

Public vision of Ukraine's participation in the EU Strategy for the Danube Region



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Introduction

In June 2009 leaders of the European Council asked the European Commission to prepare the EU Strategy for the Danube Region (hereinafter – the Strategy, the Danube Strategy) till the end of 2010 as well as the Action Plan for the Strategy that will include concrete projects and activities to be realized within the Strategy. The main criteria for the projects to be included into the Action plan are their feasible positive results.

The approach draws on the experience of the EU Strategy for the Baltic Sea Region, while also taking into account the different nature of the Danube Region. In particular, such a strategy involves the relevant partners aiming at finding agreed solutions to common challenges/opportunities and providing a governance mechanism for a common strategic approach, as well as for the implementation of concrete actions/projects.

The Strategy will be both integrated and focused.

The goals of the Strategy are as follows:

- to improve navigation of the river, primarily for cargos;
- to protect the environment and combat pollution;
- to promote economic development, as well as culture and tourism;
- to help overcoming natural disasters.

In order to ensure wider consultations as for contents of the Strategy and Action Plan, the European Commission launched on-line consultations and held five conferences in the countries of the Danube Region to get comments directly from participants. The final decision on approval of the EU Strategy for the Danube Region will be taken in spring 2011 at the sitting of the European Council.

The Strategy does not envisage new financing, new legislation nor new institutions. However, there will be introduced the position of priority coordinator and the mechanism of joint coordination of priorities by several countries.

The European Commission invited the following countries to develop the Danube Strategy: Germany (Baden-Württemberg and Bavaria), Austria, the Slovak Republic, the Czech Republic, Hungary, Slovenia, Croatia, Serbia, Bosnia and Herzegovina, Montenegro, Romania, Bulgaria, the Republic of Moldova and Ukraine (the regions along the Danube). Eight are Member States of the EU and six are not.

To ensure Ukraine's participation in the Strategy development, the Cabinet of Ministries of Ukraine appointed the Ministry of Regional Development and Construction of Ukraine as coordinator of developing the joint Ukrainian position on the Danube Strategy development. In May 2010 the Ministry prepared and submitted to the European Commission the Ukrainian vision of the future EU Strategy for the Danube Region».

The goal of Ukraine's participation in development and further implementation of the Danube strategy is to ensure sustainable development of the Ukrainian part of the Danube Region and to launch the complex EU policy of the Danube Region development.

Unfortunately, the Vision was submitted with delay and the document was not of proper quality. Therefore, in July 2010 Ukraine was invited to submit additional proposals to the Vision and Action Plan for the Strategy.

The public got actively involved into the initiative of the Danube Strategy development and in April 2010 the Working Group on the development of the Danube Region was created within the Public Expert Council

at the Ukrainian part of the EU-Ukraine Cooperation Committee. The Working Group was formed and functioned with the support of the European Program of International Renaissance Foundation within the project «Stimulating the Ukrainian public to participate in realization of the EU Strategy for the Danube Region» realized by international public interest environmental law organization *Environment–People–Law*.

The project also envisages development of the Public vision of Ukraine's participation in the EU Strategy for the Danube Region. This document does not reflect official position of Ukraine. Authors of the Public vision meant to activate independent Ukrainian experts whose expertise will be a valuable contribution to the updated version of Ukraine's vision of the EU Strategy for the Danube Region to be developed by Interdepartmental working group coordinated by the Ministry of Regional Development and Construction of Ukraine.

1. The Danube region in Ukraine

The Danube is the second river of the European continent and the most important water-way of the Central and Eastern Europe. Therefore, the Danube region is purely European notion, which can be fully perceived through realizing its exceptional political, economic, environmental and historic role for Europe in general and for the European Union in particular. The Danube region includes first of all coastal areas of the countries it flows through: Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Moldova and Ukraine; secondly, it includes 17 countries of the Danube basin that are Parties to the Danube River Protection Convention and European countries which from geopolitical point of view have certain dispositions towards the Danube water-way.

In any context Ukraine is the part of the Danube Region; however, according to the first approach it includes only Ukrainian Danube-adjacent region. If the basin-oriented approach is applied, the Ukrainian part of the Danube region also includes Zakarpattia region, part of Chernivtsi and Ivano-Frankivsk regions, but if to apply the last mentioned approach, the Danube Region includes the whole territory of Ukraine.

However, in this Vision by the Ukrainian part of the Danube region we mean the part of the Danube basin region in Ukraine. From administrative point of view it includes territories of Odessa, Chernivtsi, Zakarpattia

and Ivano-Frankivsk regions. Respectively, these are basins of the Lower Danube (the Danube delta), the Tysa, the Siret and the Prut rivers.

The Ukrainian Danube-adjacent region occupies the Southwest part of Odessa region located in the Danube–Dnister interfluvium and includes 7 administrative districts – Artsyzk, Bolgrad, Izmail, Kiliya, Reni, Tatarbunary and Tarutyne districts and the city of regional level Izmail. Total area is 9.78 thousand sq. km.

The most specific feature of economic and geographic location of the region is its border and coastal location, access to international transport waterway of the Danube, which means certain available and potential transport functions as well as access to the Black sea.

Besides the Danube, small rivers of Kohylnyk and Sarata flow through the region. In the Danube-adjacent region there are also freshwater lakes Kytay, Kahul, Yalpuh, Kuhurluy, Katlabukh, which are natural reservoirs of fresh water being in miserable environmental condition. There are numerous estuaries along the coastal line: Sasyk, Dnantsheysk, Small Sasyk, Burnas, Alibey, Shahany.

The natural potential of the Danube-adjacent region is represented by land, water and recreational resources. There are also deposits of constructional materials including clay, sands, sand and gravel mixtures, limestone and coquina, macadam. The region has oil deposits (Zhovtoyarske deposit) as well as thermal waters and salts.

There are 19 protected areas in the region (2008). They include 6 local reserves (total area 632 ha), 7 local natural monuments, 2 landscape parks and 4 protected areas of national importance, among them the Danube biosphere reserve (51 547.9 ha), the regional landscape park «Izmail islands» (1 366 ha): the national botanical reserve «Staromanzyrskyi» (128 ha), the national zoological reserve «Zmiyinyi Island» (323 ha). On 1 January 2010, the national natural park «Tuzla estuaries» (27 865 ha) was created.

Ukrainian water collecting part of the Danube region includes upper parts of the basins of the longest Danube tributaries (the Tysa with Uzh and Latorytsa rivers in Zakarpattia region and the Prut with the Cheremosh in Chernivtsi and Ivano-Frankivsk regions) as well as the Siret with Suchava rivers in Chernivtsi region.

