levant Sparrowhawk), *Aquila heliaca* (Imperial Eagle), *Aquila nipalensis* (steppe eagle), *Aquila clanga* (greater spotted eagle), *Circus macrourus* (pallid harrier), *Falco cherrug* (Saker falcon).

This site houses important protected bird species as follows: 29 species in Annex 1 of the Birds Directive, 30 other migratory

species listed in the Annexes to the Convention on Migratory Species (Bonn), 7 globally endangered species.

The site is important for nesting populations of the following species: *Burhinus oedicephalus*, *Caprimulgus europaeus*, *Calandrella brachydactyla*, *Oenanthe pleschanka*. The site is also used for wintering of the following species: *Branta ruficollis* (red-breasted goose) and *Circus cyaneus*.

➤ ROSPA 0076 Măcin Niculiţel

It is one of the most important places in the country in terms of the abundance of nesting raptorial birds: Imperial Eagle (*Aquila heliaca*), Lesser spotted eagle (*Aquila pomarina*), Booted eagle (*Hieraaetus pennatus*), Short-toed snake-eagle (*Circaetus gallicus*), *Pernis apivorus* (European honey-buzzard), ong-legged buzzard (*Buteo rufinus*), Levant

Sparrowhawk (*Accipiter brevipes*), Saker Falcon (*Falco cherrug*) and Eurasian eagle-owl (*Bubo Bubo*), Long-eared owl (*Asio Otus*).



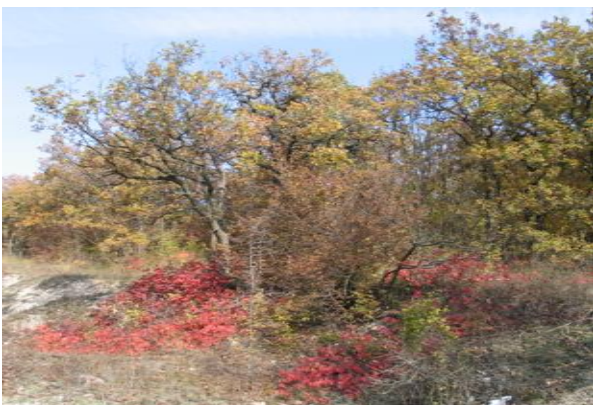
This site houses important protected bird species as follows: 56 species in Annex 1 of the Birds Directive, 123 other migratory species listed in the Annexes to the Convention on Migratory Species (Bonn), 10 globally endangered species.

The site is important for nesting populations of the following species:

Falco cherrug, *Coracias garrulus*, *Ciconia ciconia*, *Accipiter brevipes*, *Burhinus oedicephalus*, *Oenanthe*

pleschanka, *Circaetus gallicus*, *Buteo rufinus*, *Emberiza hortulana*, *Caprimulgus europaeus*, *Hieraaetus pennatus*, *Lullula arborea*.

The site is important during migration period for the following species: *Ciconia ciconia*, *Accipiter brevipes*, *Circaetus gallicus*, *Buteo rufinus*, *Hieraaetus pennatus*, *Lanius collurio*, *Gyps fulvus*, *Ficedula parva*, *Galerida cristata*, *Lullula arborea*, *Falco vespertinus*, *Neophron percnopterus*, *Pandion haliaetus*, *Nycticorax nycticorax*, *Ciconia nigra*, *Himantopus himantopus*, *Haliaeetus albicilla*, *Recurvirostra avosetta*, *Tringa glareola*, *Pelecanus onocrotalus*, *Pelecanus crispus*, *Ardea purpurea*, *Plegadis falcinellus*, *Platalea leucorodia*, *Chlidonias hybridus*, *Pernis apivorus*, *Antus campestris*, *Aquila pomarina*, *Aquila heliaca*, *Aquila chrysaetos*, *Aquila clanga*, *Circus macrourus*, *Circus aeruginosus*, *Falco peregrinus*, *Milvus migrans*, *Phalacrocorax pygmaeus*, *Egretta alba*.



➤ ROSPA 0091 Babadag Forest

It is the largest forest in Dobrogea having a special role during migration and wintering for thousands of raptorial birds and other species that stop here for feeding.

Important species of this area: *Caprimulgus europaeus* (European nightjar), *Coracias garrulous* (Roller), *Hortulana Emberiza* (ortolan bunting), woodpecker (*Dendrocopos medius*), black

woodpecker (*Dryocopus martius*).

This site houses important protected bird species as follows: 38 species from Annex 1 of the Birds Directive, 61 other migratory species listed in the Annexes to the Convention on Migratory Species (Bonn) and 6 globally endangered species.

The site is important for nesting populations of the following species: *Falco vespertinus*, *Falco cherrug*, *Coracias garrulus*, *Hieraaetus pennatus*, *Accipiter brevipes*, *Circaetus gallicus*, *Circus pygargus*, *Oenanthe pleschanka*, *Picus canus*, *Milvus migrans*, *Dendrocopos medius*.

The site is important during migration period for the following species: *Haliaeetus albicilla*, *Ficedula parva*, *Ciconia ciconia*.

The site is important for wintering for the following species: *Circus macrourus* and *Circus cyaneus*.

➤ **ROSPA 0100 Casimcea steppe**

It is a site which hosting a significant number of globally threatened species of birds and a feeding, migration and wintering ground for a large number (thousands) of geese (red necked goose), *Branta ruficollis* (red-breasted goose) and raptorial birds (eagles, short-toed eagle, hawk, Saker Falcon).

This site houses important protected bird species as follows: 28 species in Annex 1 of the Birds Directive, 37 other migratory species listed in the Annexes to the Convention on Migratory Species (Bonn) and 5 globally endangered species.

The site is important for nesting populations of the following species: *Coracias garrulus*, *Falco cherrug*, *Falco vespertinus*, *Aquila heliaca*, *Anthus campestris*, *Accipiter brevipes*, *Calandrella brachydactyla*, *Buteo rufinus*, *Milvus migrans*, *Pernis apivorus*, *Lanius collurio*, *Lullula arborea*, *Oenanthe pleschanka*, *Lanius minor*, *Melanocorypha calandra*, *Burhinus oedicephalus*, *Circaetus gallicus*, *Galerida cristata*, *Aquila pomarina*, *Dendrocopos syriacus*, *Emberiza hortulana*. The site is important during migration for the following species: *Falco vespertinus*, *Accipiter brevipes*, *Hieraaetus pennatus*, *Falco peregrinus*, *Circus cyaneus*, *Aquila pomarina*, *Ficedula albicollis*, *Circus macrourus*, *Circus pygargus*.

➤ **ROSPA 0032 Denis Tepe**

In the area are nesting or migrating several species of raptorial birds: Levant Sparrowhawk (*Accipiter brevipes*), Imperial Eagle (*Aquila heliaca*), eagle owl (*Bubo Bubo*), Lesser spotted eagle (*Aquila pomarina*), Short-toed snake-eagle (*Circaetus gallicus*), Saker falcon (*Falco cherrug*), Hen harrier, harrier, white (*Circus pygargus*, *cyaneus*, *macrourus*).

This site houses important protected bird species as follows: 25 species in Annex 1 of the Birds Directive, 33 other migratory species listed in the Annexes to the Convention on Migratory Species (Bonn) and 6 globally endangered species.

The site is important for nesting populations of the following species: *Falco cherrug*, *Buteo rufinus*, *Calandrella brachydactyla*, *Melanocorypha calender*, *Lullula arborea*, *Burhinus oedicephalus*.

➤ **ROSPA 0052 Beibugeac Lake**



Declared a nature reserve of local interest through Decision of the Local Council No.3 / 2004, the lake has a seismic origin and appeared in the 1940 earthquake. It is sitting on sandy loess layers arranged above limestone layers dating from the Triassic. The lake is fed mainly by rainwaters that drain the surrounding hills, by infiltration resulted at higher elevations of the Danube waters from Razim

Lakewhich is located in the immediate vicinity and possibly by supply from springs.

From an avifaunistic point of view, the lake is an important resting and feeding place during winter for thousands of geese: Red breasted goose (*Branta ruficollis*), Greater white-fronted goose (*Anser albifrons*). The lake attracts for feeding thousands of ducks every season among which the White-headed Duck (*Oxyura leucocephala*) and Ferruginous duck (*Aythya nyroca*). Islands in the middle of the lake are a resting place for thousands of gulls, hundreds of pelicans and tens of dalmatian pelicans.

This site houses important numbers of protected bird species as follows: 39 species in Annex 1 of the Birds Directive, 56 other migratory species listed in the Annexes to the Convention on Migratory Species (Bonn) and 7 globally endangered species.

The site is important for nesting populations of the following species: *Glareola pratincola*, *Falco vespertinus*, *Recurvirostra avosetta*, *Himantopus himantopus*.

The site is important during migration for the following species: *Branta ruficollis*, *Aythya nyroca*, *Pelecanus crispus*, *Pelecanus onocrotalus*, *Platalea leucorodia*, *Pelecanus onocrotalus*, *Plegadis falcinellus*, *Glareola pratincola*, *Ardeola ralloides*, *Larus melanocephalus*, *Recurvirostra avosetta*, *Nycticorax nycticorax*, *Himantopus himantopus*, *Sylvia nisoria*, *Tringa glareola*, *Sterna hirundo*, *Sterna albifrons*.

The site is important for wintering for the following species: *Phalacrocorax pygmaeus*, red-breasted goose, *Anser albifrons*, *Cygnus Cygnus*.

During migration the site hosts more than 20,000 of fen fowls, being a possible candidate as a RAMSAR site.

➤ **ROSPA 0040 Old Danube Macin Channel**

This site houses important numbers of protected bird species as follows: 63 species in Annex 1 of the Birds Directive, 55 other migratory species listed in the Annexes to the Convention on Migratory Species (Bonn) and 7 globally endangered species .

The site is important for nesting populations of the following species: *Coracias garrulus*, *Falco vespertinus*, *Ferruginous duck*, *Accipiter brevipes*, *Anthus campestris*, *Lanius collurio*, *Lanius minor*, *Calandrella brachydactyla*.

The site is important during migration for the following species: *Pelecanus crispus*, *Pelecanus onocrotalus*, *Accipiter brevipes*, *Phalacrocorax pygmaeus*. The site is important for wintering for the following species: *Phalacrocorax pygmaeus* and *Anser albifrons*.

II.SITES OF COMUNITY IMPORTANCE-SCI

In Tulcea County there are 8 Sits of Community Importance presented in table 5.1.4.

Table no. 5.1.4 Sites of Community Importance (SCI) in Tulcea

No	SIT COD	SIT NAME	Surface ha	Surface at the level of the County (ha)
1	ROSCI0012	Macin Channel	10,235	4,503
2	ROSCI0060	Agighiolului Hills	1,433	1,433
3	ROSCI0065	Danube Delta	454,037	422,254
4	ROSCI0066	Danube Delta-Marine zone	123,374	2,468
5	ROSCI0067	DENIZ TEPE	414	414
6	ROSCI0123	Măcinului Mountains	16,894	16,894
7	ROSCI0201	Northern Dobrogea Plateau	84,812	84,812
8	ROSCI0237	Methane submarine structures - St. Gheorghe	6,122	Black See

➤ ROSCI 0012 Măcin Channel

The site is important primarily for conservation of the habitat 92A0 *Salix alba* and *Populus alba* galleries that occupies approximately 19.41% of the site and respectively 4% of the national habitat. The habitat is also represented by more or less reduced surfaces of trees and bushes which did not suffer any silvic interventions and and surfaces that may be



considered virgin woods (actual or becoming). There were not however identified secular woods so far.

On the second place in terms of importance lies priority habitat 62C0 * Ponto-Sarmatic steppes, occupying an area of approximately 4% of the national area of habitat, represented by steppes with grasses on White soils (association *Agropyretum pectiniformae*) encountered in the country predominantly in Dobrogea and Petroliferous sptepes on Paleozoic slates (association *Sedo hillebrandtii- Polytrichetum piliferous*) falling in endemic alliance for Dobrogea *Pimpinello - Thymion zygioidi* (Sanda, Arcus, 1999).

On the site it has been cited (Savulescu, 1976) the species of Community interest *Marsilea quadrifolia* in the Iglita Lake area currently existing as aquaculture, due to which it can be assumed that the species has not disappeared.

The site is the northern part of the migration corridor of plant species in the Balkan Peninsula towards northern Dobrogea and the Danube Delta. Moreover it constitutes an important migration route for birds (being proposed also as SPA) as well as for certain species of fish, including sturgeon.

Including the Danube Flow in the site is essential for continuity and for transport by river waters of reproductive organs (seeds, sprouts etc.) of different plant species, fact that favors their dissemination to the northern Dobrogea and the Danube Delta.

➤ ROSCI 0060 Agighiolului Hills



The site is characterized by the presence of 3 priority habitats. In the most important habitat in the site 62C0 * Ponto- Sarmatic steppes respectively, occupying about 0.9% of the national area of the habitat, the association *Agropyro brandzae* - *Thymetum zygoidi* presents an outstanding value, endemic to Dobrogea (Sanda, Arcus, 1999), which occupies appreciable surfaces of hundreds of hectares. Within this association it must be emphasized the presence of important populations of the species *Euphorbia myrsinites*

included in the National Red List (Oltean et al. 1994), very rare in Dobrogea, the only region in the country where this taxon may be found.

Second place in importance is held by the habitat 91AA * Ponto- Sarmatian forest vegetation with fluffy oak, represented by the association *Paeonio peregrinae* - *Carpinetum orientalis* predominantly prevalent in the country in Dobrogea.

In the site are met also other national red list species (Oltean et al., 1994), namely: *Agropyron brandzae*, *Koeleria lobata*, *Thymus zygioides* etc. of which the first taxon is mentioned also in the European Red List.

➤ ROSCI 0067 Deniz Tepe

The site is important because it is covered almost entirely by priority habitat 62C0 * Ponto- Sarmatic steppes, along with this being another priority habitat - 40 CO * Ponto- Sarmatic deciduous bushes.

This site is also important as a habitat for other important species of plants and animals: *Campanula romanica* (Dobrogea bellflower), *Elaphe quatorlineata* (four-lined snake) and *Spermophilus citellus* (European ground squirrel). The site was declared a protected natural area since 2004 and presents a geological/geomorphological importance, representing an erosion proof of Jurassic age, here being identified also fossils from that period.

➤ ROSCI 0123 Măcinului Mountains

The importance of the site lies mainly in the fact that it consists almost entirely of community interest habitats, in addition to those characteristic of these mountains being added also salty habitats by including in this site the Sărat and Slatina Lakes.

Also in this site it was identified the largest area nationally and worldwide of the 91X0 habitat in the reserve Fagilor valley, the rest of the areas with this habitat being widespread in SCI Northern Dobrogea Plateau. Here there were also identified the species of Community interest *Campanula romanica*, *Moehringia jankae*, *Himantoglossum caprinum*, *Agrimonia pilosa*, *Echium russicum*.



In addition to the unique character from a geological point of view Macin Mountains, the oldest mountains in the country, also stand out due to their characteristic landscape that can not be found at national level, being the result of the combination of geomorphological (megalithic granite formations) and fitocenocomplexis typical for most floors and vegetation zones in Dobrogea (Balkan forests, Mediterranean, woodsteppe and steppe), Petrescu, M . 2007).

➤ **ROSCI 0201 Noth Dobrogean Plateau**

The site included 23 legally constituted natural reserves of national importance, totaling 7520.55 ha. Nationally, the site is the most extensive and representative for steppe bioregion, consisting in a proportion of 95.5% (84,812 ha) of habitats of Community interest, out of which the steppe habitats being (17000 ha - 19.14 %).

Forest habitats also community interest habitats are dominated by habitate group 41.7 thermophilous and supra -Mediterranean oak forests (which includes types 91IO, 91 MO, 91AA) - 34,000 ha (38.19%), followed by 41.2 habitat (represented by the type 91YO) – 21,000 ha (23,591%), other forest habitats with a restricted share respectively 91XO -1 Ha (0.001%); 92AO - 10ha (0.011%). Shrubbery habitats of Community importance are also representative, occupying an area of 35.6% relative (1,780.8 ha).

