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Environmental Protection of International River Basins

**Preparation and development of the draft of new legislative
act, based on the IWRM principles and in accordance with
the requirements of the WFD**



**Analyses and recommendations in national
water legislation and institutional sphere**

Prepared by

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LIST OF ABBREVIATIONS

RBMP – River basin management plan

EPIRB - Environmental Protection of International River Basins

WFD - Water Framework Directive 2000/60/EC

IWRM – Integrated Water Resources Management

MENR – Ministry for Ecology and Natural resources

BUWR – River basin management authority

INTRODUCTION

The EPIRB project targets the improvement of water quality in the trans-boundary river basins of the wider Black Sea region and Belarus. It supports the move towards modern management tools and compliance of the EU Water Framework Directive (WFD) by building capacities learning-by-doing, and through the development and implementation of River Basin Management Plans for selected pilot river basins according to the requirements of WFD.

The present report has been prepared by 'International Dnieper Fund' within the signed contract for Implementation of selected measures from the programme for pilot projects in the scope of EU funded project "Environmental Protection of International River Basins" (EPIRB).

The aim of assignment 'Preparation and development of the draft of new legislative act, based on the IWRM principles and in accordance with the requirements of the WFD' is elaborate the transition from administrative-territorial management model to the management of the basin principle under the EU WFD. This assignment will contribute to the implementation of EPIRB project Activity 2.6 – 'Implementation of selected measures'. Beneficiary: Parliament (Verhovna Rada of Ukraine), Government (Cabinet of Ministers of Ukraine), Ministry of Ecology and Natural Resources of Ukraine, State Water Agency of Ukraine

National governments are developing strategies for the use and protection of water resources in their countries. Although the implementation of these strategies can be effective at different levels, when strategies are implemented at the basin level, it is always possible to find a solution for the "entire basin" and solve the contradiction between the users of the upper and lower flow (for the river) or between the regions (for lakes or reserves of groundwater). The basin approach allows estimating the action on the system level. In other words, national policies, intergovernmental agreements and regional conventions on transboundary waters are applied to the existing natural basins. Thus, interrelations between the administration of water resources within the same country and the management of water resources of basins are becoming more dynamic and sensitive to the changing environmental, social or economic conditions.

The signing of the political part of Association Agreement between Ukraine and EU on 21 of March 2014 and economical part on 27 of June made step forward implementation of the results of 10 years work of Ukraine on harmonization / approximation of environmental legislation to the EU legislation, including EU water legislation, particularly the EU WFD. It develops a good political momentum to support the efforts of SWA, the MENR and the Ecology Committee of the Verkhovna Rada to incorporate the Basin management principles into Ukrainian legislation. During the last 3 years there were three attempts of SWA and MENR to made amendments to the Water Code of 1995 edition. Due to the administrative reforms and political instability they were not adopted yet.

1. Review of the current legislation of Ukraine and institutional sphere that are a legal basis for the transition to the basin water resources management and recommendations for the development of relevant legal documents

Conference on Water and the Environment (Dublin) and United Nations Conference on Environment and Development (Rio de Janeiro) that were held in 1992 gave the outlines of an integrated approach to the water resources management for achieving the sustainable development goals. There were outlined basic principles of the Integrated Water Resources Management (IWRM) framework. The basic principles of IWRM that were proclaimed in Dublin and Rio de Janeiro in 1992 and developed in these forums were:

- 1) the principle of recognition of the freshwater as the exhaustible and vulnerable resource that is essential for sustaining life, development and the environment;
- 2) integrated approach to development and water management, with the participation of users, workers of planning organizations and persons who make policy decisions at all levels;
- 3) gender principle: the recognition that women play the central role in the provision, management and protection of water resources;
- 4) the recognition of water as the economic as well as social goods.

These principles, having got the support of the international community, were concretized in the decisions of conferences in Harare and Paris, as well as of meeting "Rio + 5" of the UN Commission on Sustainable Development which took place in 1998. During the World Summit in Johannesburg in August 2002, it was recognized that the environmentally safe water use is possible with the introduction of IWRM principles. In the final document "Shaping the future we want" of UN Conference on Sustainable Development "Rio + 20" in 2012 the duty of the international community to considerably increase the effectiveness of Integrated Water Resources Management at all levels was emphasized. Regarding the necessity in Integrated Water Resources Management of international watercourses the so-called "Water Convention", Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Ukraine joined it in 1999), was adopted in 1992 under the UNECE. It contains rules which fixed items of IWRM.

The Integrated Water Resources Management is a process that "favours the coordinated development and management of the water, land and other related natural resources. It is aimed on maximisation of economic achievements and social welfare that based on the justice and without the compromises regarding to sustainability of vitally important ecosystems". On the river basin, lake or groundwater levels IWRM can be defined as a process that provides the coordinated management of the water, land and other natural resources within the basin. The goal of it is the optimisation and fair distribution of the socio-economic goods without the compromises regarding to the long-term welfare of vitally important ecosystems.

The IWRM approach at the national level has no conflict with the IWRM approach at the basin level and they complement each other in fact. The comprehensive national framework for IWRM is essential for managing the basin that is located within national borders as well as for managing the transboundary basin.

The task of the integration of land use and water management within the basin is rather difficult. This is because the land resources management is not usually associated with the water policy. It is referred to the various administrative departments and includes the preparation of land cadastre, forestry, industry, agriculture and environment protection. Currently countries are implementing the integrated approach to the water resources management at the national and basin levels, considering the multifactorial type of the water resources management. This process

requires the optimization of institutional structures as well as improvement of working practice.