The Tysa basin that regularly suffers from technogenic catastrophes in Northern-East Romania is the main water collecting part defining flood threats in Hungary, Slovakia and Serbia. In some places the Tysa river serves as the borderline between Romania and Ukraine.

Comparison of the economic complex of the Pre-Carpathian part of the Danube basin with the structure of its recreational potential shows glaring disproportions in interactions of natural and social productive powers. Their balance would mean the shift of the economy towards non-productive sphere. The priority should be given to complex of recreational, forest and water industry.

In order to increase the recreational potential, it is necessary to expand the area of forests through afforestation of eroded damaged areas. One of the ways of increasing effectiveness of the economy is to protect water resources from pollution and exhaustion, to introduce modern systems of water supply, water-free technologies or technologies requiring little water, to establish proper control over water usage, first of all in irrigational agriculture.

The integration potential of the Danube Region as the basis of economic security and sustainable development of Ukraine includes the following elements:

- convenient economic, geographic and geopolitical location of the region emanating from its location at the intersection of almost all transport and transit routes connecting Europe with Asia, the Indian sub-continent, Far East countries of «economic tigers», Australia, new Zealand etc.;
- rich natural resource potential that includes water, biological, recreational, mineral, fuel and energy resources;
- powerful transit-forming potential emanating from the status of the Danube as an important European water-way, the Black Sea communications, functioning of the VII (Danube) international transport corridor, functioning of three big Ukrainian sea ports (Reni, Izmail, Ust'-Dunays'k), small ports (Kiliya, Vylkove etc), automobile, railway and aviation communications;
- industrial potential including agricultural complex, fishery, vessel repair and shipbuilding;
- potential of the forestry complex in the basins of the Tysa, Siret, Cheremosh and Prut rivers;
- potential of non-production sphere that includes development in recreational, tourist and environment protecting directions;
- potential of international cooperation that envisages expansion of foreign-economic relations of the region, inclusion of the region into the world economic system, formation of the international system of environmental security in order to ensure sustainable social, economic and environmental development of the Danube region countries.

Principles and tasks of regional development of the Ukrainian part of the Danube Region

Development of the Ukrainian part of the Danube region in the context of realizing the EU Danube strategy should follow the following **principles**:

- sustainable development of the Danube Region;
- integration of environmental protection requirements into plans, programs and projects of the Danube Region development;
- neighborhood;
- transboundary cooperation and joint solution of transboundary problems;
- prevention of environmental damage and ensuring compensation for the damage to the environment and landscape as a result of realization of big infrastructural projects;
- involvement of the public to the development and realization of the Action Plan at the EU level as well as at the national/regional/local levels;
- involvement of small and medium business to initiatives in the Danube region and to the development and realization of the Action Plan and the Strategy;

Within the main tasks of sustainable development of the Danube Region of Ukraine the following tasks can be identified:

- development of economic potential of cooperation, in particular potential of exporting products and services, intensification of transboundary cooperation and integration into the European economic system;
- ensuring conditions for restoration of economic potential and further economic growth of the region on the basis of restructuring, modernization and increase of effectiveness of the economy;
- ensuring safe conditions of life of populations on the basis of effective development of water and energy supply and prevention of natural disasters;
- increasing the educational and employment level of population, overcoming poverty, strengthening demographic and labour resource potential of the region;
- preservation and development of regional, national and human identity, improvement of social and economic grounds of ethno-national stability, adjustment of interests of ethnic communities and solution of international contradictions;

- realization of a row of measures ensuring environmental safety of the region, more efficient usage of natural resources, improvement of environmental conditions of the Danube-adjacent lakes, prevention of pollution of surface and underground waters, protection of population from floods, droughts, forest degradation, emergency pollution of the environment and solution of waste problems;
- ensuring complex solution of the issues of effective functioning and expansion of natural reserves, protection of wetlands with international status, environmental rehabilitation of natural objects, in particular forest complexes, estuaries etc.

2. Ensuring communication and connection in the Danube Region

2.1. The Danube as an international transport artery

The Danube is the most important transport water-way situated at the intersection of transport routes of Europe. Usage of its natural advantages on the basis of sustainable development principle and with due account being taken of interests of local communities will promote integration processes in Europe. Secure usage of strategic geographic location of the Danube will help decrease the load on the rest of European transport routes and bring them into compliance with the Alpine and the Carpathian Conventions.

Thanks to the unique geographic location at the junction of the Carpathian and Black Sea regions, the Ukrainian part of the Danube Region is important for trans-European transport connections, in particular for transformation of the network of transport corridors TEN-T (as well as the network of energy supply TEN-E) into a modern system of European axes that covers European, interstate and local interests.

The main feature here is the necessity to combine needs of the economy and population with the requirements and technogenic and environmental safety. As an example may serve the Transport Protocol signed by countries-participants of the Alpine Convention and EU countries following the decision of the EU Council # 2007/799/EC of 12.10.2006.

2.2. The Danube ports and transit potential of the Danube Region

The Ukrainian Danube ports – Reni, Izmail, Us't'-Dunaysk together with small ports in Kiliya and Vylkovo form the Danube port industry annually processing over 20–24 mln of lading. The ports reload lading to be transported to the countries of EECCA, Central, Southern and Western Europe and also cooperate with ports of the Black, Mediterranean and Red Seas and the Indian and Pacific Oceans.

One of the main port bases on the Black Sea part of the Danube is Izmail port located at the intersection of the VII international transport corridor and the Balkan branch of the IX transport corridor. In 2004 the freight turnover of the port was 6.6 mln tons. The port of Reni is located on the upper Danube and it closes VII corridor. The port has higher processing potential than Izmail port but the potential is limited by absence of access railway. The port located in Us't'-Dunaysk with processing potential of about 6 mln tons is meant for reloading freights from barge onto big vessels (at present it does not function).

At present financial situation of the Ukrainian Danube Navigation is at the breaking point. At the end of 2007 the navigation had 41 mln UAH of debt and the amount of shipment decreased by 22 % in comparison with 2006. The average age of the ships is 30 years. Less than third of river vessels that traditionally were the most profitable are suitable for exploitation. In 2007 the Navigation also faced difficulties with staff when about 1 thousand of employees were laid off. Nevertheless, the Ukrainian Danube Navigation covers about 32 % of all shipment down the Danube. It transports coal, coke and chemical fertilizers to Serbia, metal to Bulgaria and coal and metal to Romania.

Economic advantages of transporting freights using the Ukrainian route in contrast to the Romanian one remain the issue open for discussion. The length of the way through the Chorna Woda canal – Constantza is 340 km shorter than down the deep water navigation way «Bystre» which annually means about 5 additional trips. In total transportation through the Chorna Woda canal is 1.73 USD per ton cheaper than transportation down the deep water navigation way «Bystre».