It is important to emphasize that the site preserves phytocoenosis that served for the initial phytogenological description of the majority of forrest associations and numerous meadows and shrubbery associations typical of Dobrogea (Dihoru, Doniță, 1970) their conservation being extremely important scientifically. 62CO* habitat is the most representative of the steppe bioregions where the site is located, so it is important to detail certain aspects of it.

The surface at national level of Ponto- Sarmatic steppe is estimated up to 60,000 ha, of which 40,000 ha are in Dobrogea (30,000 in Tulcea County, 10,000 in Constanta County). The remaining 20,000 ha are widespread in other areas of the country, but generally on fragmented surfaces and exposed to intens grazing, especially in the steppe bioregion, areas outside the steppes not being generally typical steppe, climax, but result from deforestation.

Therefore there is no possibility of establishing representative sites of this habitat (on large enough surface to ensure a satisfactory percentage for this priority habitat) other than in Dobrogea and in particular in Tulcea County, where there are the largest and compact areas of this habitat.

The habitat is represented by associations of *Stipion lessingianae*, *Festucetum valesiacae*, *Pimpinello - Thymion zygioidi*, *Agropyro- Kochion* alliances. In this habitat subtype 34.9211 (comprising associations from *Pimpinello - Thymion zygioidi* alliance) is endemic for Dobrogea (Sanda, Arcus, 1999; Dihoru, Doniță, 1970), the site brings together the bulk of the range at national and global level.

This situation also applies to some specific regional associations of this province, namely the following associations: *Stipo ucrainicae* – *Festucetum valesiacae*, *Bombycilaeno – Botriochloetum ischaemi*, dobrogicum sub-associations of coenotaxon *Stipetum capillatae*, *Thymio pannonici* – *Chrysopogonetum grylli* (Dihoru, Doniță, 1970, Horeanu, 1976).

UKRAINE

Information on biodiversity in Ukraine was taken from documents found on the following websites:

- <http://ypcf.eu/files/booklet/ang/ukraine.pdf>
- <http://www.brucebyersconsulting.com/wp-content/uploads/2011/07/Ukraine-Biodiversity-Analysis-Report-1-2011.pdf>

Biodiversity of Ukraine consists of 27,000 **flora species** namely: species of algae, bryophytes species and species of vascular plants.

Fauna include: species of insects, fish, amphibians, reptiles, birds and mammals. Therefore, Ukraine can be considered one of the most powerful natural reservations necessary to restore biodiversity in Europe.

The only natural resources in Ukraine are **Crimea and the Carpathians**.

Ukrainian Carpathians are also called "Eastern Carpathians" or Wooded Carpathians, mainly for their territory area (up to Prislop Pass), while Romanians use the term Eastern Carpathians (Oriental Carpathians) to refer to the area from the border with Ukraine to the south.

Crimean Peninsula known as the Crimea is located on the northern coast of the Black Sea. Peninsula is located south of the Herson region of Ukraine and west of the Kuban region of Russia. It is joined with Herson region by the Isthmus of Perekop and separated of Kuban by the Strait of Kerch. Peninsula is surrounded by two seas: the Black Sea (west and south) and Azov Sea (east).

Ukraine pays special attention to the conservation of biological and landscape diversity and creating a national ecological network of protected areas.

Special attention is paid to the development of a network of natural reserve. This development was based on the law on "environmental protection" (1991) and "Nature Reserve Fund of Ukraine" (1992) and then " ecological network of Ukraine" (2004).

In 1991, protected areas accounted for only 1.9 % of the Ukraine surface, in 2007 , protected areas represented 4.6 % and in 2008 the protected areas increased to 4.95 % , in 2009 reaching 5.2% and in 2010 to 5.4% .

Since January 2011, the nature reserve of Ukraine had a total of 7,739 zones, with a surface of 3,458,900 ha on Ukraine territory and 402,500 ha in the Black Sea (botanical reserve). The structure of biodiversity areas includes: four biosphere reserves, 47 national parks, 307 natural reserves, 132 nature monuments, 18 botanical gardens and 7 zoological parks.

In order to create new protected areas in 2011, the request for the establishment of national parks was approved, namely:

- *Odessa*: National park Kuialnyk and Nipru –Desnyansko;
- *Vinnytsia*: National park Podolski;
- *Kherson* –botanical reservation of national importance;
- *Ternopil*: National park Valea.

In addition, a protection zone was established in Medoborsky from Ternopil region and the National Park - Dvurechansky from Kharkiv region was extended. It was established the reserve of local importance "Big Wood" - Kiev region as well as the territory of the landscape reserve of local importance "Samsonov Plant" in Lugansk region was expanded.

An agreement between the Government of Ukraine, the Government of Belarus and the Government of the Republic of Poland regarding the establishment of transboundary biosphere reserve "Western Polesie" was concluded.

The forests of Ukraine are located in different wildernesses: Polesie, forest-steppe, steppe, the Ukrainian Carpathians mountains and the mountain part of Crimea, in which difference regarding afforestation and forest management conditions being important.



Figure nr. 5.6 The species of flora and fauna typical and exceptional of Ukrainian forests

The forests of Ukraine are distributed unevenly. They are mostly concentrated in the Ukrainians' Carpathians and also in Polesie region. The Trans Carpathian region with forests of fir (*Abies*) is known as the most forested region of Ukraine.

The forest flora of Ukraine is very rich due to the diversity of climate zones.

The forests of Ukraine are made up of more than 30 types of tree species, dominated by pine (*Pinus sylvestris*) in which, until recently from pine sapit was extracted turpentine, oak (*Quercus robur*), beech (*Fagus sylvatica*), spruce (*Picea abies*), birch (*Betula pendula*), alder (*Alnus glutinosa*), ash (*Fraxinus excelsior*), hornbeam (*Carpinus betulus*), fir (*Abies alba*).

Coniferous forest occupies 42% of the total surface, pine forests occupies 33%. Deciduous forest occupies 43% and beech and oak forests occupies 32%.

Fauna of Ukraine is historically formed as part of the ecosystems. The most common ungulates that are hunted in Ukrainian forests are of many types and are presented below: European roe deer (143,600 exemplaries), wild boar (58,600 exemplaries), moose (5,600 exemplaries), deer (16,000 exemplaries), deer skipjack (4,300 exemplaries), deer (3,400 exemplaries) and muflon (500 exemplaries).

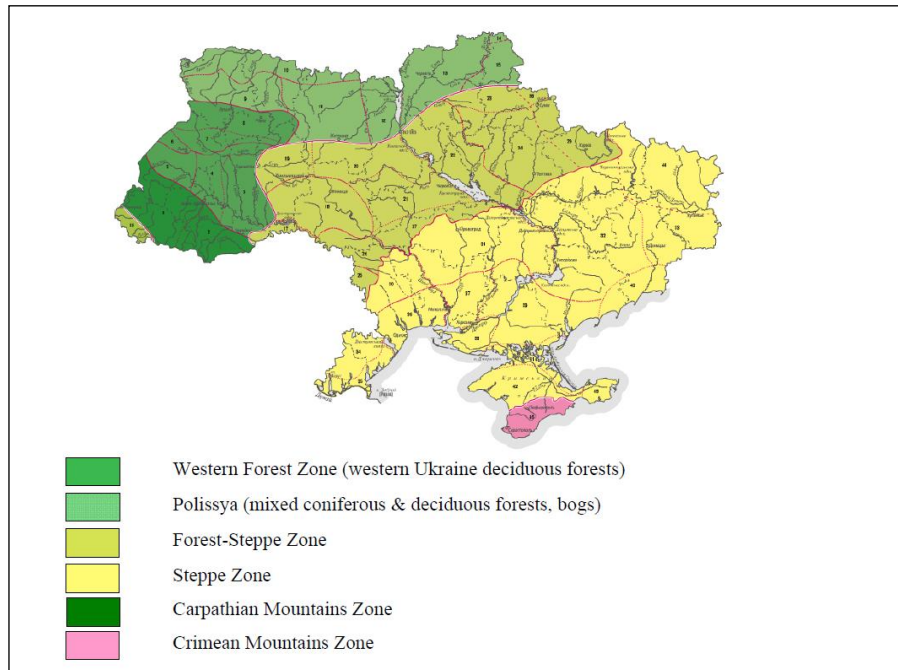


Figure nr. 5.7 *The distribution of tree species in Ukraine*

CULTURAL HERITAGE OBJECTIVES

I. ROMANIA

Regarding the cultural heritage the information is taken from the pages of each county or of the page of the County Departments of Culture, Cults and National Cultural Heritage of the Ministry of Culture: Botosani, Maramures, Satu Mare, Suceava and Tulcea.

➤ Cultural Heritage in Botosani County

The cultural heritage objectives from the Botosani County are 9, namely:

- Ciomac Cantemir House, Foundation Stefan Luchian;
- Costache Enescu House, George Enescu Museum premises;
- Manolache Iorga House, Botosani;
- G. Enescu Memorial House Liveni;
- N. Iorga Memorial House, Botosani;
- Ipotești Memorial,
- Museum of Archaeology, Saveni,
- Museum of Natural Sciences, Dorohoi,
- Botosani County Museum.

Places of worship in Botosani County are 23.

➤ **Cultural Heritage in Maramures County**

➤ Museum complexes in Maramures:

- Ethnography Museum, Sighetu Marmatiei;
- Museum of Ethnography and Folklore Art Baia Mare;
- Artistic center of Baia Mare - The Art Museum;
- Florean Museum;
- Mineralogy Museum Baia Mare;
- Memorial Museum Sighetu Marmatiei;
- County Museum of History and Archeology Baia Mare.

➤ Architecture and folk art monuments in Maramures:

- The historic center of Baia Mare;
- The historic center of Sighetu Marmatiei;
- Stefan Tower;
- Wooden churches of Maramureș;
- Wooden Churches of Lapus;
- Wooden Churches of Chioar;
- Merry Cemetery in Sapanta.

➤ Monasteries in Maramures:

- Barsana Monastery;
- Peri - Săpânța Monastery;
- Moisei Monastery;
- Santa Ana in Rohia Monastery.

Cultural objectives of Maramures included in UNESCO heritage are:

- Church " St. Arhangheli" (Rogoz) – UNESCO;
- Wooden Church " Intrarea Maicii Domnului in Biserica " in Barsana – UNESCO;
- Wooden church Calinesti- Susani;
- Wooden church Sfinții Arhangheli, Valenii Somcutei;
- Elie Wiesel Museum House.

➤ **Cultural Heritage in Satu Mare County**

In Satu Mare there are many touristic attractions that can be visited, including:

- □ ***Turnul Pompierilor***- built in 1904 on the initiative of Bishop Gyula Meszlényi being designed and built by Lajos Ferencz Dittler Vajnay. Today, the tower is a landmark of great attraction being visited daily by aprox. 50 visitors.
- ***Dacia Hotel (former Pannonia)*** - built in 1902 by architect Zoltán Bálint and Lajos Jámboor in Hungarian Art Nouveau style, Hotel Dacia is perhaps the most emblematic monument of Satu Mare. The model of the hotel won secondplace award at the World Expo in Wien.

- **Roman Catholic Episcopal Palace of Satu Mare** - designed by architect of the Counts Károlyi and Joseph Bitthauser and built between 1804 and 1840 in classical style, the bishop's palace is the seat of the Roman Catholic bishops of Satu Mare and headquarters of the Roman Catholic School Group "Ham Janos". In the Episcopal chapel, the altar where the famous Hungarian poet Sándor Petőfi married Julia Szendrey in the chapel of Arad Citadel.
- **Theatre** - is the second theatre building in the city theater (the first being demolished in 1889). Its foundations were filed on May 18, 1892; the inauguration took place during a festive ceremony on 14 January 1892. The project was conducted by Adolf Voyta, architect of the Pope, the work was carried out under the supervision of the architect from Debrecen Lajos Szikszay and interior decorations were created by Spanrafft and Hirsch.
- **Shoemakers' Guild building;**
- **Ormos House.**

Churches

- Roman Catholic Cathedral;
- Reformed Church with chains;
- Greek Catholic Cathedral "Sf. Arhangheli Mihail și Gavril ";
- Orthodox Church " Adormirea Maicii Domnului " ("the Cathedral")

Statues

- Lupa Capitolina Statue (Lupoaica);

Muzeum

- Memorial Workshop Aurel Popp;
- Memorial House "Vasile Lucaciu";
- County Museum.

➤ **Cultural Heritage in Suceava County**

Suceava, one of the oldest cities in Romania and former capital of Moldova has many historical sites and tourist attractions, spread over the town and its surroundings. The town is characterized by the large number of old Orthodox churches, Armenian, Roman Catholic, Hebrew. These churches and monasteries are evidence of ethnic diversity and multiculturalism of the settlement.

Also in Suceava there are several historical buildings, most of them built in the late nineteenth century and early twentieth century, the period during which the city mayor was Franz Des Loges. Suceava town also has a number of statues, busts, parietal mosaics and other monuments representing touristic attractions. Most of the historical and touristic objectives are located in the old town, region that stretches from Cetatea de Scen (east) and Șcheia Citadel (west).

Suceava Museum was founded in 1895 and acquired legal status on January 4, 1900. Currently, the Museum of Bucovina hosts the main touristic attractions from Suceava, and also some memorial houses and museums located in other areas of the county:

- Fortress of Suceava (Cetatea de Scaun);

- Royal Court of Suceava;
- History Museum in Suceava;
- Museum of Natural Sciences in Suceava;
- Ethnographic Museum in Suceava (Royal Inn);
- Bucovinian Village Museum;
- Cultural Memorial Fund, including:
 - Memorial House "Simeon Florea Marian" Suceava;
 - Memorial House "Nicolae Labis" in Mălini;
 - Memorial House "Eusebius Camilar" in Udești;
 - Solca House and Museum (Casa "Saveta Cotrubaș");
 - Bilca House and Museum;
 - Museum complex "Porumbescu" in Stupca.

The churches and monasteries are in the number of 19.

Memorial houses:

- "Simeon Florea Marian" Memorial House;
- The house where Ciprian Porumbescu lived.

➤ **Cultural Heritage in Tulcea County**

Tulcea is one of counties in Romania having one of the richest archaeological heritage, but few sites are designed to be known by tourists. Sites are listed below:

- **Enisala medieval fortress**, the most visited archaeological site in Tulcea. Near it, in the commune Jurilovca is Orgame/Argamum Citadel, the first town on the current territory of Romania.
- **Aegyssus Citadel**;
- **Noviodunum Roman-Byzantine Citadel**;
- **Another site that can enter the UNESCO patrimony, Dinogetia Citadel** is located in the perimeter of Jijila commune, near the road that links Tulcea and Galati towns, near a monastery named "Izvorul Tămăduirii".
- **Dinogetia was a Geto-Dacian settlement, then a Roman fortress mentioned by Ptolomeu** in the citadel area being discovered several pottery fragments proving the existence of a Roman fortresses including before Diocletian (284-305 AD). At present, the citadel is administered by the Romanian Academy.
- **Troesmis Citadel**, located on an area of about 157 hectares near the village Turcoaia, ICEM runs a project of non-invasive research of the site.
- **Halmyris Citadel**, near Murighiol, located on St. George Channel of the Danube, was inhabited, according to ICEM, by Getae in VI -V century BC.

II. UKRAINE

For Ukraine the information on cultural and historical heritage were taken from documents found on the following websites:

- http://en.wikipedia.org/wiki/Ukrainian_Cultural_Heritage_Village

- <http://whc.unesco.org/en/statesparties/ua>
- <http://www.history.alberta.ca/ukrainianvillage/>
- <http://culture.pl/en/article/polish-and-ukrainian-tserkvas-make-unesco-list>

➤ **CHERNIVTSI Oblast**

Residence of Bukovinian and Dalmatian Metropolitans - it is registered on the List of UNESCO World Heritage Sites from 2011.