The Integrated Water Resources Management helps in steady and balanced controlling and development of water resources, taking into account the social, economic and environmental interests. It deals with the different and sometimes competing groups and sectors of the economy, which use and may pollute the water, as well as with the requirements for environmental protection. The integrated approach helps to coordinate the water resources management in various economic sectors and by interest groups on the different scales (from local to international level). It requires the necessary development of national policy and legislative framework, the introduction of improved management and effective institutional and regulatory structures that are indispensable for fair and more stable solutions. This process could be supported by the set of instruments, such as social and environmental assessment, economic indicators and monitoring systems.

The current guiding document in the field of protection of water and water resources in Europe, the EU Water Framework Directive 2000/60/EC, has consolidated the integrated basin model of water resources management as one of the basic principles of EU policy in the relevant field. The Directive compels EU Member States to achieve the "good" condition of all water bodies, considering the quantitative and qualitative indicators, before 2015. According to this document it shall be reached with the help of the development and implementation of all river basin management plans and the establishment of administrative units and competent control authorities.

In general the EU Water Framework Directive contains most of elements from IWRM. Among them are the principles of complexity protection of all waters – rivers, lakes, coastal waters and groundwater; the basin principle of water resources management; the principle of wide participation of citizens, interested parties, non-governmental organizations; the principle of consecutive improvement of legislation. Transition from the administrative-territorial to the basin water management system, which defines the basin of water body as the main administrative unit, will favour the maximally effective governance in the field of use, protection and restoration of water resources. This is stipulated by the Law of Ukraine "On Fundamentals of the State Environmental Policy until 2020". It states that "the system of government in the field of water protection needs an immediate reform in the direction of transition to the Integrated Water Resources Management". Also in accordance with this Act and with the Action Plan on the Approximation of Ukrainian legislation to the EU legislation it is necessary to develop draft law aimed at the introduction of the principle of Integrated Water Resources Management.

Scientifically based management of the water resources, regime of water course and water consumption with the purpose of rational and complex use of these resources on a certain territory is possible when implementing the basin principle of water resources management as it is provided by the Law of Ukraine. According to this principle the administrative institution within the catchment area of the basin will perform the functions of planning, coordination and control, providing the integrated and sustainable management of river waters of the basin at the regional, national and international level. The basin principle of the water resources management implies transboundary cooperation in the use, protection and restoration of water resources in the transboundary waters.

The improvement of transboundary monitoring demands the coordination of administrative decisions in the field of water management with other countries that have common transboundary watercourses, the spreading and sharing of environmental and water management information, the development of common measure for assessing the ecological state of river

basins, the practicing in joint actions for elimination of the effects of environmental emergencies, accidents and disasters. The basin system of water resources management will favour the harmonisation of water legislation of Ukraine with the EU legislation and the implementation of international conventions and agreements to which Ukraine has acceded. The implementation of Integrated Water Resources Management is one of the priorities in this field. Thus it is necessary to consider the social factors and needs of industries, to provide educational and informational activities aimed at the protection and rational use of water sources, to participate in the international activities for the conservation and restoration of water resources.

Within the Integrated Water Resources Management in Ukraine it is expected:

- establishment of the basin authorities for water resources management that are responsible for the restoration of water resources and the implementation of river basin management plan according to requirements of the EU WFD;
- development of the legislative acts that provide their development;
- development and implementation of the economic mechanisms for regulation of use and restoration of water resources and ecosystems;
- development of the target-oriented programs for reconstruction and development of water management and financing of this sphere;
- access to information, public participation in the discussion of problems and joint decision-making.

Due to the impossibility of quick solution of the water and environmental problems, public policy should be based on the principles of defining objectives that will be the targets for the entire water and environmental activities. National priorities of the environmental protection and rational use of the natural resources includes:

- guaranteed environmental safety of the nuclear facilities and protection of people and environment from radiation, prevention of the harmful effects of the Chernobyl nuclear disaster;
- improvement of the ecological state of the Dnipro river basin and quality of potable water;
- stabilisation and improvement of ecological state in the cities and industrial centres of the Donetsk-Dnieper region;
- prevention of pollution of the Black and Azov Seas and improvement of their ecological state;
- structural reorganisation of the resource-consuming production capabilities of the economy, ecologisation of the industrial, energetic, building, agricultural and transport technologies.

Drafting the legal act for implementing integrated approaches to the water resources management on the basin principle will improve the efficiency of state regulatory policy by transition from the administrative-territorial to the basin system of state water resources management.

1.1. Analyses of national water legislation due to the IWRM principles

According to Article 50 of the Constitution of Ukraine every citizen has the right to a safe and healthy environment and to compensation for the harm caused by the violation of this law. Everyone has the guaranteed right to free access to the information about the environmental conditions, quality of food and consumer goods, as well as the right to dissemination of such information. No one can classify it as a secret. According to Article 16 the duty of state is ensuring the environmental safety, maintaining the ecological balance in Ukraine, managing the consequences of Chornobyl disaster (the catastrophe of global scale), genetic conservation of the Ukrainian people. As the only legislative body of Ukraine the Parliament (the Verkhovna Rada of Ukraine (Art. 75)) has the power to make laws, including the acts in the field of environmental safety and natural resources (Art. 92), and to approve the national programs of environmental protection (Art. 85).