2.3. International transport corridors of the Danube Region

Seven (!) (IV–X) out of ten international transport corridors are partially or completely situated in the Danube Region.

Development of transport infrastructure on the principles of sustainable development provides not only for economic advantages but also guarantees the environmental protection in the zone of TEN-T corridors V, VII, IX that go through the Danube basin and the territory of Ukraine. In particular it is true about restoration of the original role of the existing shortest and safest Baltic-Black Sea-Mediterranean routes of trans-European connections that go around the Carpathians on the East and connect I, II and VI TEN-T corridors in the zone of the Baltic Strategy with V, VII, VIII, IX and X TEN-T corridors in the zone of the Danube Strategy.

Chernivtsi region has a developed network of automobile roads (density 354 km/1000 km²) and railways (36 km/1000 km²). The international highway E-85 connecting II, III, V, VI, VIII and IX Pan-European (TEN-T) corridors go through this territory of Ukraine called Bukovyna.

Also, the border is approached by routes from the East (in the direction of V TEN-T corridor) that follow the shortest way through Southern Bukovyna, Transylvania and the Carpathians (crossing IV and X TEN-T corridors), pass by Belgrade and Zagreb and reach Adriatic ports.

Poor conditions of the network of highways in Ukraine, in particular highways on the route Rava Rus'ka – Lviv – Ternopil' – Terebleche – Chernivtsi, cause serious social and economic losses. In order to remedy the situation, it has been found reasonable to realize the investment project to renovate the highway Rava Rus'ka – Lviv – Ternopil' – Chernivtsi – Porubne.

In comparison with the ambitious project of East EU countries to construct tran-European highway S-19 (that will go around Ukraine crossing the Carpathians twice), the above-mentioned proposals ensure shorter and safer way of transcontinental connections.

2.4. Transport projects of sub-region of Tysa, Prut, and Siret

The complex approach of the Ukrainian party to increasing transit status of the Ukrainian part of the Danube Region will increase transit role of Ukraine in the context of extension by the EU and Russia of the railway of Russian standard (1520 mm) from Chop to Bratislava in view of the interest of German railways towards development of III TEN-T corridor in Ukraine.

The most urgent issue is to ensure transportation of participants of EURO 2012 on the E-85 highway that goes along the Carpathians and crosses basins of the

Siret and Prut rivers. Also, according to Schengen requirements, within the project of developments on the Ukrainian-Romanian border it is necessary to draft technical and economic substantiation of restoring the European railway from Poland to Romania through the territory of Ukraine (Lviv, Ivano-Frankivs'k, Chernivtsi).

2.5. Environmentalization of transport and creation of new transport infrastructure

Formation of the system of sustainable navigation that takes into account the issues of stabilization of natural resources of the Danube should be based on application of the following mechanisms: development of the unified concept of navigation down the Danube, harmonization of transport policy with the principles of the EU Water Framework Directive, implementation of methods of environmental compensation and investment into ecosystematic services, limitations as for dredging.

More active development of NAIADES Program needs more comprehensive application of the mechanisms of Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA). Any construction works can be performed only if it complies with the interests of population of a country and does not pose a threat for interests of other countries of the basin.

As for transport projects, we suggest applying the following criteria of environmentalization: energy capacity, amount of wastes, emissions, emissions having impact on the climate change, assessment of processes of environmental destruction, emergency factors.

Realization of the Danube transport programs should take into account additional expenses of prevention of and compensation for negative factors.

All environmental losses of the ecosystem should be compensated for, and therefore it is necessary to make environmental assessment of the value of the Danube ecosystem.

Fleets of the Danube countries need active modernization. It is necessary to implement new ship-building technologies, to decrease emissions, to improve informational systems, security systems that ensure proper probing, adequate and modern marking of navigation ways.

An important precondition of formation and implementation of the EU Strategy and national strategies as well as initiatives and projects envisaged

by the Action plan is application of instruments of Strategic Environmental Assessment (SEA) and Environmental Impact Assessment in national and transboundary contexts.

In case of threats of harmful transboundary impact of transport or infrastructure projects, it is necessary to perform EIA in transboundary context which requires transboundary consultations with potentially affected countries and the public. Results of such consultations should be taken into account in the final decision, which is envisaged by the Espoo Convention to which all Danube countries are the Parties.

In order to strengthen transport potential of Ukraine in the area of the Lower Danube, it has been suggested implementing the project «Creating conditions for extension of International transport corridor (ITC) # 7 using Ukrainian transport infrastructure of the Lower Danube».

Within this project it is also reasonable to consider alternatives to the Danube–Black Sea canal, in particular the option of navigation through the Danube–Sasyk Canal. It is interesting because its route goes beyond the Danube Biosphere Reserve through the lands allocated for servicing the existing canal, they stretch along the canal and are 100 meters wide. Realization of the project is related with the opening of the sea dam of the Sasyk estuary. The decision on the dam opening has been approved by local self-governance bodies. This option facilitates the Sasyk's gaining its natural marine status. Construction of a port in the estuary is considered to be perspective.

The option of canal of the Solomon arm – the Zhebryjany bay located higher the town of Vylkovo along Vylkovo barrows goes from the Solomon arm to the Zhebryjany bay of the Black Sea. The navigation canal that is 9.1 km long (the Sulina canal is 75 km long) is oriented against the direction of powers of Koriolis and goes through the stable part of the delta formed by ancient marine neck «Vylkovo barrows». Following this option, economic effectiveness of the Danube–Black sea canal is related with the necessity to construct a new Ukrainian marine port near the river bed. Kiliya district state administration has adopted the decision about allocating a land lot for expansion of the Ust'-Dunaysk port.

At present the main development of carting development on the Danube is related to carting in containers, which may become several times bigger, and ferry transportation of heavily-loaded vehicles as it is envisaged by the EU Maritime Transport Policy. In order to perform this transportation successfully, it is necessary to have a deep-water port, and the marine mouth trade port on the Sasyk may be the one.

Creation of a unified logistic complex in the region will help increase investments into the Danube region.

In order to create an integral transport infrastructure in the Lower Danube Area, it is necessary to construct a European railway on the route Gallaz – Ust'-Dunaysk and to complete construction of ferry crossings in the Lower Danube Area. It is also necessary to ensure Ukraine's participation in harmonization of River Information Service, in creation of an educational complex for the Danube navigation staff in order to improve the system of training staff of internal water transport.

In the context of constructing the Danube adjoining part of Black Sea ring road the following projects are feasible: construction of a bridge over the Dniester estuary, construction of a bridge over the Danube, reconstruction of Odessa–Reni highway.

3. Environmental protection, management of water resources

3.1. Legal mechanisms of ensuring transboundary management of water resources

In view of joint usage of water resources by different countries, there is a need to jointly manage these resources in order to ensure equality in using the resources and their protection.