The Chernivtsi Oblast is administratively subdivided into 11 raions (districts). In this region there are a total of 12 monuments included in national cultural heritage. The most are in Chernivtsi city (8 monuments), 2 monuments in Khotyn Raion (the most important is Khotyn Fortress), 1 monument in Novoselytsia Raion and 1 monument in Storozhynets Raion.

Most of these monuments from Chernivtsi Oblast are churches and cathedrals.

➤ **ODESSA Oblast**

The Struve Geodetic Arc – as part of the triangulation chain stretching from Hammerfest in Norway to the Black Sea, through 10 countries and over 2.820 km, which yielded the first accurate measurement of a meridian; - it is registered on the List of UNESCO World Heritage Sites from 2005;

The Odessa Oblast is administratively subdivided into 26 raions (districts) and 7 municipalities. In this region there are a large number of monuments included in the cultural heritage of Ukraine. Thus, in the 26 districts, there are a total of 169 monuments that are part of the national cultural heritage.

A special situation is found in the city of Odessa, where there exist about 1200 monuments. Most of them (several hundreds) are old buildings located on important streets such as: Bazarna Street, Pushkinska Street, Marazliyivska Street, Kanatna Street, Katerynynska Street, Koblevska Street, Frantsuzkyi Boulevard, Deribasivska Street, Dvoryanska Street, etc.

Most of these monuments from Odessa Oblast are churches and cathedrals.

➤ **IVANO-FRANKVISK Oblast**

The Ivano-Frankvisk oblast is administratively subdivided into 14 raions (districts) and 5 cities (municipalities). In the whole region there are a total of 85 monuments which are included in the national cultural heritage. Most of them are located in Dolyna Raion – 19 monuments and in Halych Raion – 14 monuments. Also, as in other districts, most of the monuments are churches and cathedrals.

➤ **ZAKARPATTIA Oblast (Transcarpathian Region)**

Zakarpattia Oblast is administratively subdivided into 13 raions (districts), as well as 5 towns (municipalities). In this region there are a total of 126 monuments which are included in the national cultural heritage. Most of them are located in Uzhhorod city (53 monuments) and in Mukachevo town (31 monuments) these two being the most important cities from the region.

Also, churches and cathedrals rank first among monuments.

6. THE ENVIRONMENTAL PROTECTION OBJECTIVES, ESTABLISHED AT INTERNATIONAL, COMMUNITY OR MEMBER STATE LEVEL, WHICH ARE RELEVANT TO THE PROGRAMME AND THE WAY THOSE OBJECTIVES AND ANY ENVIRONMENTAL CONSIDERATIONS HAVE BEEN TAKEN INTO ACCOUNT DURING ITS PREPARATION

I. ROMANIA

The Partnership Agreement with Romania

The Partnership Agreement (PA) Romania - EU approved on August 6, 2014 provides the strategic framework for the necessary reforms and investment to be carried out in the 2014 ÷ 2020 period. The PA is the main strategic document, covering the development needs and establishing the investment domains for FESI allocated to Romania totalizing approximately 40 billion Euros.

The PA objectives are convergent with ENI CBC Thematic Objectives due to the fact that the documents are converging in EU 2020 strategy. The main development necessities in terms of environmental protection and resource efficiency are the following:

- Expanding public access to water services in the context of the Directive 98/83/CE, regarding the quality of drinking water, Directive 91/271/CEE regarding urban waste water as well as Water Framework Directive 2000/60/CE through management plans of water basins;
- Implementing and upgrading of the necessary infrastructure for compliance with the requirements of the Directive on waste and Plans of Waste Management and prevention programs that will be development;
- Protection and nature conservation, including a coherent and functional Natura 2000 network, support for the high nature value farming systems and restoration of degraded ecosystems; Sustainable management of natural resources in Romania, including landscapes, farmland, forests, inland and coastal waters, protected areas and biodiversity;
- Development and improvement of air quality assessment and monitoring;
- Improving urban sustainable transport and reducing pollution;
- Addressing the situation of abandoned and contaminated sites and management of existing sources of pollution;
- Preservation and protection of cultural heritage;
- Reduce the risk of abandonment of farming activities;
- Development of public institutions through the implementation of the Integrated Management Plan.

Based on the conclusions of the analysis on difficulties of development and prevention of emergency situations the main development needs are:

- Improving Romania's ability to anticipate, prevent and respond to natural or anthropogenic extreme emergencies;

- improving the coping and resistance of Romania to the negative consequences of climate change and, in particular, the increased incidence of extreme heat events, drought, coastal erosion and flooding in the framework of the National Strategy on Climate Change;
- improving the adaptation and resilience resistance of Romania to other natural and anthropogenic risks;
- Adoption of farming practices to improve resilience to climate change; advisory service should accompany the adoption of measures at farm level;
- Enhance water efficiency in agriculture contributes to climate change adaptation.

National Reforms Program for Romania (NRP)

This strategic document is setting the framework for the main priorities and reforms to be applied on short and medium term for Romania to meet the objectives of the Europe 2020 Strategy. The NRP includes particular measures in various policy areas targeted to sustain economic growth and create jobs. Focused on the Romania's most urgent measures, the National Reform Program (NRP) is paying special attention to governance issues and macroeconomic stability. It is aiming to boost competitiveness, productivity and growth, social cohesion, territorial and economic convergence for reducing disparities in terms of economic development to other member states of the European Union.

Generally, ENI CBC Thematic Objectives are converging with NPR measures, with the exception of two of them, *TO3 Promotion of local culture and preservation of historical heritage* and *TO10 Promotion of border management and border security*, that are not essential to the NRP.

National Strategy on Climate Change 2013 ÷ 2020

Given the evolution of EU policy on climate change, the second NSCC 2013 ÷ 2020 was adopted by Government Decision no. 529/2013, foreseeing two action directions: reducing greenhouse gas emissions and increasing carbon sequestration through natural absorbent tanks and adaption to the negative effects on natural and anthropogenic systems of inherent climate change.

The overall objective of the strategy is to integrate the obligations related to energy and climate legislative package underlying principles that will guide the development of action plans and programs at sectoral level, setting goals and targets to be achieved through future specific measures and actions at sectoral level.

NSCC highlights the two key components of the climate effort: the prevention and mitigation of climate change (through action to reduce emissions of greenhouse gases - GHG emissions) and the appropriate adaptation measures with minimal damage in the context of the climate change already underway.

GHG emission mitigation component identifies the economic sectors that require specific measures to reduce GHG emissions (energy, industrial processes, agriculture, land use, land use change, forestry, and waste management). In addition, data on the GHG emissions contribution of each sector, general information on how human activity (productive processes or consumer / user) alongside with natural processes lead to these types of

emissions are presented and key measures to reduce GHG emissions in each sector are proposed.

The objective of adaptation to climate change component is to increase the capacity to adapt to real or potential effects of climate change by establishing strategic directions that can guide sectoral policy development, action to be taken and capacity development needed to update them regularly. Actions supported by this component are:

- Active monitoring of climate change impacts and associated social and economic vulnerability;
- Integration of adaptation measures to climate change into development strategies and policies at sectoral level and the harmonization of these measures between them;
- Identify urgent adaptation measures to climate change in critical socio-economic sectors.

National adaptation to climate change component encourages the identification of measures, actions and solutions that must be implemented in accordance with existing national needs in line with available resources and research requirements in order to limit the negative effects of climate forecast scenarios in medium and long term. Measures, actions and solutions identified will be implemented through inter-institutional cooperation and by providing technical assistance.

NSCC provides guidance support on policies and measures to be taken using EU structural and investment funds of the future of financial year (2014 ÷ 2020).

NSCC will contribute to the sustainable use of natural resources; reduce emissions of greenhouse gases in our country and the protection of biodiversity and natural ecosystems.

The objectives included in NSCC in 2013 ÷ 2020 will contribute to the sustainable use of natural resources, to the reduction of Romania greenhouse gases emissions, to the protection of biodiversity and natural ecosystems and the long-term preservation of social welfare by creating new jobs in specific sectors.

National Strategy for Flood Risk Management on medium and long term

NSFRM on medium and long term (2010÷2035), developed under SEA procedure, has been approved by GD no.846/2010 and its main objective is to prevent and reduce the consequences of floods on human life and health, socio-economic activities and the environment. The strategy foresees an integrated management of water and adjacent resources: urban planning and development, nature protection, agricultural and forestial development, protection of transport infrastructure, building and tourist areas, personal protection, etc.

National Strategy for Flood Risk Management objectives are the following:

- social objectives: prevention and minimization flood risk on people and human communities, prevention and minimization flood risk on public/ community goods (hospitals, clinics, schools, etc.) and recreational areas, minimizing damage to health state due to the impact on population of the flooding phenomenon and pollution associated with it;
- economic objectives: prevention and minimization of economic losses by reducing the flood risk in populated area, minimizing risks on economic objectives and goods by providing flood protection for localities with the exceedance probability

of 1% for urban areas and 10% for agricultural areas, differentiated on various time scenarios.

- environmental objectives – the accomplish the European Water Framework Directive requirements, avoiding the influence of anthropogenic alteration on watershed geomorphology, preventing pollution of watercourses and groundwater as a result of floods and their associated effects on the ecological quality of watercourses; protect and improve the land, and where possible encourage changes in agricultural practice to prevent or minimize leakage and flooding associated with it due to intensive agricultural activities; protection and preservation of historic monuments, protected areas and ecosystems; protecting and improving the environment and the specificity of its aesthetic appearance; minimize or prevent impacts of climate change on the occurrence of floods phenomenon.

In respect to the SNMRI objectives there have been developed plans for prevention, protection and mitigation of floods effects (PPPD), as required by Directive 2007/60 / EC (Flooding) in order to reduce the risk of natural disasters (floods) affecting the population, by implementing preventive measures in most vulnerable areas in the medium term (2020). PPPD will be completed in 2014 ÷ 2015 and will form the basis of schemes necessary to protect the population goods, property and cultural values against floods on each basin / catchment area. On this basis it will be developed Hydrographic Basin Development Plans and Flood Risk Management Plans.

Waste Management

In order to ensure effective waste management one should consider all relevant legislative provisions as:

- Accession Treaty -section Environment - Romania's commitments for the waste sector for each county are detailed at the level of each county within the EU Directives Implementation Plans;
- SOP Environment - Priority Axis 2, Intervention area 1 - "Development of integrated waste management and waste management infrastructure expansion";
- National Waste Management Strategy (NWMS), approved by Government Decision no. 1470/2004 is the basic tool that ensures implementation in Romania of EU waste policy. NWMS's overall objective is to create the necessary framework for the development and implementation of an integrated waste management environmentally effective and economically feasible to protect human health and the environment.
- National Waste Management Plan (NWMP) approved by GD 1470/2004, constitutes the implementing plan of the national strategy objectives through adequate actions and measures to comply with the environmental acquis in the field of waste management;
- Regional Waste Management Plan (RWMP) for the Region 1 - North - East, approved by MEW Order no. 1364/1499/2006.

North-East Regional Development Plan 2014-2020

The strategy identified four key strategic priorities for the NE Region of Romania:

- Improving human capital;
- Development of modern infrastructure;
- Sustaining competitive economy and local development
- Optimizing the use and protection of natural resources.

Most of the specific objectives of this strategy are convergent with ENI CBC Thematic Objectives and their respective priorities.

South-East Regional Development Plan 2014-2020

The strategic document (currently in consultation process) identified ten development priorities for the SE Region as follow:

- Integrated sustainable urban development;
- Development of regional transport infrastructure;
- Improving the competitiveness of the regional economy, in the context of promoting smart specialization;
- Improving the quality of tourism at regional level;
- Conservation and protection of environment;
- Improving energy efficiency and using renewable resources;
- Improving the quality of life through education, health and social inclusion;
- Recovery of the resources in rural areas and upgrading of the rural economy;
- Improving human resources at the regional level in the context of smart regional specialization;
- Promoting cross-border and interregional cooperation.

Even if these development priorities are sometimes formulated differently than the objectives of the CBC programmes, the measures included in the SE Regional Development Plan are strongly convergent with ENI CBC Thematic Objectives.

II. UKRAINE

State Strategy of Regional Development for the period until 2020

The Strategy points out new risks and challenges that emerged in 2014 due to external influence of Russian Federation regarding Crimea and Sevastopol and Eastern regions of Ukraine. This document has been elaborated in accordance with the European standards taking into account the trends of modernization of urbanization and openness to movement of labor force.

The Strategy defines the goals of state's regional policies and key targets of regional authorities and structures of self-governance. The UA Government declares that it shares EU's approach towards avoiding the increase of the regional disproportions however admits limitation in resources necessary for the efficient efforts in this direction.

The key goals of the Strategy are; to raise of the competitiveness of the regions, good governance and decentralization of power and enhanced coordination in such areas as transport and infrastructure, economic development and investments, support to entrepreneurship, labor market, education, science and innovations.

Increasing competitiveness of the regions in accordance with the Strategy can be reached by enhancing access to the regions including the development of transport networks, applying new technologies, ensuring environmental protection and enhanced economic activities in the country. The Strategy also points out the necessity of the efficient interaction with the external mechanisms of support (e.g. ENPI). One of the important objectives foreseen by the Strategy is diversification of sources of energy supplies, increase of energy efficiency, modernization of industries aimed at enhancing of energy efficiency, substituting gas by other energy resources gained from renewable sources of energy and alternative types of fuel.

Good governance and efficient state policies in the field of regional development can be reached by decentralization of power and enhanced coordination of activities between central authorities and self-governance bodies.

Additional priority is given to the development of border security and efficient border management in the regions bordering Russia. In this respect the Strategy proposes plans for the improvement of the ecological situation in the bordering regions, development of near-border infrastructure and enhanced cooperation with the local communities of the bordering states.

III. EUROPEAN UNION

Europe 2020

Europe 2020 was launched in 2010 and defines the strategy regarding the increase in ten years of employment by creating within the EU the following conditions for economic growth:

- Smart, through more effective investments in education, research and innovation;
- Sustainable, through a decisive move towards a low-carbon emissions economy;
- Inclusive, with a strong emphasis on job creation and poverty reduction.

The EU 2020 targets are focused on:

- Employment;
- Research and Development;
- Climate change and energy sustainability;
- Education;
- Fighting poverty and social exclusion.

Danube Strategy

In 2011 the European Council, at Romania and Austria proposal, adopted a macro-regional strategy to boost development of the Danube basin region. The strategy aims to create synergies and coordination between policies and initiatives taking place in the Danube basin region, including in 14 countries, including Romania, Republic of Moldova and Ukraine.

The strategy is based on four major pillars:

- A. interconnecting the Danube region;
- B. protect the environment in the Danube region;
- C. improve prosperity in the Danube region;
- D. strengthening the Danube region.

Each pillar of the strategy corresponds to specific areas of action, grouped into 11 priority areas, each priority area is coordinated by 2 states / provinces in the region, namely:

A. Interconnecting the Danube Region

- Improving mobility and multimodality:
 - a. inland waterways; (*Austria and Romania*)
 - b. road, rail and air; (*Slovenia and Serbia*)
- Promote sustainable energy; (*Hungary and Czech Republic*)
- Promote culture and tourism, people to people contacts; (*Romania and Bulgaria*)

B. Protecting the environment in the Danube region

- restore and maintain water quality; (*Hungary and Slovakia*)
- manage environmental risks; (*Hungary and Romania*)
- preserve biodiversity, landscapes and air and soil quality (*Bavaria and Croatia*)

C. Building prosperity in the Danube region

- Develop the knowledge society through research, education and information technologies; (*Serbia and Slovakia*)
- support the competitiveness of enterprises, including cluster development; (*Baden Württemberg and Croatia*)
- Investing in people and skills; (*Austria and Republic of Moldova*)

D. Strengthening the Danube Region

- Improving institutional capacity and cooperation; (*Austria and Slovenia*)

Work together to promote security and tackle organized crime and serious crime issues. (*Bavaria and Bulgaria*). Most of ENI CBC's strategic thematic objectives, excluding social inclusion and local government are well represented in this strategy. Among the priority axes related also to matters / activities of the CBC Programme are included:

- connectivity (intermodal transport, culture and tourism, energy networks);
- Environmental protection (water management, biodiversity protection and risk management);
- Increasing prosperity of the Danube region (education, research, competitiveness);
- Improvement of governance (institutional capacity and internal security).