The laws of Ukraine exclusively determine the rights and freedoms of person and citizen, the guarantees of these rights and freedoms; the main duties of citizen; the principles of use of natural resources, exclusive maritime zone, continental shelf, the outer space exploration; the organization and operation of the power systems, transport, communication service; the bases of environmental safety (Art.92).

Historically the regulation of water relations in Ukraine on the legislative level is provided only by one legal act – the Water Code of Ukraine. Before Ukraine got the independence its main provisions had completely coincided with those that had been enshrined in the Fundamentals of Water Legislation of the USSR and the Union Republics that came into effect on September 1, 1971. The new Water Code of Ukraine that was putted in force on June 6, 1995 has considerable differences from the previous one. However it still remains the sole regulatory document on the use, protection and restoration of water resources that accords with the rank of state law.

At the same time there is the further increasing the number of subordinate regulatory acts which have been approved by the state executive authorities but in fact they largely perform the legislative functions. They include the rules of surface, sea and ground waters protection; the regulatory requirements for the composition and properties of water in water bodies which are used for the public water supply, cultural and everyday purposes as well as for the needs of fisheries; the standards for the maximum permissible concentrations of harmful substances for those water bodies; the procedure of development and approval of standards for maximum permissible discharge of pollutants and the list of pollutants discharge of which is standardized; the procedure of the state waters monitoring and others.

Along with these most important normative acts there are several dozens of the national (interdepartmental) regulatory documents which have been approved by the same state authorities: the regulations, rules, instructions, methods and requirements, compliance with which is mandatory, as well as the departmental (branch) normative documents. In addition to the specialized normative documents that are directly related to the use, protection and restoration of water resources, there are considerable number of the complex regulatory acts relating these issues indirectly and in which they are considered within the other questions of the environmental management and protection. There is no unified collection of all these documents that regulate water relations in Ukraine as well as the respective extracts from the complex normative acts. Therefore it is difficult to determine their complete structure.

Water legislation of Ukraine should be a legal instrument of environmental policies. At the same time it is far from full satisfaction of the demands of legal regulation of water use and its protection activities without a reliable political basis. The current Water Code of Ukraine is

characterized by a number of drawbacks, internal contradictions and imperfect definition of some key legal concepts. There is insufficient number of the direct acting legal norms and there is no basic procedure for implementing the law and enacting its norms.

The EU Water Framework Directive has introduced absolutely new approach to the water resources management system – the so-called integrated water resources management on the basin principle. It stipulates that the basin of water body is the basic unit of the water resources management in the country. The world practice indicates that such integrated approach helps to maximise the achievement of goals and objectives for the protection and restoration of aquatic ecosystems and sustainable use of water resources.

Article 13 of the Water Code of Ukraine determines that the state management in the field of use and protection of waters is performed on the basin principle basing on the state, target, interstate and regional programs of use, protection and restoration of water resources. The Law of Ukraine on 24.05.2012 № 4836-VI approved the National Target Program on Water Resources Management and Environmental Rehabilitation of Dnipro river basin until 2021. It stipulates a set of measures for the implementation of integrated water resources management on the basin principle.

Nevertheless, today the water resources management in Ukraine is based on the administrative territorial division owing to the imperfection of the legislative and regulatory framework. The transition from the administrative territorial to the basin water resources management needs improvement of legislation foremost imposing the legal norms aimed at the practical implementation of system of the integrated water resources management on the basin principle. Among them is the hydrographical and water management zoning of Ukraine, the definition of key terms, powers of state and local executive authorities etc.

Besides the Water Code of Ukraine requires bringing into compliance with the provisions of the Law of Ukraine on 16.10.2012 № 5456-VI “On amending the certain legislative acts of Ukraine on optimisation of powers of the state executive authorities in the field of environment protection and natural resources, including the local level of executive authorities” through:

clarifying the list of powers within the competence of the Supreme Council of Autonomous Republic of Crimea and regional, Kyiv and Sevastopol city councils in the Articles 8, 8-1 of the Water Code of Ukraine. It will allow the state and local executive authorities and governments to provide functional activity effectively;

amending the Article 48 of the Water Code of Ukraine with the list of activities that do not belong to the special water use.

Transition from the administrative territorial to the basin water resources management system, which defines the water body basin as the main administrative unit, will favour the maximally effective state administration in the field of use, protection and restoration of water resources. This is stipulated by the Law of Ukraine "On fundamentals of the state environmental policy until 2020", which states that "the system of state administration in the field of water protection requires the immediate reforming in the direction of transition to the integrated water resources management". Also, according to the Law of Ukraine "On fundamentals (strategy) of the state environmental policy of Ukraine until 2020" and the Action Plan on the implementation of the State program on approximation of Ukraine's legislation to the EU legislation it is necessary to draft the legal act aimed at the introduction of principle of the integrated water resources management. Proceeding from the above, there is a need for making the mentioned amendments to the Water Code of Ukraine.

1.2. Recommendations in national water legislation and institutional sphere

Currently the Parliament of Ukraine is considering the draft Law of Ukraine "On amendments to the Water Code of Ukraine" (on the implementation of integrated approaches to the basin principle of water resources management). This draft regulatory act is developed according to the requirements of the EU Water Framework Directive and on implementation of the Action Plan on the implementation of the State program on approximation of Ukraine's legislation to the EU legislation. The draft regulatory act is aimed at solving the problems defined in the previous chapter that analysed the regulatory influence in general. The main goals of its adoption is in the establishment of legal norms regarding the system of integrated water resources management on the basin principle through:

- hydrographical and water management zoning of the territory of Ukraine;
- development of the river basin management plan;
- development of the water balances;
- definition of powers of the central and local executive authorities and governments.