The Convention on the Protection and Use of Transboundary Watercourses and International Lakes envisages creation of a joint body arranging cooperation between Riparian parties. Riparian countries can also cooperate on the basis of bilateral or multilateral agreements in order to develop joint policies, programs or strategies.

The Convention on Co-operation for the Protection and Sustainable Use of the River Danube (Danube River Protection Convention) created legal foundation for creation of International Commission for the Protection of the Danube River (Art. 18), which is one of the most active and influential bodies of management of transboundary rivers. The Commission is meant to ensure sustainable and effective use and management of water resources in the Danube basin. In 2000 the Commission signed the Memorandum of understanding with the Convention on Wetlands

to provide it with the status of an observer in the Danube River Protection Convention. Memorandum of Understanding with the International Commission for the Protection of the Black Sea has also been signed in order to reach common goals.

An important instrument of directing environment-protecting investments is the Danube–Black Sea Task Force (DABLAS) created by the European Commission in 2001. DABLAS is an example of a successful platform for international financial institutions, donors and beneficiaries for the sake of cooperation and involvement of investments to protect water ecosystems of the Danube and the Black Sea.

The EU legislation in the sphere of management and protection of water resources is applied in the EU-member Danube states. This legislation includes the EU Water Framework Directive, Directive on flood risks assessment and management, Drinking Water Directive, Framework Directive on Marine Strategy.

3.2. Water resources of the Danube Region

The state of water resources of the Danube Region and approaches to their management and use is one of the key directions of the future Danube Strategy.

Present system of water resources management in Ukraine, Moldova and bordering EU countries is unevenly distributed among central executive bodies, regional structures, local self-governance bodies and enterprises related to use and security of water resources. Lack of unified system of management and monitoring of water resources and lack of joint informational system, system of risk assessment, flood control and prevention have an adverse impact on the environment, economic and social sphere and human health as well as the level of technogenic and environmental safety in the upper part of the basins of the Tysa, Prut and Siret Rivers.

3.3. The role of integrated management of preserving water resources

Recently many countries have been facing the problem of water deficit, decrease of water quality and catastrophic floods that put serious hindrances for economic development of certain regions and countries.

According to research results, problems with water resources result from fragmentation of their management. As research and experience show,

the most effective approach to their management is integration of all its elements realized in the concept called Integrated management of water resources. This approach promotes coordination of development of water sector and land use in order to increase welfare and equality in the society.

One of the main units for effective management of water resources is a river basin. Introduction of a basin-based approach to solving problems in water quality and its deficit or excess guarantees economic development and protection of water ecosystems.

One of the main directions of improving the state and level of provision with water resources of population and industry of the Danube region of Ukraine is development and introduction of Management plans for sub-basins of the Tysa, Siret and Prut Rivers and the Danube delta. According to the EU Water Framework Convention, such plans are the main instruments of integrated management of water resources. The plans are strategic documents of river basin development used to implement in river basins environmental goals such as attaining good water quality, sustainable water use, protection and improvement of water environment through decrease in dumping hazardous substances. The final goal of the Plan is to develop the Program of measures on the basis of analysis of river basin characteristics, review of impact of human activity on surface and underground waters and economic analysis of water use.

The main factors that may slow down implementation of the basin-based approach to management of water resources in the Danube region of Ukraine are as follows:

- inconsistency of national and regional legislation;
- lack of strategic complex planning on national, regional and local levels;
- prevailing of branch approach in the sphere of management;
- lack of experience in the sphere of integrated management of water resources;
- low public awareness in the sphere of sustainable water use, land use, waste management;
- insufficient transboundary cooperation on sub-basin level and on the level of Danube basin in general.

Therefore, the main directions of improving water resources in the Danube Region are as follows:

- improvement of use of water and land resources in boundary regions of Ukraine and Romania through introduction of the basin-based principle in management;

- promotion of creation of integrated Ukrainian-Romanian system of hydro-meteorological monitoring in the territory of the Lower Danube including installment of automated observation systems, approval of terms and parameters of observations, data and information exchange system etc;
- promotion of creation and development of modern transboundary systems of risk management and cooperation in case of emergencies and flood warning on the Danube and its tributaries: the Tysa, Prut and Siret Rivers.
- improvement of management of water and land ecosystems including international wetlands, the Danube and Carpathian biosphere reserves;
- improvement of managing industries using water resources, e. g. agriculture, fishery, ecotourism, recreation etc.;
- improvement of territory planning on the regional level through more accurate definition of water resource problems;
- improvement of interaction among sectors and involvement of affected parties and the public to management of water resources;
- raising public awareness as for state of water resources;
- promotion of cooperation in water resources management in boundary regions of Ukraine, Romania, Hungary, Slovakia, Moldova through improvement of experience and information exchange in the sphere of integrated management of water resources;
- promotion of realization of basic principles of the EU Water Framework Directive.

3.4. Perspectives of implementing the Management plan for the Danube basin in Ukraine

In view of the number of countries located in the Danube basin, the Danube is the most international river not only of Europe but of the world as well. Thus, in order to accommodate different interests of the countries and to establish cooperation among them it is necessary to introduce an integrated approach to management of the Danube water resources. On 29 June 1994, eleven Danube countries including Ukraine signed the Convention on Cooperation for the Protection and Sustainable Use of the Danube River (The Danube River Protection Convention) with the aim to create a legal basis for cooperation in transboundary management in the Danube basin.

The International Commission for the Protection of the Danube River (ICPDR) – the executive body of the Convention – is at present a powerful actor in the Danube basin promoting the basin-based approach to water resource management in the region. The main result of its efforts became development by the Convention Parties of the Management plan of the Danube River basin. The Management plan is a joint document for the period up to 2015 that defines the scope of actions directed at improvement of the Danube environment including the decrease of organic pollution, improvement of sewage purification systems, introduction of phosphate-free detergents as well as effective risk management. The document was approved at the 12th meeting of heads of national delegations and in February 2010 it was approved by the meeting of ministers and heads of central executive water management bodies of the countries that are Parties to the Danube River Protection Convention.

We have all grounds to consider that the Management plan will be to great extent taken into account in the process of development of the Danube Strategy.

The Management plan of the Danube river basin has three levels of coordination: 1) international level for the whole basin; 2) national level as well as sub-basin level for certain sub-basins (the Tysa, Sava, Prut Rivers and the Danube delta; 3) territorial level.

It is worth focusing on the second sub-basin level of coordination because it has to become the key one in development of proposals to the Danube strategy to be drafted by Ukraine in the sphere of water management.

Active position of Ukraine in development of complex plans of managing transboundary sub-basins of the Danube delta, the Prut and Siret would be in line with the state policy directed at introducing the basin principle in water resource management pursued by the State Committee of Ukraine on water management.