Given the cross-country and regional dimension of the Danube Strategy it is needed an integrated approach with the Corossborder Cooperation Programme to jointly support complementary measures.

Eastern Partnership

Representing the Eastern dimension of the European Neighbourhood Policy, this initiative was launched at the Prague summit in 2009 and was reaffirmed in 2011 and subsequently in 2013. It aims to deepen and strengthen relations between the European Union and its six Eastern neighbours, Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova and Ukraine.

The EaP is focused on several Flagship Initiatives as follows:

- Integrated Border Management Programme;
- Small and Medium-size Enterprise (SME);
- Regional energy markets and energy efficiency;
- Diversification of energy supply;
- Prevention of, preparedness for and response to natural and man-made disasters;
- Good environmental governance.

The implementation of the Programme Romania-Ukraine thematic objectives should take into consideration the EU Directives, Decisions and Regulations on air quality, surface water and groundwater, soil and subsoil, climate change, health, biodiversity, conservation, resource efficiency or the national legislation in force (Romania or Ukraine) if this is more restrictive.

The development of the program indicative actions will consider the measures necessary to fulfill the requirements of the Framework Convention of the United Nations on Climate Change and the Kyoto Protocol. It also will take into account any other national or European policy or strategy on adaptation and mitigation of climate change.

The projects promoted through the indicative activities of the programme will be in line with the legal framework and provisions of the Romania-Ukraine bilateral water management, namely the *Agreement between the Government of Romania and the Government of Ukraine on cooperation of cross border water management*, signed on 30 September 1997 in Galati and ratified by Law no. 16/1999.

7. THE LIKELY SIGNIFICANT EFFECTS ON THE ENVIRONMENT, INCLUDING ON ISSUES SUCH AS BIODIVERSITY, POPULATION, HUMANHEALTH, FAUNA, FLORA, SOIL, WATER, AIR, CLIMATIC FACTORS, MATERIAL ASSETS, CULTURAL HERITAGE INCLUDING ARCHITECTURAL AND ARCHAEOLOGICAL HERITAGE, LANDSCAPE AND THE INTERRELATIONSHIP BETWEEN THE ABOVE FACTORS

TO2 - SUPPORT TO EDUCATION, RESEARCH, TECHNOLOGICAL DEVELOPMENT & INNOVATION

Objective 1: *Develop education and support research and innovation at the level of the Programme area by facilitating the cooperation at local, regional and central level*

Priority 1.1 – Institutional cooperation in the educational field for increasing access to education and quality of education

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact
1.	Joint planning and joint development of educational strategies;	Is not the case	Indirectly
2.	Exchanges of experience, teacher exchanges, transfer of good practices between institutions from both sides of the border for increasing the effectiveness of education through the diversification of professional training programs for employees in the education system in areas such as:		
	- School development, school management, developing the relation between schools and communities;	Is not the case	Indirectly
	- Developing and applying innovative educational methods, for increasing teaching skills to facilitate and motivate students to perform;	Is not the case	Indirectly
3.	Developing specific joint programs of entrepreneurship education, programmes that stimulate creativity, innovation and active citizenship;	Is not the case	Indirectly
4.	Rehabilitation/modernization/ extension/ equipment procurement for the educational infrastructure to provide the necessary material preconditions of a quality educational process and increase the participation in the educational processes;	Efficiency uses of resources Waste management	Positive Reduced consumption of power raw material, hazardous substances Resulted waste

			reused/ recycling
5.	Development and implementation of partnerships between education institutions from both sides of the border to:		
	- Prevent and correct early school leaving phenomenon through integrated programs (including awareness campaigns) for prevention of school dropout, encourage school attendance and reintegration of those who have left school early;	Is not the case	Indirect
	Develop after school programs and extra-curricular activities;	Is not the case	Indirectly
6.	Development and implementation of joint actions in support of disadvantaged groups, e.g.:	Is not the case	
	Integrated support actions addressing children and youth with parents living abroad (which may include inter alia guidance, counselling, after school programmes, educational and cultural activities);	Is not the case	Indirectly
	Support actions meant to facilitate the social and work integration of people (children, youth and adults) with disabilities*	Is not the case	Indirectly
7.	Joint support actions for youth for the prevention of drug use, human trafficking, alcohol abuse, etc.	Is not the case	Indirectly
8.	Development and implementation of cross border actions for enhancing/improving/facilitating job qualifications and competences	Is not the case	Indirectly

Priority 1.2 – Promotion and support to research and innovation

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact
1.	Development of partnerships/networking between universities for joint development of theoretical research	Is not the case	Indirectly
2.	Joint research actions and studies (including related equipment procurement) in the field of environment (climate change challenges, preservation of biodiversity, renewable energy and resource efficiency, etc.).	Is not the case	Indirectly
3.	Promotion and support for research and innovation through rehabilitation/ modernization/ extension of the specific	Efficient uses of resources	Positive Reduced consumption of

	infrastructure including the procurement of related equipment.		power, raw material, hazardous substances
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TO3 - PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE

Objective 2: *Preservation of the cultural and historical heritage in the eligible area, support the development of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.*

Priority 2.1 – Preservation and promotion of the cultural and historical heritage

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact
1.	Restoration, conservation, consolidation, protection, security of cultural and historical monuments, archaeological sites (including the corresponding access roads), museums, objects and art collections and their joint promotion based on relevant cross-border strategies/concepts;	Biodiversity Cultural heritage	Positive The technologies should have a minimum impact
2.	Preservation, security, and joint valorisation of cultural and historical monuments and objects;	Biodiversity Cultural heritage	Positive Reduced consumption of power raw material, hazardous substances
3.	Cultural institutions networks aiming at the promotion of the cultural and historical heritage	Is not the case	Indirectly
4.	Support for specific and traditional craftsman activities, important for preserving local culture and identity.	Is not the case	Indirectly
5.	Promotion of specific and traditional activities in the eligible area (including cross border cultural events);	Is not the case	Indirectly
6.	Preserving, promoting and developing the cultural and historical heritage, mainly through cultural events with a cross-border dimension;	Is not the case	Indirectly
7.	Valorisation of the historical and cultural heritage through developing joint promotion strategies, common tourism products and services.	Is not the case	Indirectly

TO7 - IMPROVEMENT OF ACCESSIBILITY TO THE REGIONS, DEVELOPMENT OF TRANSPORT AND COMMON NETWORKS AND SYSTEMS

Objective 3: *Improve public transport services, infrastructure and ITC cooperation and networking*

Priority 3.1 – Development of cross border transport infrastructure and ICT tools

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact
1.	Reconstruction, rehabilitation, modernization of cross-border transport systems	Air Water Soil Climate change Biodiversity	Positive
2.	Development of environmentally friendly (carbon-proofed) cross-border transport initiatives and innovative solutions	Air Water Soil Climate change Biodiversity	Significantly Positive
3.	Improvements of multimode transport (road/water) facilities of cross-border interest	Air Water Soil Climate change Biodiversity	Positive
4.	Reconstruction, rehabilitation, widening of cross-border (segments of) roads connecting settlements alongside the border with main road, which leads to the border	Air Water Soil Biodiversity	Positive
5.	Improvement/restoration/construction of (segments of) access roads to centres of cross-border interest	Air Water Soil Climatic change Biodiversity	Positive
6.	Elaboration of joint strategies/policies/plans for improving the cross-border transport infrastructure	Is not the case	Indirectly
7.	Development of cross-border connections, information and integrated communications network and services	Is not the case	Indirectly
8.	Upgrading existing facilities to enable linkages between communities and public services which promote co-operation on a cross-border and wider international basis	Is not the case	Indirectly

TO8 - COMMON CHALLENGES IN THE FIELD OF SAFETY AND SECURITY

Objective 4: *Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint projects*

Priority 4.1 - Support to the development of health services and access to health

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact
1.	Joint activities meant to enhance the access to health in the border area through construction / rehabilitation / modernization of infrastructure of public health services (including through the use of renewable energy etc.)	Air Water Soil Climate change Waste Management Population and public health	Positive
2.	Developing labs and mobile labs for screening / clinical monitoring of diseases and prevention of cross border epidemics	Population and public health	Positive
3.	Equipping specific public medical service infrastructure (outpatient, emergency room facilities, medical centres, integrated social intervention, etc.)	Population and public health	Indirectly
4.	Joint training programs and exchange of experience, networking for supporting the functioning of the specific public medical services, telemedicine	Is not the case	Indirectly
5.	Exchange of experience, joint activities in order to ensure compatibility of the treatment guidelines, joint diagnosis programmes	Is not the case	Indirectly
6.	Awareness campaigns concerning public education on health, diseases and prevention of epidemics	Is not the case	Indirectly

Priority 4.2 – Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact
1.	Common measures for preventing land slide and flooding of the cross border areas	Soil Water Waste	Positive

		Management Biodiversity	
2.	Joint integrated systems for efficient monitoring and disaster prevention and for the mitigation of consequences	Soil Water Waste Management Biodiversity	Positive
3.	Common strategies and tools for hazard management and risk prevention including joint action plans	Is not the case	Indirectly
4.	Elaborating of joint detailed maps and databases (indicating natural and technological risks, and land use for regional planning authorities, environmental agencies and emergency services)	Soil Water Biodiversity	Positive
5.	Exchanging experience and knowledge, including raising awareness in the field of efficient risk prevention and management in the cross-border area	Is not the case	Indirectly
6.	Development of integrated and common standards for the urban planning and risk management	Is not the case	Indirectly
7.	Investments and development of common, integrated, emergency management systems	Air Water Soil Climate change Waste Management Biodiversity	Positive
8.	Planning co-ordinated actions of the authorities in emergency situations caused by natural and man-made disasters (flood, fire, heat waves, earthquakes, storms)	Is not the case	Indirect

Priority 4.3 Prevention and fight against organised crime and police cooperation

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact
1.	Common actions for increasing mobility and administrative capacity of police units (including border police)	Is not the case	Indirectly
2.	Creating collaborative working platforms in order to increase the efficiency of police, border police and custom structures in the exchange of data and	Is not the case	Indirectly

	information		
3.	Joint trainings of police, customs, border police, gendarmerie, exchange of best practices on specific areas of activity (analysis, criminal investigation, organized crime)	Is not the case	Indirectly
4.	Investment in construction, renovation or upgrading of police and border crossing infrastructure and related buildings	Air Water Soil Waste Management	Positive
5.	Investments in operating equipment and facilities specific for the activity of police/customs/border police/gendarmerie (e.g. laboratories, equipment, detection tools, hardware and software, means of transport)	Air Climate change	Positive
6.	Developing common policies and strategies, experience exchange for fighting organised crime	Is not the case	Indirectly

LARGE INFRASTRUCTURE PROJECTS

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact
1.	«Clean river» Dunărea	Water Biodiversity	Positive
2.	Improving the cross-border infrastructure – opening the gate to Europe	Air Water Soil Waste Management	Positive
3.	Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine	Air Water Soil Waste Management	Indirectly
4.	Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management.	Air Water Soil Waste Management	Indirectly

The resulted effects on the environment of each of the indicative activities corresponding to the thematic objectives and priorities of the Programme Ro-Ua will be identified and estimated. In this evaluation all the national, European and international relevant environmental objectives and policies are taken into consideration.

The impact of the eligible activities financed by the Program is analysed for each of the following relevant aspects that characterise the environment:

- Air;
- Surface and underground waters;
- Soil, subsoil and landscape;
- Climate changes;
- Population and human health;
- Biodiversity, flora and fauna;
- Waste management;
- Cultural heritage;
- Efficient use of resources, including renewable sources

In implementing the thematic objectives of the Programme Romania - Ukraine will take into account the provisions of the Directives, Decisions and Regulations of EU air quality, surface water and groundwater, soil and subsoil, climate change, human health, biodiversity, conservation, efficient use resources and/or those of their national laws (Romania, Ukraine), if they are more restrictive .

The projects promoted through the programme's indicative activities will be in line with the legal framework and provisions of the Romania-Ukraine bilateral water management agreement, namely the *Agreement between the Government of Romania and the Government of Ukraine on cooperation border water management*, signed on 30 September 1997 in Galati and ratified by Law no. 16/1999.

Projects related to water management approved for funding and promoted by other institutions must have the approval of the competent authority in the field, the "Romanian Waters" National Administration and Water Branches of the Ro-Ua Programme from the eligible area.

Any work / investment / activity to be completed on transboundary waters or in the area of common interest requires the opinion / authorization of the "Romanian Waters National Administration" and shall obtain the approval of relevant authorities from Ukraine, respectively Romania (According to the provisions of the Agreement between the Government of Romania and the Government of Ukraine regarding cooperation in the field of management of cross-border waters, signed at 30 September 1997 at Galati and ratified through Law no.16/1999).

Also, projects funded by the Ro-Ua Programme will have to consider all legislative provisions on integrated waste management in Romania and similar legislation in Ukraine.

Environmental assessment is performed using a scoring system shown in Table 7.1, which estimates which are the effects of indicative activities over every aspect of the environment, taking into account the overall environmental impact.

Table 7.1 Scoring system regarding the environmental assessment

Symbol	Semnification	Definition
++	Significant Positive Impact	Highly positive benefit for the environment which is of considerable importance in terms of its overall policy implication
+	Positive Impact	Positive effect on the environment which is not considered to be significant
0	Neutral	No effect envisaged
-	Negative Impact	Negative impact on the environment which is not considered to be significant
--	Significant Negative Impact	Highly adverse impacts on aspects of the environment which seriously demand to be addressed through revision of current stated policy
?	Uncertainty	Effect could not be determined due to lack of data or information

The assessment methodology was created by estimating the environmental impact of every aspect highlighted in Table 7.2. At this level of detail of the program a comprehensive methodology was used which attempted to highlight the possible effects of indicative actions on environmental issues. The accuracy of the methodology depends very much on the projects that will be funded.

Table 7.2 presents the impact of the indicative action on each relevant environmental aspect.