The adoption of the Law of Ukraine answers the requirements on defined problem in general as well as the principles of state regulatory policy. The draft law stipulates the introduction of hydrographical and water management zoning of the territory Ukraine for the development of river basin management plans. Also the concept of the River Basin Management Plan is being introduced as the strategic planning document for the implementation of the program of activities that form the basis for integrated, ecological, economically feasible and sustainable water resources management within the river basin for a long period. The draft law introduces the concept of the basin councils, as the advisory bodies within the territory of the river basin, and determines the procedure of their creation. They are being established for resolving the issues on use, protection and restoration of water resources. New articles of the draft law stipulate development of the procedures of hydrographical and water management zoning of the territory Ukraine, development of the river basin management plans and water balances within the river basins, subbasins, water management areas considering the different conditions of water content (Appendix 1).

Leaving the existing regulatory acts of Ukraine without modification will reduce the effectiveness of state administration in the field of use, protection and restoration of water resources in general, as well as keep the incompatibility of legislation in Ukraine with the legislation of European Union. This is not consistent with the commitments of Ukraine provided under the EU-Ukraine Association Agreement.

Water Code of Ukraine dated 1995 just declares the principle that the water resources should be managed on a basin principle but its implementation methodology is still absent. A lot of international projects and national research papers include the developed recommendations and draft normative documents that would allow starting this process in Ukraine. The endorsement of such documents by other ministries had always led to the same result. Ministry of Economy and Ministry of Finance have been demanding the financial explanation of transition to the basin management principle. Legal department of the Parliament of Ukraine has been considering the basin approach as the violation of main principle of the territorial system of Ukraine.

The integrated water resources management implies that all interested water consumers in basin are involved in the water resources management at the basin level. However their participation in the planning process within the river basins is not shown in the Water Code. Only Article 11 mentions the general right of citizens and their associations to participate in activities on the use, protection and restoration of water resources. The aforementioned Law on the National Program on development of water management prescribes the wide public involvement in the process of

discussing, planning and control of water resources without a specified mechanism and powers of such involvement.

The Basic plan of adaptation of environmental Ukraine's legislation to the legislation of European Union (Basic Plan of approximation), that is approved by decree of the Minister of Environment and Natural Resources of Ukraine # 659 on 17.12.2012, stipulates that ensuring the proper implementation of the basin management principle in Ukraine according to the requirements of WFD needs:

- amendments to the Water Code of Ukraine (bringing into compliance of the terminology, appointing the relevant competent authority (-ies) on the river basin management);
- bringing the sections "Surface Water" and "Groundwater" of the State Water Cadastre in compliance with the WFD and ensuring the mutual correspondence between these sections;
- enactment of the Regulations on the basin authorities for water resources management, making these authorities responsible for a number of functions stipulated by the WFD.
- ensuring the proper implementation of the basin principle of administration that requires to:
 - legalise zoning of the territory of Ukraine on the basin principle;
 - identify the units of hydrographical zoning of the territory of country;
 - ensure the formation of institutional sphere for the water resources management on the basin principle;
 - develop and consolidate the assessment criteria of the river basin conditions within the legal framework;
 - develop and approve the Regulations on river basin management plans and the methods of their creation;
 - develop methods of creating the programs of measures under Article 11 of WFD;
 - develop the river basin management plans (also considering the requirements of Article 14 of WFD on informing the public and consultations);
- amendments to the related regulations aimed at the transposition of the WFD and caused by the adoption of new legislation.

2. Review of the existing institutional structure of water management at all levels with the aim of delivering river basin management and IWRM

2.1. Review of the existing institutional structure of water management at all levels

The Cabinet of Ministers of Ukraine is the supreme authority in the system of state executive bodies (Article 113). Among other things the Cabinet of Ministers of Ukraine ensures the implementation of policy on environmental protection, ecological safety and nature management (Article 116).

Ministry of Ecology and Natural Resources of Ukraine is the main authority in the system of central executive bodies in the formation and realization of state policy in the field of environmental protection, ecological and (within its competence) biological, genetic and radiation safety. It solves issues on the management of waste, pesticides and agrochemicals.

Ministry controls the rational use, restoration and protection of natural resources (mineral resources, surface and ground waters, internal sea waters and territorial sea, air, forests, wild animals (including aquatic living resources, game and non-game animals), flora; the natural resources of territorial waters, continental shelf, exclusive (marine) economic zone of Ukraine. Also it cares about the restoration and protection of land; the restoration and sustainable use of biological and landscape diversity; the development, conservation and use of ecological network; the organization, protection and use of nature reserve fund; the preservation of the ozone layer; the regulation of negative anthropogenic effect on the climate change and adaptation to its changes; the execution within the competence of the UN Framework Convention on Climate Change and its Kyoto Protocol. In addition the Ministry of Ecology and Natural Resources of Ukraine carries out the development of water management and land reclamation, geological survey and rational use of mineral resources, as well as the state supervision (control) over compliance with the requirements of legislation on the environmental protection, rational use, restoration and protection of natural resources.