The project «Development of management plans for sub-basins of the Danube River» envisages the following measures: development of transboundary management plans for sub-basins of the Tysa, Siret, Prut Rivers and the Danube delta; development of transboundary plans of flood risk management; development of transboundary system of informing about natural emergencies (floods).

Project partners: International Commission for the Protection of the Danube River, national public authorities in the sphere of water management (The Ministry of Environmental Protection of Ukraine, the State Committee of Ukraine on water management, the Danube basin administration for water resources, Zakarpattia regional water management, Dnister-Prut basin administration for water management,

state administration for environmental protection in Odessa, Chernivtsi, Ivano-Frankivsk and Zakarpattia regions), the public, local self-governance bodies.

3.5. Prevention of phosphate dumping into the Danube

Detergents with phosphates became one of the three biggest sources of pollution of the Danube basin. Thus, there is a need to realize in the region a pilot project aimed at evaluating the use of phosphate detergents in the Ukrainian part of the Danube basin. In this way it will be possible to determine exact amount of phosphates coming to the ecosystem of the river, to borrow international experience in this sphere, and to develop recommendations as for gradual decrease of inflow of phosphates for the Danube River and for Ukraine in general.

The project «Gradual decrease of phosphates in detergents and halt of use of phosphates in detergents» may include the following measures: to evaluate the amounts of phosphate detergents used in the Ukrainian part of the Danube basin and the amounts of phosphate dumps into the rivers of the basin of the Ukrainian part of the Danube; to realize awareness raising activities among population on the advantages of phosphate-free detergents; to provide detergent producers with financial support in order to promote their switch to producing phosphate-free detergents; to develop international cooperation with organizations lobbying for use of phosphate-free detergents.

Project partners: local public authorities, executive authorities performing monitoring of the state of environment, entrepreneurs, local communities, NGOs.

3.6. Modernization of the system of environmental monitoring on the Danube and its tributaries

Adequate and timely information on the state of environment, qualitative and quantitative characteristics of water and air, hydrometeorological conditions, warning about natural disasters is one of important factors ensuring sustainable social and economic development of a state and separate regions and realization of timely preventive measures.

It is very important for the Danube Region to establish international cooperation in the sphere of timely

forecast and information exchange as for state of water resources, interaction for effective reacting to emergencies and integrated management of water resources.

The main problems of the system of environmental monitoring in the Danube region of Ukraine are as follows:

- inadequate coordination among organizations in terms of places, terms, methods of performing monitoring;
- limited and complicated exchange of information;
- lack of unified banks of monitoring data for the Ukrainian part of sub-basins of the Tysa, Siret, Prut and Lower Danube Rivers;
- lack of goal-oriented programs;
- drawbacks of present instrumental and technical base of monitoring including systems of processing and presenting data;
- low capacity of rapid detection of emergency pollution and forecast of its development and consequences;
- inadequate use of data of hydrometeorological monitoring in decision-making process;
- inadequate access of the public to the monitoring results.

Low level of cooperation with the International Commission for the Protection of the Danube River and other European organizations raises special concern.

The main directions of projects aimed at improvement of environmental monitoring and forecast in the Danube region in Ukraine can be as follows:

on the regional level

- automation of the monitoring system. This process may include installation of automated hydrological observation posts, automated stations of controlling water quality;
- creation of mobile hydrochemical laboratories on the basis of speedy boats or auto transport to ensure prompt reaction to emergency pollution;
- installation of modern meteoradars in Odessa, Chernivtsi and Zakarpattia regions and establishment of interaction with Romanian, Hungarian and Slovak radar systems to forecast dangerous meteorological and hydrological phenomena and minimize harm caused by them;
- creation of Basin councils in the Danube Region in Ukraine in order to form common data banks;

- development of a joint plan of synchronization and better coordination of controlling quantitative and qualitative characteristics of water in the Danube;
- installation of servers to locate the data of monitoring and forecasts with public authorities having direct access to them;
- development and implementation of regional programs of updating the system of hydro-meteorological and environmental monitoring, assessment and forecast. Special attention should be paid to transboundary pollution and natural and anthropogenic emergencies.

on the national level

- promotion of approximation of the system of hydrological and hydrochemical monitoring to the requirements of the EU Water Framework Convention.

on the transboundary level

- promotion of active cooperation within the Agreement between the Government of Ukraine and the Government of Romania on cooperation in the sphere of water industry in transboundary waters.
- promotion of integration of systems of meteorological, hydrological and hydrochemical observations in the sub-basin of the Lower Danube (Ukraine, Romania, Moldova), the Tysa (Ukraine, Romania, Hungary, Slovakia and Serbia), the Siret and the Prut (Ukraine, Romania, Moldova) and creation of unified data banks;
- promotion of the experience exchange among specialists of the institutions performing monitoring in the Danube region;
- development and realization of international programs, projects on improvement of the system of monitoring the Lower Danube.

3.7. Protection and restoration of ecosystems

A specific feature of the Ukrainian Danube-adjacent region is the fact that out of 8 territories located in Odessa region and included into the Ramsar lists of wetlands of international importance 5 are located in the Danube-adjacent region: the Kartal lake (500 ha); the Kuhurluy (6500 ha); the Kiliya mouth (32800 ha), the Sasyk estuary (21000ha), the system of lakes Shahany–Alibey–Burnas (19000 ha).

The highest international status in Odessa region has the Danube biosphere reserve of the National Academy of Sciences of Ukraine created by the Order

of President of Ukraine #861/98 of 10 August 1998. In September 1999, there was the inauguration of the bilateral biosphere reserve the Danube Delta Romania–Ukraine, which included the territory of the Danube biosphere reserve.

In view of the international importance of the ecosystem of the Danube-adjacent region, it is necessary to widen the area of highly protected territories, and it is planned that 20 000 ha of Danube-adjacent reserved lands will be awarded this status.

A very important initiative in the Danube-adjacent region is creation of the Lower Danube Green Corridor initiated 10 years ago by the Danube-Carpathian program of WWF. The main goals of the strategy of creating the Lower Danube Green Corridor is integration of main provisions and requirements as for wetlands and preservation of the Lower Danube biodiversity into the systems of national and regional planning; preservation and restoration of landscapes and environments for biological species; improvement of the system of water management and preservation and restoration of water resources of the Danube region; realization of the system of preventing transboundary impacts; modernization of the existing nature-protecting engineer infrastructure; development of models of environmental risks assessment for wetlands; organization of networks of interstate water management; ensuring exchange of environmental information and data bases; raising environmental awareness of local population.