-Develop after school programs and extra-curricular activities									
Development and implementation of joint actions in support of disadvantaged groups, e.g.: - Integrated support actions addressing children and youth with parents living abroad (which may include inter alia guidance, counselling, after school programmes, educational and cultural activities); - Support actions meant to facilitate the social and work integration of people (children, youth and adults) with disabilities.	0	0	0	0	0	0	0	0	0
Joint support actions for youth for the prevention of drug use, human trafficking, alcohol abuse, etc	0	0	0	0	0	0	0	0	0
Development and implementation of cross border actions for enhancing/improving/ facilitating job qualifications and competences	0	0	0	0	0	0	0	0	0
Priority 1.2 – Promotion and support to research and innovation									
Development of partnerships/networking between universities for joint development of theoretical research	0	0	0	0	0	0	0	0	0
Joint research actions and studies (including related equipment procurement) in the field of environment (climate change challenges, preservation of biodiversity, renewable energy and resource efficiency, etc.)	+	+	+	++	+	++	+	0	0
Promotion and support for research and innovation through rehabilitation/modernization/extension of the specific infrastructure including the procurement of related equipment	?	+	?	0	0	0	-	0	0
TO3- PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE									
Objective 2: <i>Preservation of the cultural and historical heritage in the eligible area, support the development of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.</i>									
Priority 2.1 – Preservation and promotion of the cultural and historical heritage									
Restoration, conservation, consolidation, protection, security of cultural and historical monuments, archaeological sites (including the corresponding access roads), museums, objects and art collections and their joint promotion based on relevant cross-border strategies/concepts	-	-	-	0	0	?	?	++	0

transport infrastructure									
Development of cross-border connections, information and integrated communications network and services	0	0	0	0	0	0	0	0	0
Upgrading existing facilities to enable linkages between communities and public services which promote co-operation on a cross-border and wider international basis	+	+	+	+	+	?	?	?	0
TO8 - COMMON CHALLENGES IN THE FIELD OF SAFETY AND SECURITY									
<i>Objective 4: Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, access to health through joint projects</i>									
Priority 4.1 - Support to the development of health services and access to health									
Joint activities meant to enhance the access to health in the border area through construction / rehabilitation / modernization of infrastructure of public health services (including through the use of renewable energy etc.)	+	+	+	+	++	-	-	0	+
Developing labs and mobile labs for screening / clinical monitoring of diseases and prevention of cross border epidemics	0	0	0	0	++	0	0	0	0
Equipping specific public medical service infrastructure (outpatient, emergency room facilities, medical centres, integrated social intervention, etc.)	0	0	0	0	++	0	0	0	0
Joint training programs and exchange of experience, networking for supporting the functioning of the specific public medical services, telemedicine	0	0	0	0	++	0	0	0	0
Exchange of experience, joint activities in order to ensure compatibility of the treatment guidelines, joint diagnosis programmes	0	0	0	0	++	0	0	0	0
Awareness campaigns concerning public education on health, diseases and prevention of epidemics	+	+	0	0	++	-	+	-	-
Priority 4.2 – Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations									
Common measures for preventing land slide and flooding of the cross	+	++	++	?	0	+	0	0	0

border areas									
Joint integrated systems for efficient monitoring and disaster prevention and for the mitigation of consequences	0	++	++	?	0	+	0	0	0
Common strategies and tools for hazard management and risk prevention including joint action plans	+	+	+	0	0	0	0	0	+
Elaborating of joint detailed maps and databases (indicating natural and technological risks, and land use for regional planning authorities, environmental agencies and emergency services)	0	+	+	0	0	0	0	+	0
Exchanging experience and knowledge, including raising awareness in the field of efficient risk prevention and management in the cross-border area	0	0	0	0	0	0	0	0	0
Development of integrated and common standards for the urban planning and risk management	0	0	+	0	0	0	?	0	0
Investments and development of common, integrated, emergency management systems	0	0	0	0	0	0	0	0	0
Planning co-ordinated actions of the authorities in emergency situations caused by natural and man-made disasters (flood, fire, heat waves, earthquakes, storms)	0	0	0	0	0	0	0	0	0
Priority 4.3 Prevention and fight against organised crime and police cooperation									
Common actions for increasing mobility and administrative capacity of police units (including border police)	0	0	0	0	0	0	0	0	0
Creating collaborative working platforms in order to increase the efficiency of police, border police and custom structures in the exchange of data and information	0	0	0	0	0	0	0	0	0
Joint trainings of police, customs, border police, gendarmerie, exchange of best practices on specific areas of activity (analysis, criminal investigation, organized crime)	0	0		0	0	0	0	0	0
Investment in construction, renovation or upgrading of police and border crossing infrastructure and related buildings	+	+	+	0	0	0	-	0	+

Investments in operating equipment and facilities specific for the activity of police/customs/border police/gendarmerie (e.g. laboratories, equipment, detection tools, hardware and software, means of transport)	+	+	+	+	+	0	-	0	+
Developing common policies and strategies, experience exchange for fighting organised crime	0	0	0	0	0	0	0	0	0
LARGE INFRASTRUCTURE Projects									
«Clean river» Dunărea	0	++	++	+	+	++	++	0	0
Improving the cross-border infrastructure – opening the gate to Europe	+	+	+	+	0	0	+	0	0
Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine	0	0	0	0	+	0	0	0	0
Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management.	0	0	0	0	+	0	0	0	0

8. THE MEASURES ENVISAGED TO PREVENT, REDUCE AND AS FULLY AS POSSIBLE OFFSET ANY SIGNIFICANT ADVERSE EFFECTS ON THE ENVIRONMENT OF IMPLEMENTING THE PLAN OR PROGRAMME¹

The environmental impact assessment of indicative activities under the four thematic objectives of the Programme Ro-Ua performed in chapter 7 of this Environmental Report revealed that most of them have an indirect effect, activities of cooperation and support between the two partner states having a neutral impact:

- Education, research, technological development and innovation;
- Preservation of cultural and historical heritage;
- Strategies for improving cross-border transport infrastructure;
- Development of health and access to health;
- Strategies to prevent and manage natural and man made disasters;
- Prevention and fight against organized crime and police cooperation.

Given that the effects on the environment of future projects funded by the indicative actions of the four thematic objectives and the four large infrastructure projects should be reduced as far as possible, the following actions are recommended:

- Reduce the electricity and / or heat consumption;
- Reduce fuel, raw materials and hazardous substances consumption;
- Use high energy performance equipments;
- Choose adequate technologies for restoration/ preservation and respect them accurately so that the solutions chosen do not affect species of flora, fauna and aquatic ecosystems in the area;
- Valorification of cultural/ historical heritage should take into account the fact that it should not affect flora and fauna and aquatic ecosystems in the area;
- Preservation and conservation of protected species and habitats
- Minimize waste production;
- Minimize production of waste both during construction and functioning.
- Ensure collection/ sorting/ recycling/recovery of the waste resulted;
- Choice of technologies for construction/ rehabilitation/ widening roads with reduced emissions of particulate matter;
- Solutions for infrastructure construction so as to avoid contamination of soil and water by liquid fuel or other materials during construction period;
- Choice of routes for new roads or access parts so as to not affect flora and fauna species and aquatic ecosystems;
- Choice of low emission transportation solutions.

¹ All measures of prevention and reduction of any possible adverse impact will be realized in compliance with specific environmental legislation as well as with relevant legislation related to the use of EU funds, including, but not limited to, those regarding sustainable development and public procurement.

For the implementation of the thematic objectives of the Romania-Ukraine Programme the relevant Directives, Decisions and EU Regulations regarding air quality, surface and phreatic waters, soil and subsoil, climatic change, waste management, population health, biodiversity, cultural heritage preservation, efficient use of resources and/or of the national legislation (of Romania/Ukraine) if those are more restrictive.

Investment projects that will be financed within the indicative activities of the programme should consider the following measures recommended for the reduction of the impact on the environment:

- Obtaining the agreements/permits /authorisations necessary for the construction and functioning, according to the national legislation in force, from the relevant authorities;
- In the case of projects relating to water resources, obtaining the relevant agreements according to national legislation in force (for Romania- agreement from the National Administration of Romanian Waters, or of the relevant Basin Administration from the area of the projects) and in the case of cross border waters also from the authorities in Romania/Ukraine (in accordance with the Agreement between the Government of Romania and the Government of Ukraine on cooperation of cross border water management, Galati 1997)
- Obligation of conducting the biodiversity assessment of the potential effects on the natural protected areas of community interest for the projects that take place in natural protected areas, in accordance with national legal provisions in force which implement art 6.3 from the Habitat Directive
- The requirements of the Framework Convention of the United Nations regarding climatic change and of the Kyoto Protocol and of the european/national policies and strategies regarding adaptation and reduction of the effects of climate change;
- The principles and directions regarding waste management from NWMS, NWMP, RWMP.

For those indicative actions with impact on the environment have been proposed measures to prevent and reduce any likely impact:

Ro-Ua Programme Indicative activities	Measures to prevent and reduce the impact
OT2 - SUPPORT TO EDUCATION, RESEARCH, TECHNOLOGICAL DEVELOPMENT & INNOVATION	
Objective 1: <i>Develop education and support research and innovation at the level of the Programme area by facilitating the cooperation at local, regional and central level</i>	
<i>Priority 1.1 Institutional cooperation in the educational field for increasing access to education and quality of education</i>	
Rehabilitation/modernization/ extension/ equipment procurement for the educational infrastructure to provide the necessary material preconditions of a quality educational process and increase the participation in the educational processes	<ul style="list-style-type: none"> - Reducing consumption of electricity and/heat - Reducing consumption of fuel, raw material, hazardous substances; - Energy efficient equipments; - Reducing the waste produced; - Assuring collection/ sorting/ recycling/ recovery of waste
<i>Priority 1.2 Promotion and support to research and innovation</i>	
Promotion and support for research and innovation through rehabilitation/ modernization/extension of the specific infrastructure including the procurement of related equipment	<ul style="list-style-type: none"> - Reducing consumption of electricity and heat - Reducing consumption of fuel, raw material, hazardous substances; - Energy efficient equipments.
OT3 PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE	
Objective 2: <i>Preservation of the cultural and historical heritage in the eligible area, support the development of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.</i>	
<i>Priority 2.1 Preservation and promotion of the cultural and historical heritage Indicative activities</i>	
Restoration, conservation, consolidation, protection, security of cultural and historical monuments, archaeological sites (including the corresponding access roads), museums, objects and art collections and their joint promotion based on relevant cross-border strategies/ concepts	<ul style="list-style-type: none"> - Accuracy in respecting restoration, conservation technologies; - Choosing solutions that do not affect species of flora, fauna and aquatic ecosystems in the area; - Preservation and conservation of the protected species and habitats.
Preservation, security, and joint valorisation of cultural and historical monuments and objects	<ul style="list-style-type: none"> - Choosing appropriate conservation technologies; - Choosing solutions that do not

	<p>affect species of flora, fauna and aquatic ecosystems in the area;</p> <ul style="list-style-type: none"> - Preservation and conservation of protected species and habitats
OT7 - IMPROVEMENT OF ACCESSIBILITY TO THE REGIONS, DEVELOPMENT OF TRANSPORT AND COMMON NETWORKS AND SYSTEMS Objective 3: : Improve public transport services, infrastructure and ITC cooperation and networking <i>Priority 3.1 Development of cross border transport infrastructure and ICT tools</i>	
Reconstruction, rehabilitation, modernization of cross-border transport systems	<ul style="list-style-type: none"> - Use of technologies with low emissions of particulate matter; - Use of technologies for construction/ rehabilitation/ widening roads - Choosing solutions that do not affect species of flora, fauna and aquatic ecosystems in the area; - Preservation and conservation of protected species and habitats
Development of environmentally friendly (carbon-proofed) cross-border transport initiatives and innovative solutions	<ul style="list-style-type: none"> - Eco-friendly transport (electric, hydrogen, etc.)
Improvements of multimode transport (road/water) facilities of cross-border interest	<ul style="list-style-type: none"> - Zero emission transport with minimal effect on soil, water, fauna and flora
Reconstruction, rehabilitation, widening of cross-border (segments of) roads connecting settlements alongside the border with main road, which leads to the border	<ul style="list-style-type: none"> - Use of technologies with low emissions of particulate matter - Solutions for infrastructure construction so as to avoid contamination of soil and water by liquid fuel or other materials during construction period; - Choice of routes as to not affect flora and fauna species and aquatic ecosystems; - Preservation and conservation of protected species and habitats
Improvement/restoration/construction of (segments of) access roads to centres of cross-border interest	<ul style="list-style-type: none"> - Use of technologies with low emissions of particulate

	<p>matter</p> <ul style="list-style-type: none"> - Solutions for infrastructure construction so as to avoid contamination of soil and water by liquid fuel or other materials during construction period; - Choice of routes for new roads or access parts so as to not affect flora and fauna species and aquatic ecosystems; - Preservation and conservation of protected species and habitats
OT8 - COMMON CHALLENGES IN THE FIELD OF SAFETY AND SECURITY Objective 4: <i>Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint projects</i> <i>Priority 4.1 Support to the development of health services and access to health</i>	
Joint activities meant to enhance the access to health in the border area through construction / rehabilitation / modernization of infrastructure of public health services (including through the use of renewable energy etc.)	<ul style="list-style-type: none"> - Reducing consumption of electricity and heat - Reduce fuel, raw materials and hazardous substances consumption; - Energy efficient equipments; - Reducing the waste produced; - Assuring the collection/ sorting/ recycling/ recovery of waste
Developing labs and mobile labs for screening / clinical monitoring of diseases and prevention of cross border epidemics	<ul style="list-style-type: none"> - Energy efficient equipments
Equipping specific public medical service infrastructure (outpatient, emergency room facilities, medical centres, integrated social intervention, etc.)	<ul style="list-style-type: none"> - Energy efficient equipments
<i>Priority 4.2 Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations</i>	
Common measures for preventing land slide and flooding of the cross border areas	<ul style="list-style-type: none"> - Choosing green solutions, with minimal impact on the area; - Minimizing the waste - Preservation and conservation of protected species and habitats and aquatic ecosystems

Joint integrated systems for efficient monitoring and disaster prevention and for the mitigation of consequences	<ul style="list-style-type: none"> - Choosing green solutions, with minimal impact on the area; - Preservation and conservation of protected species and habitats and aquatic ecosystems
Elaborating of joint detailed maps and databases (indicating natural and technological risks, and land use for regional planning authorities, environmental agencies and emergency services)	Taking into account the most advanced technologies appropriate to specific situations (aerospace, radar interferometry, etc.)
Investments and development of common, integrated, emergency management systems	<ul style="list-style-type: none"> - Reducing consumption of electricity and/or heat - Reducing consumption of fuel, raw material, hazardous substances; - Energy efficient equipments; - Reducing the waste produced; - Assuming the collection/ sorting/ recycling/ recovery of waste - Preservation and conservation of protected species and habitats and aquatic ecosystems
<i>Priority 4.3 Prevention and fight against organised crime and police cooperation</i>	
Investment in construction, renovation or upgrading of police and border crossing infrastructure and related buildings	<ul style="list-style-type: none"> - Reducing consumption of electricity and/or heat - Reducing consumption of fuel, raw material, hazardous substances; - Energy efficient equipments; - Reducing the waste; - Assuming the collection/ sorting/ recycling/ recovery of waste
Investments in operating equipment and facilities specific for the activity of police/customs/border police/gendarmerie (e.g. laboratories, equipment, detection tools, hardware and software, means of transport)	<ul style="list-style-type: none"> - Reducing consumption of electricity and/or heat - Reducing consumption of fuel, raw material, hazardous substances; - Energy efficient equipments

LARGE INFRASTRUCTURE PROJECTS	
«Clean river» Dunărea	<ul style="list-style-type: none"> - Use of the rehabilitation technologies with minimal impact on soil and flora, fauna and aquatic ecosystems; - Preservation and conservation of protected species and habitats and aquatic ecosystems.
Improving the cross-border infrastructure – opening the gate to Europe	<ul style="list-style-type: none"> - Reducing consumption of electricity and/or heat - Reducing consumption of fuel, raw material, hazardous substances; - Reducing the waste produced; - Assuring the collection/ sorting/ recycling/ recovery of waste.
Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine	<ul style="list-style-type: none"> - Reducing consumption of electricity and/or heat - Reducing consumption of fuel, raw material, hazardous substances; - Reducing the waste produced; - Assuring the collection/ sorting/ recycling/ recovery of waste.
Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management	<ul style="list-style-type: none"> - Reducing consumption of electricity and/or heat - Reducing consumption of fuel, raw material, hazardous substances; - Energy efficient equipments.

The following observations were made in the framework of the SEA procedure so as to minimize the impact of certain activities on the environment:

Relevant authority	Comment/recommendation
Ministry of Culture of Romania	To introduce „ <i>archaeological sites</i> ” in the indicative activity with possible impact on the environment under Priority 2.1

9. THE REASONS FOR SELECTING THE ALTERNATIVES DEALT WITH, AND A DESCRIPTION OF HOW THE ASSESSMENT WAS UNDERTAKEN INCLUDING ANY DIFFICULTIES (SUCH AS TECHNICAL DEFICIENCIES OR LACK OF KNOW-HOW) ENCOUNTERED IN COMPILING THE REQUIRED INFORMATION

9.1 Selection of the Programme Ro-Ua alternatives

The alternatives analysed for the Joint Operational Programme Romania – Ukraine for period 2014 ÷ 2020 are presented below:

- **Alternative 0:** The Programme is not implemented;
- **Alternative 1:** Implementation of the Ro-Ua Programme 2014 ÷ 2020 with the following thematic objectives:

TO2 - SUPPORT TO EDUCATION, RESEARCH, TECHNOLOGICAL DEVELOPMENT & INNOVATION

***Objective 1:** Develop education and support research and innovation at the level of the Programme area by facilitating the cooperation at local, regional and central level*

Priority 1.1 – Institutional cooperation in the educational field for increasing access to education and quality of education

Justification:

The development of the education sector is strongly supported as a key area for intervention in the programme area. The main issues of the area in regards to education are related to early school leaving, poor accessibility to the educational infrastructure in rural areas, support for disadvantaged groups as well as low investments in educational infrastructure and trainings for teachers.