The main tasks of the Ministry of Environment of Ukraine are:

1) forming of the state policy in the following fields:

- the environmental protection, ecological and (within its competence) biological, genetic and radiation safety; the management of waste, pesticides and agrochemicals; the rational use, restoration and protection of natural resources; the restoration and protection of land; the restoration and sustainable use of biological and landscape diversity; the development, conservation and use of ecological network; the organization, protection and use of nature reserve fund; the preservation of the ozone layer; the regulation of negative anthropogenic effect on the climate change and adaptation to its changes; the execution within the competence of the UN Framework Convention on Climate Change and its Kyoto Protocol; the development of water management and land reclamation, geological survey and rational use of mineral resources;
- the state supervision (control) over compliance with the requirements of legislation on the environmental protection, rational use, restoration and protection of natural resources; the restoration and protection of land; ecological and (within its competence) radiation safety; protection and use of territories and objects of the nature reserve fund; the preservation, restoration and inexhaustible use of biological and landscape diversity; the development, conservation and use of ecological network; issues on the management of waste (except the management of radioactive waste), toxic chemicals, pesticides and agrochemicals; the compliance with the requirements of biological and genetic safety on biological objects of the environment while creating, studying and practical use of genetically modified organisms (GMOs) in an open system; the providing of state geological control;

2) realization of state policy in the field of environmental protection, ecological and (within its competence) biological and genetic safety; the management of waste (except the management of radioactive waste), toxic chemicals, pesticides and agrochemicals; the rational use, restoration and protection of natural resources; the restoration and protection of land; the preservation, restoration and inexhaustible use of biological and landscape diversity; the development, conservation and use of ecological network; the organization, protection and use of nature reserve fund; the protection of the atmosphere; the preservation of the ozone layer; the regulation of negative anthropogenic effect on the climate change and adaption to its changes; the execution within the competence of the UN Framework Convention on Climate Change and its Kyoto Protocol; the geological survey and rational use of mineral resources within the competence of state policy.

The Ministry of Environment of Ukraine according to the tasks assigned to it:

- in the field of protection and restoration of surface, sea and ground waters, rational use of water resources:
 - a) provides normative and legal regulation on:
 - rules, regulations, norms for the protection and restoration of surface, sea and ground waters, rational use of water resources and analysis of water use;
 - limits of the withdrawal and use of water and limits of the pollutants discharge into water bodies;
 - granting the permissions in this field;
 - orders on the development and approval of standards for the maximum permissible discharge (MPD) of pollutants into water bodies;
 - methods and methodology on setting the technological standards in this field;
 - terms of water discharge into the water bodies and groundwater aquifers;
 - criteria for extremely high level of the water pollution;
 - b) grants, cancels, reissues and gives duplicates of permissions for the work on lands occupied by seas;
 - c) keeps a list of enterprises, institutions and organizations that draft the standards for maximum permissible discharges of pollutants into the water bodies.
- in the field of water management and land reclamation provides the normative and legal regulation of issues related to:
 - rules, regulations, standards in the field of water management and land reclamation, analysis of their implementation;
 - organization and monitoring of work on the irrigated and drained lands;
 - maintaining the "Water use" section of the state water cadastre;
 - list of the water bodies of local importance;
 - temporary closedown of the melioration systems and separate objects of engineering infrastructure;
 - carrying out the regular preventive maintenance of melioration systems and facilities;
 - granting the permissions in this field.
- in the field of organization, protection and use of nature reserve fund:
 - a) provides the normative and legal regulation of issues related to:
 - special use of natural resources within the territories and objects of nature reserve fund;
 - maintenance of state cadastre of territories and objects of nature reserve fund;
 - installation and compliance with the regime of protective zone in the areas of nature reserve fund and its objects;
 - activities of state protection service of nature reserve fund;
 - scientific, recreational, environmentally educational activities of nature and biosphere reserves and national natural parks;

- economic justification of development of nature reserve fund as well as the economic assessment of natural complexes and objects that are part of them;
- maintaining the passport of wetland of international importance;
- b) grants, cancels, reissues and gives duplicates of permissions for activities aimed at protecting the natural systems, accident and natural disaster management and for other purposes that are not provided by the project of nature and biosphere reserves and national natural parks;
- c) sets limits on the use of natural resources within the territories and objects of nature reserve fund;
- d) maintains the state cadastre of territories and objects of nature reserve fund;
- e) participates in realization of scientific and technical policy in the field of organization, protection and use of nature reserve fund, namely: the generalisation of scientific researches in nature and biosphere reserves and national parks; the approval of preparation plan and program of Chronicles of Nature; carrying out the scientific researches in areas and sites of nature reserve fund; the approval of plans and programs of scientific and research works.
- f) provides:
 - protection and use of areas and objects of nature reserve fund that is carried out by the state protection service of nature reserve fund;
 - formation, preservation and use of national ecological network;
 - preparation and submission of proposals for the creation of new territories and objects of nature reserve fund as well as expansion, changing the boundaries and category, cancellation of the status of existing territories and objects of nature reserve fund;
- g) approves the provisions on areas and objects of nature reserve fund and the provisions on territories and objects that have special ecological, scientific, aesthetic, economic, historical and cultural value;
- h) approves the projects of area of nature and biosphere reserves, national natural parks, the projects of maintenance and renovation of parks that are the sights of landscape architecture;
- i) approves the projects of area of dendrological, zoological parks and botanical gardens of national importance, the projects of maintenance and renovation of parks that are the sights of landscape architecture and do not belong to the jurisdiction of the Ministry of Environment of Ukraine;
- j) approves provisions on ecological funds of nature and biosphere reserves, national natural parks, botanical gardens, dendrological and zoological parks, regional landscape parks;
- k) approves the appointment of heads of special administrations of nature and biosphere reserves, national natural parks, botanical gardens, dendrological and zoological parks of national importance as well as regional landscape parks;
- l) elaborates the projects on creation, announcement, changes of boundaries and category, cancellation of the status of territories and objects of nature reserve fund; projects of reservation of valuable natural areas and facilities; projects of setting the protective zones for natural complexes and objects of areas of nature reserve fund;
- m) organizes the installation of boundaries of territories and objects of nature reserve fund in a state of nature (on site);
- n) issues the preservation orders to enterprises, institutions, organizations and citizens concerning the territories and objects of nature reserve fund or their parts that are created or announced without the land transfer.
- in the field of control over compliance with the environmental legislation provides the normative and legal regulation of issues related to:
 - organization and carrying out of inspections of business entities, local governments and local executive authorities on compliance with the environmental legislation and legislation on ecological safety;
 - official registration of administrative offences;