The most comprehensive restoration initiative is the functioning of the Danube-Carpathian program of WWF. At present this activity is realized within a special program «A vision for the Danube delta». The history and development of the Danube delta, hydrological regime of the river, environmental values form the basis of the Vision. The Vision for the Danube delta proposes gradual restoration of environmental integrity of the delta and presents scientific and technical preconditions for realization of the program on preserving and restoring wetlands in the Ukrainian part of the Danube.

In order to restore wetlands in the Danube-adjacent region of Ukraine it is necessary to take the following actions: to make detailed inventory of flood-lands with further exclusion of certain lots from economic usage; to develop the Strategy of Complex plan of gradual exclusion of degraded agricultural lands from use and restoration of wetlands; to develop and implement the plan of restoring flood-lands of the Danube located between Danube-adjacent lakes and the river according to the Program of environmental network of Ukraine, creation of the Green Corridor of Lower Danube taking into consideration anti-floods protection of

territories; to include the Danube-adjacent lakes and flood-lands to the Danube biosphere reserve of the National Academy of Sciences of Ukraine; to create trilateral Biosphere reserve of the Lower Danube.

Also, the following projects aimed at protection and restoration of ecosystems of the Danube-adjacent area are proposed:

«Capacity building of management of reserved territories and expansion of such territories». The goal of the project is to improve financial, resource, material and professional bases for administration of natural reserves. Within the project it is planned to create multifunctional training-centers on the basis of informational and tourist centers of protected areas to provide the local communities with organizational help, to exchange experience, to raise awareness as for implementation of new types of activities, preservation of biodiversity, environmental protection, to raise professional level and awareness of natural reserves staff as for modern methods of using natural resources; to take measures to restore valuable species (such as sturgeon) in territories affected by anthropogenic changes; to complete creation of the Lower Danube Green Corridor.

Project partners: administrations of natural reserves (the Danube biosphere reserve, the Carpathian biosphere reserve etc), administrations of the network of the Danube protected areas (www.danubeparks.org) and the network of the Carpathian protected areas (www.carpathianparks.org), local self-governance bodies, EC financial institutions, local community, investors.

«Climate change mitigation». Goal of the project: to analyse foreseen changes of natural components and ecosystems of the Danube region in order to develop the climate change adaptation strategy. Activities within the project: to evaluate susceptible territories of the Ukrainian part of the basins of the Tysa, Seret and Prut rivers and lower reaches of the Danube in view of environmental and social economic aspects in conditions of global climate change; to develop strategies and plans of adapting infrastructure of these territories to global climate change consequences, methods and approaches to economic activity of people as well as approaches to using natural resources in conditions of climate change; to create conditions for adaptation of natural ecosystems to global climate change through restoration of wetlands, forests and steppes.

Project partners: International Commission for the Protection of the Danube River, universities, academic and scientific institutions and organizations (Odessa State Environmental University, Odessa branch of the Institute of Biology of Southern Seas of the National

Academy of Sciences of Ukraine, the Center for Regional Research), State Water Economy Committee of Ukraine, local administrations.

«Restoration of marine status of the Sasyk estuary»

Rehabilitation of the Sasyk estuary can be realized under conditions of returning it into natural state of a marine estuary. In order to improve the environmental state of the Sasyk, it is necessary to restore its genetic connection with the Black Sea through dam removal.

Goal of the project: to overcome adverse impact of turning the Sasyk estuary into a fresh water reservoir and to create environmental conditions for sustainable social and economic development of adjacent areas.

Activities within the project: to develop and realize the plan of rehabilitation of the Sasyk estuary through including the estuary in the Danube biosphere reserve, to combine environment protecting and recreational use of the Sasyk estuary through construction of a yacht complex, reconstruction of the Danube–Sasyk canal to be used for rowing; to develop infrastructure for environmental, rural, recreational, historical, ethnical and sport tourism.

Project partners: local self-governance bodies, local public authorities, local population, non-governmental organizations.

4. Social, economic and human development

4.1. Preservation of cultural diversity

Nowadays regions are identified through traditions and culture. With the growth of independence of regions, there is a growing responsibility for sustainable cultural development. Multicultural nature has been a prominent characteristic of the Danube Region for centuries.

At present transboundary cooperation becomes a useful tool of transposing European values and integrating neighboring countries into European structures.

It is proposed to create *the Danube Cultural Forum*. There have been made certain steps in this direction within ENPI Program «Romania–Ukraine–Moldova». In order to promote cultural development of national minorities in the region, public authorities of all levels take actions to preserve lingual and cultural diversity of ethnical communities in the Lower Danube area. It is necessary to overcome centralization tendencies

in development of school curricula that limit the studying of history, culture, ethnography of population in the region.

The list of issues to be realized by public authorities of different levels:

- to create the network of out-of-school educational establishments to ensure that educational and cultural needs of national minorities are satisfied;
- to cooperate on a regular basis with the Councils of representatives of national minorities;
- to provide full support to Bulgarian, Moldavian, Gagauzian communities and Gypsy population;
- to expand informational span through publications, the broadcasting of radio and TV programs etc. in languages of national minorities of the Danube-adjacent areas.
- to support functioning of Centers of national cultures;
- to research ethno-national and ethnical relations and to apply the research results;
- to promote the mastering of history, culture and language of Ukraine by representatives of national minorities.

The proposed project: **«Preservation of natural, ethnical, historical and cultural heritage of the Danube Region»**. Goal of the project: to preserve natural, ethnical, historical and cultural heritage of the Danube Region as the basis of sustainable development of the region, to improve welfare of local population through development of ethno-cultural tourism. Proposed activities: to support ethnographic research in the Ukrainian part of the Danube region; to develop the educational system to preserve local ethnical, historical and cultural heritage of the Danube region; to create the network of ethnographical and historical museums in the region; to develop ethno-cultural tourism as precondition of promotion of the region on the European and world market of tourist services.

Project partners: universities and educational institutions of the region, ethnographic and historical museums, archives, tourist agents, local authorities.

4.2. Development of ethnical, cultural, rural and environmental tourism

The Danube region has a considerable potential for ethnical, cultural, rural and environmental tourism thanks to its outstanding natural resources, architecture, applied art and original folklore.

There is a need to create a coordination center to ensure exchange of information on tourist agencies and tourist complexes, tourist and excursion tours, transport connections, exhibitions etc.

Projects in this sphere are supposed to ensure:

- high quality tourist services;
- establishment of tourist routes taking into account tendencies of tourism development and assessment of tourist flows;
- organization of convenient transport connections;
- improvement of legislation in the sphere of tourism to bring it into compliance with international requirements;
- categorization of tourist objects according to their quality and service level; development of state standards for tourist routes;
- development of a complex map of tourist routes;
- inventory of tourist objects according to their compliance with state standards;
- development of plans of reconstruction and construction of tourist objects taking into account needs of disabled people;
- ensuring safety of visiting tourist objects;
- ensuring personal safety of tourists including provision of medical, technical and legal help;
- creation of informational system for tourists;
- application of ground and aerial rescue service;
- realization of measures to attract foreign tourists;
- expansion of international cooperation in the sphere of tourism;
- promotion of investment projects to expand tourist infrastructure.