Priority 1.2 – Promotion and support to research and innovation

Justification:

One of the underdeveloped fields in the programme area is research and development (R&D). The level of investment in this field is very low, although there is potential for its growth. There are a number of urban centres where R&D activities are carried out that can be correlated with the level of the expenditures in R&D, the number of employees in the field, and the localization and number of tertiary level educational institutions, e.g. Odessa, Chernivtsi, Tulcea, Suceava. Building on existing centres and the general economic profile of the core eligible area there is a strong opportunity for positive outcomes for R&D that can be further enhanced through joint cross border activities.

TO 3. PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE

Objective 2: *Preservation of the cultural and historical heritage in the eligible area, support the developing of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.*

Priority 2.1 – Preservation and promotion of the cultural and historical heritage

Justification:

The two sub-national eligible areas share commonalities in terms of cultural heritage due to historic evolution and have a long-standing tradition in multi-ethnic cohabitation and multiculturalism. Despite the fact that there is a high concentration of natural and historical sites and natural protected areas, the eligible area registered low level of investments in touristic and cultural facilities.

The cultural infrastructure is developed but poorly financially supported. It includes museums, libraries, theatres and other cultural institutions. This priority aims to facilitate investments in historical heritage and local culture through joint projects and to improve the touristic potential of the cross border area.

TO7. IMPROVEMENT OF ACCESSIBILITY TO THE REGIONS, DEVELOPMENT OF TRANSPORT AND COMMON NETWORKS AND SYSTEMS

Objective 3: *Improve public transport services, infrastructure and ITC cooperation and networking*

Priority 3.1 –Development of cross border transport infrastructure and ICT tools

Justification:

Transport in the core eligible area is dominated by road and rail. However, regardless of the high density of road and rail networks, their viability is reduced by the poor quality and maintenance of these networks, the lack of modernization projects and of resources. This situation increases travel times significantly and impacts on the transport costs.

Technical differences in terms of rail transport between the two countries (i.e. use of different rail gauge) and limited multi-modal transport capabilities makes cross-border transportation more difficult. However, the eligible area presents high potential for river transport development that should be acknowledged and acted upon.

Access levels to broadband Internet and communications infrastructure is low,, especially in the rural areas.

TO 8. Common challenges in the field of safety and security

Objective 4: *Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint projects*

Priority 4.1 - Support to the development of health services and access to health

Justification:

The public health system in the programme area faces a number of limitations generated by the low quality of the infrastructure, the accessibility to health services and the lack of access of physicians to trainings and specializations. These limitations are responsible for the low life expectancy at birth in the eligible area, the low number of physicians and the high number of illnesses. A system of joint investments in public health infrastructure and equipment as well as related professional trainings and exchanges of experience would contribute to improving the response of the health local system to the real need of the area and generate significant cross border impact and added value.

Priority 4.2 – Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations

Justification:

The eligible area presents high risk of pollution through industrial accidents, especially in the Danube and Black Sea area. Also, there is a high risk of natural disasters as a result of the topography and the dense hydrographical network (e.g. flooding, landslides) – mountain areas in the North, delta area in South. These characteristics of the programme area require joint actions involving organizations from both sides of the border in order to prevent and improve the response to emergency situations. This priority aims to address common challenges such as landslide, flooding, risk prevention, emergency situation, through joint planning and coordinated interventions.

Priority 4.3 Prevention and fight against organised crime and police cooperation

Justification:

The region faces challenges in terms of criminality rates and additional risks due to the status of the border and the ramifications of illegal smuggling. In order to reduce criminality rates, improve the intervention capacity of police forces and ensure the security of the people on both sides of the border this priority will foster investments in capacity building, infrastructure and equipment for the structures involved in the customs and police services.

The selection of alternative 1 of the Programme was done so as to ensure that the indicative activities will determine the promotion of projects that will generate a minimum impact on biodiversity.

9.2 Difficulties

There were difficulties in identifying the environmental legislation in force in Ukraine and finding informations about the quality of environmental aspects and biodiversity. Some data at the level of years 2011 and 2012 were found on the following websites:

- <http://eng.menr.gov.ua/index.php/normbaza>
- http://www.kmu.gov.ua/control/en/publish/article?art_id=91651

- <http://ypef.eu/files/booklet/ang/ukraine.pdf>
- <http://www.brucebyersconsulting.com/wp-content/uploads/2011/07/Ukraine-Biodiversity-Analysis-Report-1-2011.pdf>
- http://en.wikipedia.org/wiki/Ukrainian_Cultural_Heritage_Village
- <http://whc.unesco.org/en/statesparties/ua>
- <http://www.history.alberta.ca/ukrainianvillage/>
- <http://culture.pl/en/article/polish-and-ukrainian-tserkvas-make-unesco-list>

No other significant difficulties were encountered in drafting the Environmental Report for SEA regarding the Joint Operational Programme Romania - Ukraine for 2014 ÷ 2020.

10. DESCRIPTION OF THE MEASURES ENVISAGED CONCERNING MONITORING IN ACCORDANCE WITH ARTICLE 10

The Projects financed by the Programme Ro-Ua will meet the European environmental legislation in force and the national legislation.

According to the article 10 of SEA Directive, the monitoring of the significant environmental effects of the Programme has to be done in order to identify early any adverse effects and to be able to take the proper corrective measures.

The monitoring system will be proposed based on the environmental issues that may be substantially affected by the implementation of CBC Programme Ro-Ua.

For the monitoring of the Programme impact on the environment the following principles should be taken into consideration:

- Contribution to energy efficiency, the reduced usage of raw materials or hazardous substances;
- Contribution to the development of green infrastructure, including management of protected areas;
- Contribution to an adequate management of the use of ground and underground waters;
- Contribution to sustainable mobility and multimodal transport;
- Contribution to an effective waste management, recycling and reusage;
- Contribution to risk prevention/natural disasters and climate change mitigation;
- Application of the principle of green public procurement.

The Programme's environmental impact monitoring rated the degree to which the proposed programme indicators are suitable for monitoring the environmental impact and recommendations have been made for their adaptation where needed:

Thematic objectives	Priority	Assessment indicators	Recommendations
TO2 - SUPPORT TO EDUCATION, RESEARCH, TECHNOLOGICAL DEVELOPMENT & INNOVATION Objective 1: <i>Develop education and support research and innovation at the level of the Programme area by facilitating the cooperation at</i>	P1.1 Institutional cooperation in the educational field for increasing access to education and quality of education	In order to see the effects on the environment of the proposed indicative actions it is necessary to include an additional indicator for the Programme " <i>Number of educational institutions rehabilitated / modernized</i> ". It can be determined without difficulty together with the proposed indicator for the Programme	Rehabilitation/modernization/ extension/ equipment procurement for the educational infrastructure will fullfill all the environmental requirement and will be in line with best environmental practices like energy efficiency, waste management
	P1.2 Promotion and support to research and innovation	The proposed monitoring indicator for the Programme " <i>Number of institution using Programme funds for cooperation in R & D and</i>	Rehabilitation/modernization/ extension/ equipment procurement for the research and innovation infrastructure will fullfill all the environmental requirement

<i>local, regional and central level</i>		<i>support of innovation" can reflect also the impact on the environment</i>	and will be in line with best environmental practices like energy efficiency, waste management
TO3 - PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE Objective 2: <i>Preservation of the cultural and historical heritage in the eligible area, support the developing of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.</i>	P 2.1 Preservation and promotion of the cultural and historical heritage	The proposed monitoring indicator for the Programme " <i>Number of improved cultural and historical sites</i> " can reflect also the effects on cultural and historical heritage of the implementation of the projects financed under the indicative actions of this priority	The technologies used for restoration, conservation and consolidation of cultural and historical monuments should be chosen so that their impact on environmental aspects to be minimized. Choosing and applying the proper restoration, conservation and consolidation technologies so as to avoid the impact on flora and fauna species and on aquatic ecosystems in the eligible area For ensuring security and valorization of monuments and cultural and historical objects energy efficient solutions should be taken into account and also the use of an integrated waste management if the case
TO7 - IMPROVEMENT OF ACCESSIBILITY TO THE REGIONS, DEVELOPMENT OF TRANSPORT AND COMMON NETWORKS AND SYSTEMS Objective 3: <i>Improve public transport services, infrastructure and ITC cooperation and networking</i>	P 3.1 Development of cross border transport infrastructure and ICT tools	Monitoring priorities effects revealed the need for an additional indicator for the program: <i>"Number of environmentally friendly (carbon-proofed) cross-border transport initiatives developed "</i> that clearly reflect how indicative activities will support reducing the environmental impact of transport. The second indicator proposed by the Programme, namely " <i>Total length of reconstructed or upgraded roads</i> " can also reflect the positive impact on the environment of the implementation of such indicative actions The action on facilitating multimodal transport should be reflected in the indicators. We	Construction, rehabilitation, modernization, enhancement of cross-border transport infrastructure will have to undergo the EIA / SEA procedure (where required by the legislation) and where appropriate through a proper evaluation to see the impact on the Natura 2000 network. Transboundary consultations under the Espoo Convention should be considered when transboundary impacts occur. Choosing construction/ rehabilitation/ widening roads technologies with low emissions of particulate matter, avoiding contamination of soil and water by liquid fuel or other construction materials during execution period. Choosing routes that do not affect species of flora, fauna and

		recommend rewording the indicator on the number of joint strategies to reflect and multimodal transport	aquatic ecosystems.
TO8 - COMMON CHALLENGES IN THE FIELD OF SAFETY AND SECURITY Objective 4: <i>Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint projects</i>	P 4.1 Support to the development of health services and access to health	The proposed monitoring indicators for the Programme " <i>Number of medical service infrastructure units improved</i> " and " <i>Population covered by improved health services as a direct consequence of programme support</i> " will reflect the impact on the population and public health of the indicative actions	Developing health facilities or improving them will consider all environmental legislative requirements regarding air, water and soil quality, including waste management principles. It will consider the impact on biodiversity when appropriate.
	P 4.2 Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations	The indicator " <i>Number of population affected by the implementation of measures</i> " initially proposed for the monitoring of these activities coincided with one of the Program indicators " <i>Population benefiting from flood protection measures</i> " and will reflect the positive environmental impact We recommend that the second proposed indicator for the Programme " <i>Number of joint actions (exchanges, training, study visits, joint planning session, etc.)</i> " to be modified to reflect also the LIP " <i>Clean River</i> " and to add to the number of common action or to the report on monitoring indicators " <i>new maps made or updated databases created, systems / structures made, equipment purchased</i> " in order to monitor the impact of all indicative actions of this priority. An additional indicator was proposed for the monitoring of the environment: <i>Land surface affected by the implementation of the measures</i> ²	The solutions chosen for disaster prevention should be designed so as not to affect the flora, fauna and aquatic ecosystems in these areas. The development of infrastructure for monitoring and intervention in case of emergency (eg buildings) should be in line with all applicable environmental requirements and apply the best environmental practices for ensuring the quality of air, water and soil and waste management.

² Specific environment indicator

	P4.3 Prevention and fight against organised crime and police cooperation	The indicator proposed by the Program " <i>Number of modernised facilities of police, border police, custom services from the eligible area</i> ", can monitor positive environmental impact	Construction, renovation or modernization of police / customs / border police / gendarmerie should consider all environmental legislative requirements regarding quality assurance of air, water and soil, including waste management principles.
LARGE INFRASTRUCTURE PROJECTS	«Clean river» Dunărea (OT8) 4.2	The indicator proposed by the Program " <i>Number of joint actions, including soft operations, as well as joint infrastructure investments in the field of emergency situations and the prevention of man-made disasters</i> " reflect the positive environmental impact due to measures of rehabilitation / modernization of wastewater pumping stations and the monitoring and quality control of the Danube	Realization of large infrastructure projects will have to undergo the procedure EIA / SEA and where appropriate through a biodiversity assessment to see the impact on flora, fauna and aquatic ecosystems. Transboundary consultations must be considered under the Espoo Convention, where transboundary impacts occur
	Improving the cross-border infrastructure – opening the gate to Europe (OT7) 3.1	The indicator proposed for the Program " <i>Total length of reconstructed or upgraded roads</i> " may reflect the positive environmental impact due to the rehabilitation of the existing road between Kranoilsk - Upper Vicovu	
	Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine (OT 8) 4.3	Indicator proposed in Program " <i>Number of modernized facilities of police, police border and custom services from the eligible area</i> " may reflect the positive environmental impact due to strengthening / modernization / extension of police premises	
	Improvement of the population safety and security level in the cross-border area by enhancing the joint training	One of the two indicators proposed in program namely " <i>Number of medical service infrastructure units improved</i> " may reflect the positive impact on the population and public health	

	and cooperation actions in emergency management (OT) 4.1		
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The table below summarizes the monitoring indicators recommended for the indicative activities of the Programme under which there is a possibility to finance projects having an impact on the environment. Part of these indicators are the same as those monitoring the implementation of the programme as they can also monitor impact on the environment. For certain indicative activities under P1.1, P3.1, P4.2 and LIPs specific environmental indicators were suggested or the programme indicators were modified as to reflect also the impact on the environment.