- tag-out and sealing the enterprises, their separate workshops (sectors) and units of equipment in the case of limitation or temporary suspension of enterprises and facilities;
- assessment of compensation and payment of claims in favour of state owing to the violation of environmental legislation and legislation on ecological safety;
- calculating the mass of emissions and pollutants discharge into the environment;
- technical operation of gas treatment units;
- inspection of environmental performance of petroleum products that are sold through the wholesale and retail trade;
- interaction between the State Environmental Inspectorate of Ukraine and other bodies of state control;
- state control over the compliance with the rules of forest use, hunting organisation and operating modes of fisheries;
- relocation (transportation), export (re-export), import, withdrawal, acquisition of ownership, use, lease of wild animals and trading them including those that are listed in the Red Book and are protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- state control over the special, sport and amateur use, keeping, destruction of fish and other aquatic living resources;
- making the rules and procedure of sampling, detection and measurement of the composition and characteristics indicators of objects, that used for the control of water, soil, emissions and waste;
- carrying out the ecological and radiological control of vehicles and freights including the goods (articles) of humanitarian aid at the border inspection posts and on the customs territory of Ukraine;
- determining the list of goods that are subject to the ecological and radiological control at the border inspection posts and on the customs territory of Ukraine.
- organises monitoring of the environment, provides functioning of informational and analytical environmental monitoring system;
- determines ecological indexes for assessing the state of environment and methodological instructions on their use;
- approves the terms and procedure of formation and operation of information systems in the state system of environmental monitoring;
- determines the registers of components of environmental monitoring network;
- sets the methods of environmental monitoring, including the monitoring by business entities whose activities lead or may lead to the deterioration of environment;
- organises, coordinates and oversees the environmental impact assessment, including its transboundary context;
- develops strategic, program-planning documents in this field and provides their implementation;
- participates in the realisation of measures on adaptation of Ukraine's legislation to the legislation of European Union;
- provides international cooperation within its competence, research, generalisation and dissemination of international experience, organisation of Ukraine's compliance with obligations under international agreements on the issues within its competence;
- organises work on efforts to attract the international financial and technical assistance, grants and other international programs in the defined area;
- participates within its competence in planning and implementing the measures on preventing the anthropogenic and natural disasters and responding to them;
- cooperates with the civic institutions, provides public participation in the formation and implementation of state policy in the respective field;

- provides public information on the formation and implementation of state policy in the respective field;
- sets the order of providing information about the state of environment and the order of organization and carrying out the public hearings or open sessions on the issues of impact of planned activities on the environment;

Minister of Environment and Natural Resources of Ukraine directs and coordinates the activities of the State Geological and Mineral Resources Survey, the State Water Resources Agency of Ukraine, the State Environmental Investment Agency of Ukraine, the State Environmental Inspectorate of Ukraine.

The State Water Resources Agency of Ukraine is the central executive body that is directed by the Cabinet of Ministers of Ukraine through the Minister of Environment and Natural Resources of Ukraine. It is part of the system of executive authorities and it implements state policy in the field of water management and land reclamation, management, use and restoration of surface water resources. The main tasks of State Water Resources Agency of Ukraine are:

- making proposals on the formation of state policy in the field of water management and land reclamation, management, use and restoration of surface water resources;
- implementation of state policy in the field of management, use and restoration of surface water resources, the development of water management, land reclamation and operation of state multi-purpose hydraulic structures, interfarm irrigation and drainage systems.

Other most important institutions in Ukraine that are related to water resources are the Ministry of Agrarian Policy and Food of Ukraine, Ministry of Economic Development and Trade, Ministry of Infrastructure, State Emergency Service of Ministry of Defence. In turn the State Emergency Service includes the Ukrainian Hydrometeorological Center as well as the State Agency for Land Resources, State Agency for Fishery, State Agency for Forest Resources, State Agency of Ukraine on the Exclusion Zone Management (Chornobyl), State Geological and Mineral Resources Survey of Ukraine.

Ukraine has begun the process of reforming the management of water resources, using the experience and directives of EU, including the Water Framework Directive. However, the Soviet tradition should be taken into account. According to it the water policy was focused mainly on the use of water resources and the hydraulic infrastructure instead of protection and restoration. Therefore Ukraine has made steps to transfer from the Soviet resource-oriented management style to the system that considers the river basin as the unit for (possibly integrated) water resources management and planning, but without taking into account the existing institutional system.