The project «Sustainable tourism»

Goals of the project: to create a tourist cluster in the Danube Region that would cover a wide variety of tourist services (green, environmental, religious, recreational, marine, extreme, automobile tourism).

Measures to be taken within the project: to expand the network and capacity of tourist institutions; to promote organization of new tourist routes in the territory of Romania, Moldova; to simplify border-crossing procedures to activate transboundary tourism, to improve the transport system in the region to improve the access to tourist routes and objects; to promote creation of farmer (green) ecotourism objects.

Project partners: local self-governance bodies, local public authorities, local population, banks, Ukrainian tour operators.

4.3. Promotion of organic farming

Agricultural production is important for economy of Carpathian regions. The strategy of regional agrarian policy is directed at completion of reforms of agricultural production and adaptation of the agricultural complex to market conditions, expansion of internal market and strengthening of export capacity of the agricultural complex.

The project «Development of organic agricultural production»

Goal of the project: to provide communities with legal, logistic and institutional support in organic farming, labeling and distribution of organic products in Ukraine and abroad.

Measures to be taken: to create a network of organic farmers; to establish cooperation with local self-government bodies within the program of organic farming in the Danube Region; to create centers of organic farming to provide farmers with technical, legal and logistic help; to popularize organic farming to form demand for organic products; to provide farmers with information about new markets, agro technical methods etc; to create the network of wholesale markets of agricultural products; to exchange experience among Ukrainian farmers and farmers from the EU; to provide information on financial support, tax and other privileges for organic farming; to hold awareness raising events for farmers.

Project partners: public authorities, farmers, the public, investors etc.

4.4. Education development

Because of multinational nature of the population of the Danube-adjacent region it is important to satisfy national needs of every ethnic group.

The analysis of educational conditions in the region envisages that recommendations can be given in the following spheres:

- material supply for educational institutions. The recommendations for this sphere may include infrastructure development in the sphere of education, construction of new schools, establishment of institutions for out-of-school activities, establishment of youth organizations, branches of Odessa and other higher education institutions, multinational schools.
- monitoring of specialities needed in the region;

- organization of educational process. Better conditions for foreign languages learning will contribute to increase in educational and cultural level of the population, especially in view of perspectives of European integrations.

5. Ensuring life safety of population of the Danube Region

5.1. Satisfying energy needs. Renewable energy development

The issue of energy needs of the Danube-adjacent region is a serious one in view of the fact that the region does not possess its own energy-generating capacities.

The ways of solving energy problems may include installation of wind energy plants, local plants for processing biomass to produce biogas and wider usage of helio-plants. The Danube-adjacent region is characterized by high level of potential for bioenergy (agricultural waste, biomass of holms, etc).

In Zakarpattia region there is some potential of using traditional energy sources (oil, gas, coal etc). The second important source of energy is geothermal energy. This resource is independent of climate conditions and there is world experience in using this resource. Helioenergy also has the perspective of developing in Zakarpattia. The conditions of using solar energy are especially favourable in the lowlands. The duration of sunshine in Zakarpattia is on average 2025 hours per year which is almost half of possible maximum 4450 hours per year.

Wind energy in Zakarpattia has the perspective for development, especially in areas on the mountains Hymba, Yavornyk, Menchul and others with average wind speed 5–7.5 m/s and lowlands (Uzhhorod, Berehovo etc.) where the wind speed is 4 m/s.

Bioenergy is not developed in the region except plant fuel.

The project of developing renewable energy.

The goal of the project: to create conditions for sustainability and transfer to renewable sources of energy and energy saving.

Measures:

- to develop infrastructure of renewable energy in the Ukrainian part of the Danube Region (to construct thermal energy plants etc.);

- to involve investments into big renewable energy industry in the region;
- to realize pilot projects of using solar and wind energy.

Partners: the Ministry of Fuel and Energy of Ukraine, regional state administration, business structures, foreign investors.

5.2. Population health and drinking water

The Ukrainian Danube-adjacent region faces problems with supplying the population with drinking water. This is due to the location of the region in water-deficiency zone of Ukraine and mineralization of underground water, which makes it unsuitable for being used by people.

The project 'Access of population to (especially rural) to drinking water

Goal of the project: to supply the population of the Danube Region with drinking water through installation of central water supply systems and canalization systems.

Measures:

- to assess needs of populated areas for central access to drinking water and water supply system;
- to take tests of water from wells used by local population;
- to provide financial support for planning and constructing water supply systems and canalization systems in the Danube Region;
- to construct sewage systems to purify sewage waters;
- to revegetate of polluted lands.

Project partners: local self-governance bodies, local public authorities, local population, banks.

5.3. Anti floods activities

The territory of the Danube-adjacent region belongs to territories threatened by floods.

Recently despite intensified flood preventing efforts there has been the tendency of increased damage as a result of floods. There are a number of factors influencing the tendency, among them damage of flood preventing constructions, improper maintenance of these constructions due to lack of budget financing, lack of coordination of anti flood efforts etc.

One of the main elements of modern system of flood prevention is risk management which means timely forecast, pointing out affecting factors, realization of preventive measures. Thus, lower flood risk envisages three stages – forecast and warning, reaction, liquidation of consequences.

The main directions of flood preventing projects in the Danube Region of Ukraine are as follows:

on the regional level

- to improve flood preventing service including exploitation of purification facilities;
- creation and development of automated systems of predicting and informing about origins of floods;
- to improve coordination among subjects of water supply complex in the process of realizing anti-flood actions;
- to restore natural capacity of ecosystem to accumulate flood waters through restoration of wetlands, forests and lawns and creation of polder;
- to modernize the equipment of the organizations realizing anti-flood measures and to create mobile divisions for neutralization of adverse impact of water;
- to improve special planning on the territories threatened by floods and to raise public awareness as for effective actions to be taken in case of flood threat.

on transboundary level and basin level:

- to develop and implement transboundary management plans for the flood risk for sub-basins of the Tysa, Prut, Siret Rivers and the Danube delta;
- to create and develop the transboundary system of emergency warning including flood warning;
- to exchange information on potentially dangerous objects in flood threatened territories;
- to create the system of joint reaction to emergencies.