INDICATIVE ACTIVITIES of the Programme Ro-Ua	Proposed monitoring indicators
TO2 - SUPPORT TO EDUCATION, RESEARCH, TECHNOLOGICAL DEVELOPMENT & INNOVATION Objective 1: <i>Develop education and support research and innovation at the level of the Programme area by facilitating the cooperation at local, regional and central level</i>	
<i>Priority 1.1 Institutional cooperation in the educational field for increasing access to education and quality of education</i>	
Rehabilitation/modernization/ extension/ equipment procurement for the educational infrastructure to provide the necessary material preconditions of a quality educational process and increase the participation in the educational processes	Number of educational institutions rehabilitated/ modernized
<i>Priority 1.2 Promotion and support to research and innovation</i>	
Promotion and support for research and innovation through rehabilitation/ modernization/ extension of the specific infrastructure including the procurement of related equipment.	Number of institutions using funds from the Program for cooperation in R&D and support innovation
TO3 - PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE Objective 2: <i>Preservation of the cultural and historical heritage in the eligible area, support the developing of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.</i> <i>Priority 2.1 Preservation and promotion of the cultural and historical heritage</i>	
Restoration, conservation, consolidation, protection, security of cultural and historical monuments, archaeological sites (including the corresponding access roads), museums, objects and art collections and their joint promotion based on relevant cross-border strategies/concepts	Number of improved cultural and historical sites

INDICATIVE ACTIVITIES of the Programme Ro-Ua	Proposed monitoring indicators
Preservation, security, and joint valorisation of cultural and historical monuments and objects	Number of improved cultural and historical sites
TO7 - IMPROVEMENT OF ACCESSIBILITY TO THE REGIONS, DEVELOPMENT OF TRANSPORT AND COMMON NETWORKS AND SYSTEMS Objective 3: <i>Improve public transport services, infrastructure and ITC cooperation and networking</i> <i>Priority 3.1 Development of cross border transport infrastructure and ICT tools</i>	
Reconstruction, rehabilitation, modernization of cross-border transport systems	Total length of reconstructed or upgraded roads
Development of environmentally friendly cross-border transport initiatives and innovative solutions	Number of environmentally friendly (carbon-proofed) cross-border transport initiatives developed
Improvements of multimode transport (road/water) facilities of cross-border interest	Number of joint mechanisms to support improvement of cross-border infrastructure (joint planning documents, including: strategies, plans, action plans; multi-modal facilitation mechanisms) developed
Reconstruction, rehabilitation, widening of cross-border (segments of) roads connecting settlements alongside the border with main road, which leads to the border	Total length of reconstructed or upgraded roads
Improvement/restoration/construction of (segments of) access roads to centres of cross-border interest	Total length of reconstructed or upgraded roads
TO8 - COMMON CHALLENGES IN THE FIELD OF SAFETY AND SECURITY Objective 4: <i>Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border cooperation through joint projects</i>	
<i>Priority 4.1 Support to the development of health services and access to health</i>	
Joint activities meant to enhance the access to health in the border area through construction / rehabilitation / modernization of infrastructure of public health services (including through the use of renewable energy etc.)	The population covered by improved health services, as a direct result of the Program support
Developing labs and mobile labs for screening / clinical monitoring of diseases and prevention of cross border epidemics	Number of medical service infrastructure units improved
Equipping specific public medical service infrastructure (outpatient, emergency room facilities, medical centres, integrated social intervention, etc.)	The population covered by improved health services, as a direct result of the Program support The population covered by improved health services, as a direct result of the Program support
<i>Priority 4.2 Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations</i>	

INDICATIVE ACTIVITIES of the Programme Ro-Ua	Proposed monitoring indicators
Common measures for preventing land slide and flooding of the cross border areas	Population benefiting from flood protection measures Land surface affected by the implementation of the measures ³
Joint integrated systems for efficient monitoring and disaster prevention and for the mitigation of consequences	Number of joint actions, including soft operations, as well as joint infrastructure investments in the field of emergency situations and the prevention of man-made disasters.
Elaborating of joint detailed maps and databases (indicating natural and technological risks, and land use for regional planning authorities, environmental agencies and emergency services)	
Investments and development of common, integrated, emergency management systems	
Priority 4.3 Prevention and fight against organised crime and police cooperation	
Investment in construction, renovation or upgrading of police and border crossing infrastructure and related buildings	Number of modernized facilities of police, police border and custom services from the eligible area
Investments in operating equipment and facilities specific for the activity of police/customs/border police/gendarmerie (e.g. laboratories, equipment, detection tools, hardware and software, means of transport)	
Large infrastructure projects	
«Clean river» Dunărea	Number of joint actions, including soft operations, as well as joint infrastructure investments in the field of emergency situations and the prevention of man-made disasters..
Improving the cross-border infrastructure – opening the gate to Europe	Total length of reconstructed or upgraded roads
Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine	Number of modernized facilities of police, border police and custom services from the eligible area
Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management.	Number of joint actions, including soft operations, as well as joint infrastructure investments in the field of emergency situations and the prevention of man-made disasters.

³ Specific environment indicator

The monitoring indicators will be used for the assessment of effects on the environment for each project financed by the Programme. This data will be provided by the project beneficiaries through the monitoring of activities and will be collected annually in order to be able to include it in the Annual Implementing Report of the Programme submitted to the JMC. Authorities proposed to be involved in the monitoring of the effects on the environment are: project beneficiaries, JMC, MA (MRDPA).

11. NON-TECHNICAL SUMMARY

The Strategic Environmental Assessment is carried out based on the requirements of the SEA Directive (European Council Directive no. 2001/42/EC on the assessment of effects of certain plans and programmes on the environment).

The main elements recommended to be followed in such environmental assessments by law or guidelines are as follows:

- Description of key environmental aspects to be addressed;
- Description of the reference range of environmental values to be submitted for analysis in the SEA report;
- Ways to identify the environmental impact of the plan/programme implementation;
- Assessment of capacities to address the challenges, risks and their prevention on the environment.

The methodology used in the strategic environmental assessment includes the requirements of the above-mentioned documents and of the following methodological recommendation: "*Guidance Note on Strategic Environment Assessment in the context of ENI CBC*" developed by INTERACT ENPI for the specific situation of Joint Operational Programmes and approved by the Directorate General for Development and Cooperation - Europe Aid (DG DEVCO) and the Directorate General for Environment (DG ENV).

Considering the extent to which the Joint Operational *Programme "Romania - Ukraine" 2014 ÷ 2020* provides a framework for future projects and other activities, development of its first version will be notified to the environmental competent authorities, for estimation of its impact on environmental factors. In this procedure it is necessary **to finalize the Programme in parallel with the development of the Environmental Report.**

The environmental report is a part of the Programme documentation that identifies, describes and evaluates potential semnificative effects on environment and rational alternatives, considering the objectives and related geographical area.

The development of the Strategic Environmental Assessment procedure is mandatory, the European Commission **requiring the official opinion** of the environmental authority regarding the environmental assessment procedure, for the approval of the Programme "*Romania - Ukraine*" 2014 ÷ 2020 under legislation in force.

In accordance with the SEA Directive (2001/42/EC), environmental assessment involves the following steps:

- Identification of environmental authorities of all countries concerned (Romania, Ukraine);
- The decision on whether SEA is required or not,

and if yes:

- Determining the SEA scope and development of the Environmental Report;
- Consultation of environmental authorities and the public;
- Inclusion of findings and results of consultations in the Environmental Report;
- Adequate monitoring of recommendations;
- Notification of the authorities consulted and public on the programme approval.

Environmental assessment is mandatory when programmes include projects covered by the EIA Directive in the sectors covered by Article 3.2 (energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning, land use, etc) and projects with significant environmental impact in other sectors, under Article 3.4.

ENI CBC Programmes with Large Infrastructure Projects should perform the SEA procedure.

In the period 2014 ÷ 2020, the European Union will finance through the European Neighbourhood Instrument (ENI), the bilateral cross-border cooperation programme (CBC) between Romania - Ukraine, as a continuation of the Joint Operational Programme "Romania – Ukraine - Republic of Moldova 2007÷2013".

Regulation no. 232/2014 establishing a European Neighbourhood Instrument (ENI) and Regulation no 897/2014 laying down specific provisions for the implementation of cross-border cooperation programmes, say that the programme partners have to cooperate in order to identify the needs of the programme area and select those thematic objectives and priorities, that are most relevant to the border region.

Within this context, the partner countries nominated the Ministry of Regional Development and Public Administration from Romania as Managing Authority and created the Joint Programming Committee (JPC) as decisional body for the programming process. Additionally, two working groups were created, one for the identification of Large Infrastructure Projects and one for the Management and Control structures.

4 thematic objectives (TO) were approved for the Romania-Ukraine Programme 2014-2020, together with their subsequent priorities, as follows:

TO2 - Support to education, research, technological development and innovation:

Objective 1: Develop education and support research and innovation by facilitating the cooperation at local, regional and central levels:

- *Priority 1.1 - Institutional cooperation in the educational field for increasing access to education and quality of education;*
- *Priority 1.2 - Promotion and support to research and innovation.*

• TO 3 - Promotion of the local culture and preservation of historical heritage

Objective 2: Preservation of the cultural and historical heritage in the eligible area, support the development of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area

- *Priority 2.1 – Preservation and promotion of the cultural and historical heritage TO 7 - Improvement of accessibility to the regions, development of transport and common networks and systems:*

Objective 3: Improve public transport services, infrastructure and ICT cooperation and networking

- *Priority 3.1 - Development of cross border transport infrastructure and ICT tools*

• TO 8 - Common challenges in the field of safety and security

Objective 4: Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint

projects

- *Priority 4.1* - Support to the development of health services and access to health;
- *Priority 4.2* – Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations;
- *Priority 4.3* - Prevention and fight against organized crime and police cooperation

• ***Large Infrastructure Projects (indicative as they are not yet approved by the JPC)***

- «Clean river» Dunărea
- Improving the cross-border infrastructure – opening the gate to Europe
- Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine
- Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management.

The Joint Operational Programme Romania - Ukraine 2014 ÷ 2020 will cover the following area, established by ENI CBC:

Romania: 5 counties: *Satu Mare, Maramureș, Botoșani, Suceava, Tulcea;*

Ukraine: 4 oblasts: *Ivano-Frankivsk, Zakarpatska, Chernivtsi, Odessa.*

In terms of proportionality, the Ukrainian eligible area is more than double in size compared to the Romanian territory.

According to Regulation EU no. 232/2014, art. 8(3) establishing ENI, two major social, economic and cultural centers were included in the programme: Bucharest and Kiev.

According to Regulation 897/2014, article 39, para. 2, point b and article 45, para. 4, the partner countries decided to allow a flexibility rule of maximum 10% of the Programme allocation to be used by the beneficiaries located outside the Programme area and/or for activities outside the Programme area, under specific conditions outlined in the program.

The eligible area of the Programme has several ecological problems, as a result of the aggressive industrialised process before 1989, but within the international pollution limits. The major problems come from four main sources:

- The industrial emissions and the waste resulted from operating and closing of the industrial platforms, that have a negative impact on air, soil and waters;
- Limited waste management, especially in the rural zones; having a direct effect on the environment, considering that there are no adequate facilities for waste treatment in these areas;
- The usage of the chemical fertilizers and improper disposal of agricultural waste, with direct impact on soil and on water quality;
- The urban centres are the main generators of greenhouses gas (CO₂) and have a significant impact on air quality and generally on environment, too.

There are now in the Programme area more than 1000 national and international protected areas and many historical sites.

Generally the ecological status of the eligible areas both from Romania and Ukraine will not be directly influenced if the projects financed under the Ro-Ua Programme will not be implemented,

The Projects that can be financed under thematic objectives TO2 and TO3 are generally soft projects more focused on concept and exchange of experience related to education, research & development and innovation or rehabilitation and promotion of the historical heritage, and can have only an indirect impact on environment.

Instead, the Projects that can be financed under TO7 and TO8 would have beneficial effect on environment through the development of an infrastructure at the border with a significant positive impact compared with the present situation and through prevention of the landslides and flooding with a positive impact, too.

If the Programme Ro-Ua is not implemented, the current status of the environment in the eligible area would stay unchanged and in time will be damaged, affecting almost all the environment factors: air, water, soil, biodiversity, waste management, archaeological and architectural and landscape.

The environmental protection objectives, established at international, community or member state level, which are relevant to the programme and which have been taken into account during Program preparation are included in the following national and European documents:

Romania:

- The Partnership Agreement with EU
- National Reform Program for Romania (NRP)
- National Strategy for Climate Change 2013 ÷ 2020
- National Strategy for Risk management at medium and long term flood (period 2010 ÷ 2035)
- Agreement between the Government of Romania and the Government of Ukraine, cooperation border water management
- Waste management (National Strategy, National/Regional Plan for waste management)
- North-East Regional Development Plan 2014 - 2020
- South-East Regional Development Plan 2014 - 2020

Ukraine:

- State Strategy of Regional Development for the period until 2020

EU:

- Europe 2020
- Danube Strategy
- Eastern Partnership

The implementation of the Programme Ro-Ua thematic objectives should take into consideration the EU Directives, Decisions and Regulations on air quality, surface water and undergroundwater, soil and subsoil, climate change, health, biodiversity, conservation, resource efficiency or the national legislation in force (Romania or Ukraine) if this is more restrictive.

The development of indicative actions of the program will consider the necessary measures for the fulfilment of the requirements of United Nations Framework Convention on Climate Change and Kyoto Protocol. Also, any national/ european policy or strategy related to adaptation and mitigation of the climate change will be considered.

The potential contribution of individual activity proposed for each priority of thematic objectives of Programme Ro-Ua is assessed by its resulting effects, considering the objectives and relevant environmental policies at national, European and international level.

The impact of the eligible activities financed by the Programme is analysed for each of the following relevant aspects that characterise the environment:

- Air;
- Surface and underground waters;
- Soil, subsoil land andscape;
- Climate changes;
- Population and public health;
- Biodiversity, flora and fauna;
- Waste management;
- Cultural heritage;
- Resources efficiency, including renewable sources;

A scoring approach, as presented in the following table is used for the environmental assessment of the activities of the Programme Ro- Ua.

Symbol	Semnification	Definition
++	Significant Positive Impact	Highly positive benefit for the environment which is of considerable importance in terms of its overall policy implication
+	Positive Impact	Positive effect on the environment which is not considered to be significant
0	Neutral	No effect envisaged
-	Negative Impact	Negative impact on the environment which is not considered to be significant
--	Significant Negative Impact	Highly adverse impacts on aspects of the environment which seriously demand to be addressed through revision of current stated policy
?	Uncertainty	Effect could not be determined due to lack of data or information

At this level of detail of the programme a global methodology was used, trying to highlight the possible effects of the indicative activities on the environmental aspects. The accuracy of the implementation of the methodology depends to a high degree on the type of projects that will be financed.

The possible significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic change, cultural heritage, including architectural and archaeological heritage, landscape, efficient use of resources and the interactions between these factors are presented below for each indicative activity of the four thematic objectives.

TO2 - SUPPORT TO EDUCATION, RESEARCH, TECHNOLOGICAL DEVELOPMENT & INNOVATION

Objective 1: *Develop education and support research and innovation by facilitating the cooperation at local, regional and central level*

Priority 1.1 – Institutional cooperation in the educational field for increasing access to education and quality of education

No.	Indicative activities	Environmental aspects and objectives considered	Potential impact	Environmental assessment
1.	Joint planning and joint development of educational strategies;	Is not the case	Indirect	Neutral
2.	Exchanges of experience, teacher exchanges, transfer of good practices between institutions from both sides of the border for increasing the effectiveness of education through the diversification of professional training programs for employees in the education system in areas such as:			Neutral
	- School development, school management, developing the relation between schools and communities;	Is not the case	Indirect	Neutral
	- Developing and applying innovative educational methods, for increasing teaching skills to facilitate and motivate students to perform.	Is not the case	Indirect	Neutral
3.	Developing specific joint programs of entrepreneurship education, programmes that stimulate creativity, innovation and active citizenship	Is not the case	Indirect	Neutral
4.	Rehabilitation/modernization/ extension/ equipment procurement for the educational infrastructure to provide the necessary material preconditions of a quality educational process and increase the participation in the educational processes	Efficiency use of Waste resources	Positive Reduced consumption of power raw material, hazardous substances Resulted waste reused/ recycling	Neutral

5.	Development and implementation of partnerships between education institutions from both sides of the border to:			Neutral
	- Prevent and correct early school leaving phenomenon through integrated programs (including awareness campaigns) for prevention of school dropout, encourage school attendance and reintegration of those who have left school early;	Is not the case	Indirect	Neutral
	- Develop after school programs and extra-curricular activities.	Is not the case	Indirect	Neutral
6.	Development and implementation of joint actions in support of disadvantaged groups, e.g.:	Is not the case		Neutral
	- Integrated support actions addressing children and youth with parents living abroad (which may include inter alia guidance, counselling, after school programmes, educational and cultural activities);	Is not the case	Indirect	Neutral
	- Support actions meant to facilitate the social and work integration of people (children, youth and adults) with disabilities*	Is not the case	Indirect	Neutral
7.	Joint support actions for youth for the prevention of drug use, human trafficking, alcohol abuse, etc.	Is not the case	Indirect	Neutral
8.	Development and implementation of cross border actions for enhancing/improving/facilitating job qualifications and competences	Is not the case	Indirect	Neutral

Priority 1.2 – Promotion and support to research and innovation

No.	Indicative activities	Environmental aspects and objective considered	Potential impact	Environmental assessment
1.	Development of partnerships/networking between universities for joint development of theoretical research	Is not the case	Indirect	Neutral
2.	Joint research actions and studies (including related equipment	Is not the case		Neutral

	procurement) in the field of environment (climate change challenges, preservation of biodiversity, renewable energy and resource efficiency, etc.)		Indirect	
3.	Promotion and support for research and innovation through rehabilitation/modernization/extension of the specific infrastructure including the procurement of related equipment.	Efficiency uses of resources	Positive Reduced consumption of power raw material, hazardous substances	Positive Impact

TO3 - PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE

Objective 2: Preservation of the cultural and historical heritage in the eligible area, support the development of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.