During the recent years the Basin Water Management Administrations (BWMA) were created in Ukraine's major rivers basins but none of them deals with the planning of river basin management as such. These BWMA are subordinated to the State Water Resources Agency of Ukraine, so their activity is come down to the sphere of water use and development of water infrastructure and water resources (their quantity and quality), as well as monitoring the withdrawal and discharge of water. Moreover BWMA are often involved not only in the water resources management of its river basin but also in managing the parts of the adjacent rivers (as a rule their tributaries and upper reaches). The efforts to reorganize them into the river basin management authorities to implement planning in accordance with the requirements of the Water Framework Directive are being continued.

The Basin Water Management Administration (BWMA) is a budget nonprofit organization that is subordinated to the State Water Resources Agency of Ukraine. According to legislation the

BWMA within its powers provides at the river basin area the implementation of state policy in the field of management, use, protection and restoration of water resources, water management development, operation of water bodies and hydraulic structures. Also it solves along with the executive authorities and other organisations, institutions and enterprises the issues of providing the population and industries in basin with the water resources, as well as coordinates the activities of organisations that are subordinated to the State Water Resources Agency on those issues within the basin.

The BWMA during the fulfilment of its tasks in the established order interacts with the local governments, local executive authorities, regional bodies of Ministry of Environment, Emergencies Service and other central executive authorities, law-enforcement authorities, water management organizations and enterprises, as well as the institutions that are subordinated to the State Water Resources Agency and situated within the basin, other organizations, enterprises and institutions.

The main tasks of BWMA:

- providing the state water resources management, implementation of state policy in the field of use, preservation and restoration of surface waters in the basin, fulfilment of needs of population and economic sectors for water resources;
- implementation of long-term complex programs on ensuring the reliable operation of the water economy systems, hydraulic structures and separate objects of engineering infrastructure, that are state-owned and are on the books of water management organizations subordinated to the Basin Water Management Administration;
- implementation of activities related to the prevention of water damage effects within the rural areas and agricultural lands, as well as the accident management including flood protection of these areas
- direction and coordination of the activities of organizations, that are subordinated to the State Water Resources Agency and situated in the basin, on the issues of water management, use, protection, restoration of surface waters in basin, fulfilment of needs of population and economic sectors for water resources, as well as functioning the system of state environmental monitoring.

The functions of BWMA:

- submits proposals to the State Water Resources Agency, executive authorities and local governments on the development of national target and regional programs on the issues of water management, use and restoration of surface water resources in the basin, as well as participates in their implementation;
- organises the work of inter-departmental commission on determining the operating modes of reservoirs and water resources management of river basins;
- provides international cooperation on the management, use, protection and restoration of water resources in transboundary water bodies of the basin by order of the State Water Resources Agency, prepares the relevant proposals of the State Water Resources Agency, participates in the meetings of authorised representatives, their deputies and workgroups of the parties;
- approves the petitions of water users with reasoning the need for water when using the surface waters and the water supply standards;
- provides governmental accounting of water use;
- generalizes the information of regional water resources departments, that are situated in a basin, regarding the use of water resources in a basin and gives the results to the State Water Resources Agency;
- prepares the data for the "Water use" section of the state water cadastre;
- provides the monitoring of surface water quality in the control sections in areas of main

multi-purpose water intakes, water economy systems of interindustrial and agricultural water supply;

- generalises and analyses the data of monitoring surface water quality in the basin, participates in making the real-time and long-range forecasts of changes in the ecological state of water bodies, reports on the results to the State Water Resources Agency, executive authorities, local governments and citizens;
- expertises the documentation for construction (reconstruction) of waterworks facilities on the rivers;
- grants permissions for dredging, stringing wires, pipelines and other communications on the lands of water fund on the rivers;
- approves granting the permissions for work on the lands of water fund regarding the construction of hydraulic, hydrometric and linear facilities;
- provides monitoring of state of the river bank transformation and submits proposals for their strengthening to the State Water Resources Agency;
- provides hydrogeological monitoring of lands on the protected areas in the zones of influence of reservoirs and on the irrigated lands;
- provides measures for preventing the emergency situations, reducing the damage effects of floods, ensuring the accident-free flood discharges and ice drifts on the rivers within the limits of competence and along with other executive authorities.

The establishment of Basin Councils is aimed at the support of BWMA activities on the creation of River Basin Management Plans and forming the activity programs in the basins of major rivers. Councils were firstly created within the international projects and then on the initiative of BWMA and State Water Resources Agency. They consist of representatives of state and local authorities, water users, scientists, non-profit and civic organisations. The functioning of these councils is based on agreements between the regions, but there is no legal basis of Basin Councils.

It is stated in the Regulations of the Basin Council that the Council is formed to determine the strategy and develop the River Basin Management Plan (RBMP) and the Long-term target basin program of activities on the water resources development. Also Council provides the conciliation of interests and coordination between the agents of management and use of water resources in the basin. The main goal of the Council is the creation of an effective institutional mechanism for development and implementation of activities on RBMP. Basin Council is guided by the current legislation of Ukraine and international agreements. Council is the permanently functioning consultative and advisory body. Council operates in collaboration with the relevant BWMA, organizations of State Water Resources Agency, environmental, civic, scientific institutions and water users.