5.4. Solving the problem of municipal and industrial waste

Lack of unified system of municipal and industrial waste management in cities and basins of border rivers in the Ukrainian part of the Danube Region has an adverse impact on environment, human health, investments, competitiveness and technogenic and environmental safety in the Carpathian-Danube Region. Therefore, projects in this sphere should be aimed at decreasing

the amount of municipal and industrial waste, energy and resources loss in production and introducing new recycling technologies.

Project «Transboundary cooperation on waste management in the context of integrated prevention of and control over contamination in the Danube Region».

Project goal: to improve the strategy of waste management in the Ukrainian part of the Danube Region, to prevent contamination of water, soil, adverse impact on biodiversity, to improve methods of waste management.

Measures within the project: to establish informational and expert agencies to deal with waste inventory and to determine best available technologies of waste management; to form pilot transboundary network of enterprises and institutions for separate collecting and sorting municipal and industrial waste; to set landfills for household waste; to introduce waste sorting in all residential areas; to improve conditions of transporting solid and liquid waste; to purchase equipment to collect plastic waste on water; to build waste treatment plants; to trace, collect and utilize hazardous waste; to initiate structural changes of environmental monitoring by authorized bodies for waste control.

Project partners: local self-governance bodies, local communities, business structures, NGOs.

5.5. Promotion of small and medium business

In order to promote development of small business it is proposed to introduce the Small grants program to support environment-friendly production. The goal of the project is to support business initiatives having no or minimal adverse impact on environment, introducing environment-friendly technologies. The project envisages provision of low-interest loans to local entrepreneurs, monitoring of execution of business projects, trainings for entrepreneurs, exchange of successful experience and ideas.

Project partners: local self-governance bodies, the EC, local communities, national and international donors, the government of Ukraine.

6. Institutional and financial opportunities for realization of the Danube Strategy in the Ukrainian part of the Danube Region

6.1. Transboundary cooperation

In Ukraine transboundary cooperation is perceived both as a tool of border territories development and the factor promoting European integration of these territories. The transboundary cooperation is realized within three European regions: the Carpathian region, the Upper Prut, the Lower Danube.

The Ukrainian part of the Danube region is divided within the European regions in the following way:

- Zakarpattia, Ivano-Frankivsk, Chernivtsi regions belong to the Carpathian European region;
- Chernivtsi and Ivano-Frankivsk regions belong to the Upper Prut;
- Odessa region belongs to the Lower Danube region.

Joint mechanisms of promoting transboundary cooperation within the above mentioned European regions should be considered to be potential tools of realizing the EU Strategy for the Danube Region.

6.2. The Upper Prut European Region

The following priority spheres are defined in the statutory documents of the Upper Prut Region:

- development of transport and communication infrastructure through trans-European corridors and local communications;
- development of energy infrastructure;
- improvement of water supply and waste water treatment management;
- development of wood processing and agriculture industries;
- development of transboundary trade on local level;
- development of modern types of transboundary tourism;
- health protection and recreational activities;
- development of cooperation in education, science and culture.

The mechanisms to be used to ensure project realization in the above mentioned spheres are as follows:

- to ensure sustainable development of the territories through rational resource use, application of modern tools of technogenic and environmental safety and establishment of a regional center of pure production;
- to establish cooperation of bodies dealing with standardization, metrology and consumer protection in industrial and trade spheres;
- simplification of the system of transboundary taxation and control;
- development of proposals for harmonization of national legislation with EU Directives in the above mentioned spheres;
- development of transboundary cooperation among political parties and political organizations;
- development of transboundary media interaction.

6.3. The Lower Danube European Region

The following issues are supposed to be considered within transboundary cooperation in the Lower Danube Region:

In the sphere of environmental protection and preservation of biodiversity:

- increasing the number of protected areas;
- creation of a joint system of environmental monitoring to ensure sustainable management and use of environment;
- development of trilateral management plans for sub-basins in the Danube delta and Prut–Siret region;

In the sphere of water management including flood risk management:

- creation of a joint system of hydro-chemical monitoring of water quality;
- assessment of quantity and quality of underground waters;
- creation of a joint system of informing about natural emergencies (floods).

In the sphere of preventing technogenic emergencies and minimization of their impact:

- creation of a joint system of monitoring the impact of potential dangerous object on the environment and informing about technogenic emergencies that may have transboundary impact on the environment and human health;

- utilization of hazardous chemicals;
- modernization and construction of modern water treatment stations.

In the sphere of transport and transboundary movement of people:

- launching a regular bus connection among key settlements of Ukraine (Izmail/Reni), Moldova (Kahul) and Romania (Gallaz);
- launching ferry connection Izmail/Tulcha and Orlovka–Isakcha or/and Reni–Gallaz.

In the sphere of tourism:

- creation of an integrated tourist product in the region of Danube delta (including development of joint tourist routes, their promotion, and development of tourist infrastructure);
- solving the problem of visa regime to promote transboundary tourism.

In the sphere of science, education and preservation of cultural heritage:

- promotion of faculty and student exchange among higher educational institutions of the Lower Danube Region;
- joint research and joint publications;
- holding joint ethnic and cultural events in order to form joint cultural space.

6.4. European neighborhood policy and available instruments that can be used for realization of the EU Strategy for the Danube Region. EU programs providing technical assistance to Ukraine that can be used for realization of the projects within the Strategy are as follows:

ENPI – transboundary cooperation

- the program of transboundary cooperation Hungary–Slovakia–Romania–Ukraine 2007–2013
- joint operational program Romania–Ukraine–Moldova 2007–2013
- joint operational program Black Sea 2007–2013

ENPI – interregional cooperation

- reform promotion: TAEIX – technical assistance and information exchange, SIGMA – support for improvement in governance and management

- higher education (TEMPUS; Erasmus Mundus External Cooperation Window);
- promotion of interregional dialogue: CIUDAD – cooperation in urban development;
- investments promotion: Neighborhood Investment Facility (NIF).

ENPI – East Region:

- INOGATE programme – cooperation in energy sphere;
- TRACECA programme – transport corridor Europe–Caucasus-Asia
- EUBAM – EC mission for boundary help for Moldova and Ukraine

Thematic instruments and programmes:

- European Instrument for Democracy and Human Rights (EIDHR);
- Instrument for Nuclear Safety Cooperation (INSC);
- Development Cooperation Instrument (DCI) – environment and sustainable development of natural resources;

- Development Cooperation Instrument (DCI) – Nongovernmental sector and local authorities in development;
- Development Cooperation Instrument (DCI) – food safety;
- Development Cooperation Instrument (DCI) – migration and shelter;
- Development Cooperation Instrument (DCI) – investing in people.

East Partnership

Taking into consideration that majority of proposed projects are capital-intensive, there should be developed governmental programs of involving state and private investments.

7. Challenges and opportunities for the Ukrainian part of the Danube region

Conslusions