Priority 2.1 – Preservation and promotion of the cultural and historical heritage

No	Indicative activities	Environmental aspects and objective considered	Potential impact	Environmental assessment
1.	Restoration, conservation, consolidation, protection, security of cultural and historical monuments, archaeological sites (including the corresponding access roads), museums, objects and art collections and their joint promotion based on relevant cross-border strategies/concepts	Cultural heritage Biodiversity	Positive The technologies should have a minimum impact	Positive impact
2.	Preservation, security, and joint valorisation of cultural and historical monuments and objects	Cultural heritage Biodiversity	Positive Reduced consumption of power raw material, hazardous substances	Neutral
3.	Cultural institutions networks aiming at the promotion of the cultural and historical heritage	Is not the case	Indirect	Neutral
4.	Support for specific and traditional craftsman activities, important for	Is not the case	Indirect	Neutral

	preserving local culture and identity			
5.	Promotion of specific and traditional activities in the eligible area (including cross border cultural events)	Is not the case	Indirect	Neutral
6.	Preserving, promoting and developing the cultural and historical heritage, mainly through cultural events with a cross-border dimension	Is not the case	Indirect	Neutral
7.	Valorisation of the historical and cultural heritage through developing joint promotion strategies, common tourism products and services	Is not the case	Indirect	Neutral

TO7 - IMPROVEMENT OF ACCESSIBILITY TO THE REGIONS, DEVELOPMENT OF TRANSPORT AND COMMON NETWORKS AND SYSTEMS

Objective 3: *Improve public transport services, infrastructure and ITC cooperation and networking*

Priority 3.1 – Development of cross border transport infrastructure and ICT tools

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact	Environmental assessment
1.	Reconstruction, rehabilitation, modernization of cross-border transport systems	Air Water Soil Climate change Biodiversity	Positive	Positive
2.	Development of environmentally friendly (carbon-proofed) cross-border transport initiatives and innovative solutions	Air Water Soil Climate change Biodiversity	Significantly Positive	Significantly Positive
3.	Improvements of multimode transport (road/water) facilities of cross-border interest	Air Water Soil Climate change Biodiversity	Positive	Positive
4.	Reconstruction, rehabilitation, widening of cross-border (segments of) roads connecting settlements alongside the border with main road, which leads to the border	Air Water Soil Biodiversity	Positive	Positive
5.	Improvement/restoration/construction of (segments	Air	Positive	Positive

	of) access roads to centres of cross-border interest	Water Soil Climatic change Biodiversity		
6.	Elaboration of joint strategies/policies/plans for improving the cross-border transport infrastructure	Is not the case	Indirect	Neutral
7.	Development of cross-border connections, information and integrated communications network and services	Is not the case	Indirect	Neutral
8.	Upgrading existing facilities to enable linkages between communities and public services which promote co-operation on a cross-border and wider international basis	Is not the case	Indirect	Neutral

TO8 - COMMON CHALLENGES IN THE FIELD OF SAFETY AND SECURITY

Objective 4: Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint projects

Priority 4.1 - Support to the development of health services and access to health

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact	Environmental assessment
1.	Joint activities meant to enhance the access to health in the border area through construction / rehabilitation / modernization of infrastructure of public health services (including through the use of renewable energy etc.)	Air Water Soil Climate change Waste Management Population and human health	Positive	Neutral
2.	Developing labs and mobile labs for screening / clinical monitoring of diseases and prevention of cross border epidemics	Population and human health	Positive	Positive impact
3.	Equipping specific public medical service infrastructure (outpatient, emergency room facilities, medical centres, integrated social intervention, etc.)	Population and human health	Indirect	Neutral
4.	Joint training programs and exchange of experience, networking for	Is not the case	Indirect	Neutral

	supporting the functioning of the specific public medical services, telemedicine			
5.	Exchange of experience, joint activities in order to ensure compatibility of the treatment guidelines, joint diagnosis programmes	Is not the case	Indirect	Neutral
6.	Awareness campaigns concerning public education on health, diseases and prevention of epidemics	Is not the case	Indirect	Neutral

Priority 4.2 – Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact	Environmental assessment
1.	Common measures for preventing land slide and flooding of the cross border areas	Soil Water Waste Management Biodiversity	Positive	Positive impact
2.	Joint integrated systems for efficient monitoring and disaster prevention and for the mitigation of consequences	Soil Water Waste Management Biodiversity	Positive	Positive impact
3.	Common strategies and tools for hazard management and risk prevention including joint action plans;	Is not the case	Indirect	Neutral
4.	Elaborating of joint detailed maps and databases (indicating natural and technological risks, and land use for regional planning authorities, environmental agencies and emergency services)	Soil Water Biodiversity	Positive	Positive impact
5.	Exchanging experience and knowledge, including raising awareness in the field of efficient risk prevention and management in the cross-border area	Is not the case	Indirect	Neutral
6.	Development of integrated and common standards for the urban planning and risk management	Is not the case	Indirect	Neutral
7.	Investments and development of	Air	Positive	Positive

	common, integrated, emergency management systems	Water Soil Climate change Waste Management Biodiversity		impact
8.	Planning co-ordinated actions of the authorities in emergency situations caused by natural and man-made disasters (flood, fire, heat waves, earthquakes, storms)	Is not the case	Indirect	Neutral

Priority 4.3 Prevention and fight against organised crime and police cooperation

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact	Environmental assessment
1.	Common actions for increasing mobility and administrative capacity of police units (including border police)	Is not the case	Indirect	Neutral
2.	Creating collaborative working platforms in order to increase the efficiency of police, border police and custom structures in the exchange of data and information	Is not the case	Indirect	Neutral
3.	Joint trainings of police, customs, border police, gendarmerie, exchange of best practices on specific areas of activity (analysis, criminal investigation, organized crime)	Is not the case	Indirect	Neutral
4.	Investment in construction, renovation or upgrading of police and border crossing infrastructure and related buildings	Air Water Soil Waste Management	Positive	Positive impact
5.	Investments in operating equipment and facilities specific for the activity of police/customs/border police/gendarmerie (e.g. laboratories, equipment, detection tools, hardware and software, means of transport)	Air Climate change	Positive	Positive impact
6.	Developing common policies and strategies, experience exchange for fighting organised crime	Is not the case	Indirect	Neutral

LARGE INFRASTRUCTURE PROJECTS

No. crt.	Indicative activities	Environmental aspects and objective considered	Potential impact	Environmental assessment
1.	«Clean river» Dunărea	Water Biodiversity	Positive	Positive impact
2.	Improving the cross-border infrastructure – opening the gate to Europe	Air Water Soil Waste Management	Positive	Positive impact
3.	Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine	Air Water Soil Waste Management	Indirect	Neutral
4.	Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management.	Air Water Soil Waste Management	Indirect	Neutral

The alternatives analysed for the Joint Operational Programme Romania – Ukraine for period 2014 ÷ 2020 are presented below:

Alternative 0: The Programme is not implemented;

Alternative 1: The Programme Ro-Ua has four thematic objectives and a prioritized list of Large Infrastructure Projects

For each priority selected for the thematic objectives of the Programme Ro-Ua a proper justification was provided regarding the needs of the eligible area of the Ro-Ua Programme.

According to the article 10 of SEA Directive, the monitoring of the significant environmental effects of Programme has to be done, in order to identify early any adverse effects and to be able to take the proper corrective measures.

The monitoring system is proposed based on the environmental issues that may be substantially affected by the implementation of CBC Programme Ro-Ua.

For the monitoring of the Programme impact on the environment the following principles were taken into consideration:

- Contribution to energy efficiency, the reduced usage of raw materials or hazardous substances;
- Contribution to the development of green infrastructure, including management of protected areas;

- Contribution to an adequate management of the use of ground and underground waters;
- Contribution to sustainable mobility and multimodal transport;
- Contribution to an effective waste management, recycling and reusage;
- Contribution to risk prevention/natural disasters and climate change mitigation;
- Application of the principle of green public procurement.

Based on the evaluation of the indicative activities with possible impact on the environment the following recommendations were made regarding the monitoring framework of the programme as well as the use of specific environment indicators:

Thematic objectives	Priority	Recommendation submitted as part of SEA procedure
TO2 Support to education, research, technological development & innovation	P 1.1 Institutional cooperation in the educational field for increasing access to education and quality of education	Including an additional indicator for the Program: „ <i>Number of rehabilitated / modernized educational institutions</i> ”
	P 1.2 Promotion and support to research and innovation	None
TO3 Promotion of the local culture and preservation of historical heritage	P 2.1 Preservation and promotion of the cultural and historical heritage	None
TO7 Improvement of accessibility to the regions, development of transport and common networks and systems	P 3.1 Development of cross border transport infrastructure and ICT tools	Including an additional indicator for the Program: “ <i>Number of environmentally friendly (carbon-proofed) cross-border transport initiatives developed</i> ” Modification of an indicator in order to include activities related to multimodal transport
OT8 Common challenges in the field of safety and security	P 4.1 Support to the development of health services and access to health	None
	P 4.2 Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations	Completion of the proposed indicator related to joint activities with “ <i>new or updated maps, databases, systems / structures, purchased equipment, etc</i> ” Modification of the indicator in order to include activities for

		reducing the impact of disasters caused by man (including the project Clean river). Use of an environmental specific indicator: <i>Land surface affected by the implementation of the measures</i>
	P 4.3 Prevention and fight against organised crime and police cooperation	None
Large infrastructure projects	“«Clean river» Dunărea	Completion
	Improving the cross-border infrastructure – opening the gate to Europe	None
	Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine	None
	Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management.	None

The monitoring indicators of indicative activities associated with the four thematic objectives of Programme Ro-Ua and Large Infrastructure Projects which may impact the environmental aspects considered in the current strategic environmental assessment are presented in the following table:

INDICATIVE ACTIVITIES of the Programme Ro-Ua	Proposed monitoring indicators
TO2 - SUPPORT TO EDUCATION, RESEARCH, TECHNOLOGICAL DEVELOPMENT & INNOVATION	
Objective 1: <i>Develop education and support research and innovation at the level of the Programme area by facilitating the cooperation at local, regional and central level</i>	
<i>Priority 1.1 Institutional cooperation in the educational field for increasing access to education and quality of education</i>	
Rehabilitation/modernization/ extension/ equipment procurement for the educational infrastructure to provide the necessary material preconditions of a quality educational process and increase the participation in the educational processes	Number of rehabilitated / modernized educational institutions
<i>Priority 1.2 Promotion and support to research and innovation</i>	
Promotion and support for research and innovation	Number of institutions using programme

through rehabilitation/ modernization/extension of the specific infrastructure including the procurement of related equipment.	support for cooperation in R&D and support of innovation
TO3 - PROMOTION OF THE LOCAL CULTURE AND PRESERVATION OF HISTORICAL HERITAGE Objective 2: <i>Preservation of the cultural and historical heritage in the eligible area, support the developing of local culture, specific cultural identities and the cultural dialog contributing to an enhanced attractiveness of the eligible area.</i> <i>Priority 2.1 Preservation and promotion of the cultural and historical heritage</i>	
Restoration, conservation, consolidation, protection, security of cultural and historical monuments, archaeological sites (including the corresponding access roads), museums, objects and art collections and their joint promotion based on relevant cross-border strategies/concepts	Number of improved cultural and historical sites
Preservation, security, and joint valorisation of cultural and historical monuments and objects	Number of improved cultural and historical sites
TO7 - IMPROVEMENT OF ACCESSIBILITY TO THE REGIONS, DEVELOPMENT OF TRANSPORT AND COMMON NETWORKS AND SYSTEMS Objective 3: <i>Improve public transport services, infrastructure and ITC cooperation and networking</i> <i>Priority 3.1 Development of cross border transport infrastructure and ICT tools</i>	
Reconstruction, rehabilitation, modernization of cross-border transport systems	Total length of reconstructed or upgraded roads
Development of environmentally friendly cross-border transport initiatives and innovative solutions	Number of transport initiatives developed with low environmental impact
Improvements of multimode transport (road/water) facilities of cross-border interest	Number of joint mechanisms to support improvement of cross-border infrastructure (joint planning documents, including: strategies, plans, action plans; multi-modal facilitation mechanisms) developed
Reconstruction, rehabilitation, widening of cross-border (segments of) roads connecting settlements alongside the border with main road, which leads to the border	Total length of reconstructed or upgraded roads
Improvement/restoration/construction of (segments of) access roads to centres of cross-border interest	Total length of reconstructed or upgraded roads
TO8 - COMMON CHALLENGES IN THE FIELD OF SAFETY AND SECURITY Objective 4: <i>Addressing common challenges concerning access to health, management of natural and anthropic risks and emergency situations, cross border security through joint projects</i> <i>Priority 4.1 Support to the development of health services and access to health</i>	
Joint activities meant to enhance the access to health in the border area through construction / rehabilitation / modernization of infrastructure of public health services (including through the use of renewable energy etc.)	Population covered by improved health services as a direct consequence of programme support

Developing labs and mobile labs for screening / clinical monitoring of diseases and prevention of cross border epidemics	Number of medical service infrastructure units improved
Equipping specific public medical service infrastructure (outpatient, emergency room facilities, medical centres, integrated social intervention, etc.)	Number of medical service infrastructure units improved Population covered by improved health services as a direct consequence of programme support
Priority 4.2 Support to joint activities for the prevention of natural and man-made disasters as well as joint actions during emergency situations	
Common measures for preventing land slide and flooding of the cross border areas	Population benefiting from flood protection measures Land surface affected by the implementation of the measures ⁴
Joint integrated systems for efficient monitoring and disaster prevention and for the mitigation of consequences	Number of joint actions, including soft actions (exchanges of experience, training, study visits, joint planning session, new or updated maps, databases, systems / structures, purchased equipment, etc.) and joint infrastructure investments in emergency situations and disasters caused by man
Elaborating of joint detailed maps and databases (indicating natural and technological risks, and land use for regional planning authorities, environmental agencies and emergency services)	
Investments and development of common, integrated, emergency management systems	
Priority 4.3 Prevention and fight against organised crime and police cooperation	
Investment in construction, renovation or upgrading of police and border crossing infrastructure and related buildings	Number of modernized facilities of police, border police and custom services from the eligible area
Investments in operating equipment and facilities specific for the activity of police/customs/border police/gendarmerie (e.g. laboratories, equipment, detection tools, hardware and software, means of transport)	
Large Infrastructure projects	
«Clean river» Dunărea	Number of joint actions, including soft operations (Including but not limiting to exchange experience; trainings; study visits; common planning sessions; newly developed: maps, data bases, systems/structures, aquisitioned equipments; etc.), as well as joint infrastructure investments in the field of emergency situations and the prevention of

⁴ Environment specific indicator

	man-made disasters
Improving the cross-border infrastructure – opening the gate to Europe	Total length of reconstructed or upgraded roads
Regional Cooperation for Prevention and Fighting of Cross-border Crime between Romania-Ukraine	Number of modernized facilities of police, border police and custom services from the eligible area
Improvement of the population safety and security level in the cross-border area by enhancing the joint training and cooperation actions in emergency management	Number of joint actions, including soft operations (Including but not limiting to exchange experience; trainings; study visits; common planning sessions; newly developed: maps, data bases, systems/structures, aquisitioned equipments; etc.), as well as joint infrastructure investments in the field of emergency situations and the prevention of man-made disasters

Some of indicators proposed for monitoring the Programme effects on the environment were selected from the indicators proposed for monitoring the programme, when those indicators could highlight also the impact on the environmental issues considered, and when these could not be relevant, new indicators were proposed or the Programme indicators were adapted.

The monitoring indicators will be used for the assessment of effects on environment for each project financed from the Programme. This data will be provided by the project beneficiaries through the monitoring of activities and will be collected annually in order to be able to include them in the Annual Implementing Report of the Programme submitted to the JMC. Authorities proposed to be involved in the monitoring of the effects on the environment are: project beneficiaries, JMC, MA (MRDPA).