The main tasks of the Basin Council are:

1. Promoting the integrated water resources management of the river basin.
2. Reviewing and assessment of quantitative and qualitative state of water resources of basin, reasons and consequences of its changes for the natural ecosystems and economy sectors, forecasting the trends of processes that affect the quality of water resources and volumes of water use.
3. Assessment of social and economic problems and trends of development of water use in the territory of river basin.
4. Determination of trends and strategy for the sustainable water resources management in the basin, assistance in the coordinated activities on improving the environmental state of rivers in the basin.
5. Reviewing the problems and approval of the priority direction of activity for the implementation of immediate measures for improvement of the state of natural and artificial

water bodies, restoration of the surface water quality, preservation of the volumes of water resources in the river basin.

6. Development of strategy for achieving the priority goals and determination of economic mechanisms for ensuring its implementation.
7. Reviewing and harmonization of River Basin Management Plans, assistance in the implementation of national, industry, regional and local environmental programs and projects.
8. Promotion of cooperation between the central and local executive authorities, industrial, scientific and civic institutions, organisations and associations, international organisations and experts in improving the environmental state of the Dnipro basin.
9. Preparing the proposals for attracting funds for budgets of different levels and investors for financing the activities of RBMP.
10. Promotion of development and implementation of effective economic mechanisms for ensuring the implementation of RBMP.
11. Reviewing and harmonization of annual plans and reports of the basin authority on the implementation of RBMP and results of its other activities on the basin management.
12. Coordination on the issues related to the collection, regular exchange and dissemination of environmental and water management information, creation and development of databases in the river basin.
13. Development and implementation of programs and projects on technical assistance for attracting the foreign investment aimed at the Implementation Program for improving the environmental state of the river basin.
14. Participation in the development, reviewing, harmonisation and (after the approval in accordance with established order) implementation of RBMP, as well as of developed on its basis Long-term target basin program of activities. Determination of key (priority) areas of measures for the environmental restoration of river basin and preparation of proposals on a mechanism for their financing.
15. Assistance in development, organization of discussion, harmonization and submission for consideration (in accordance with established order) of projects of international agreements on the protection of river basin from pollution, sustainable use of resources, creation of organization structures, as well as ensuring and coordination of their implementation.
16. Cooperation with relevant international organizations, especially on the development of programs and projects, receiving the technical and financial support for restoration of environmental state of river basin.

The analysis of results of activity of basin councils for all years of their functioning leads to the following conclusions:

- low efficiency of implementing the decisions of basin councils, caused by the absence of legislative consolidation of their functioning;
- absence of mechanism of financial provision of basin councils;
- low motivation of all basin stakeholders in participation in the basin councils;
- prejudice in consideration of issues regarding to the management of operations of Basin Councils, BWMA and State Water Resources Agency.

2.2. Methodological recommendations on the creation of basin organisations

In recent years the growing water shortage and hydrological variability have been causing a number of problems. Basin organisations are facing the high pressure, risks and conflicts when trying to find a balance between the economic development and the preservation of acceptable state of water resources. Basin organisations should implement such management system that will alleviate the effects of negative natural factors, supply the water for industrial purposes (agriculture, industry, power generation, transport, tourism, fisheries etc.), social purposes (improvement of sanitary conditions and domestic use) and environmental protection. Besides that they should establish a system of resolving the conflicts over water resources between the different water users.

Heads of water management basin authorities should also solve the problem of increasing water pollution. It increases owing to the municipal drainage and industrial effluents as the towns and cities grow along rivers and lakes. Progress in agriculture means that farmers use more chemical fertilizers and pesticides that raise the level of water pollution.

Transboundary basins create special problems for managers. Historically the transboundary basins favoured the development of regional cooperation, but as the resources are getting exhausted as well as the consumption increases, the potential for conflicts because of the water deficit also raises.

Development of strategy, planning and management may be considered as series of consecutive steps in the basin management. The first step is the formulation of general policy goals (where we want to be). During the next steps it is necessary to identify the issues that need solution in the water resources management (problem identification), make a list of possible strategies (how we want to get there), evaluate each of them, choose the strategy or their combination, implement the strategy, evaluate the results, explore the gained experience and adjust further plans for their better conformity with the future development. These steps form the "management cycle of learning by doing". It means that you can always adapt water resources management to the changing circumstances, such as political changes, natural disasters and so on.

Determination of the targeted agents of management and of their level is necessary for starting the implementation of integrated approach to planning. It means that it should be clear: how basin management correlates and associates with other management levels (national, regional, district). This issue should be solved to avoid the duplication and confusion in the division of responsibilities among other administrative bodies. It is necessary to determine the legal structure of basin organisation with clearly defined division of tasks and responsibilities, as well as identify the level of its decentralization and other procedural matters.

In France the planning and management of water resources are carried out at three levels: national, basin and subbasin. At national level the Member of Parliament that is appointed by the prime minister heads the National Water Management Committee (NWMC). NWMC consists of representatives of water users, associations, local executive authorities, as well as experts and presidents of basin committees. NWMC consults on the national water policy and gives its conclusion on the draft laws and decrees, reform projects and governmental action plans. The Water Code (dated 2006) expanded the field of activity for NWMC, therefore the additional committees for pricing of water management service, public water supply and sewage, fish farming and water management information systems were created.

Each of six large river basins has specially created Basin Committee (BC) headed by local elective official. BC consists of representatives of local executive authorities (40%), water users and their associations (40%), state (20%). Committee prepares general plan of development and

management of water resources (SDAGE) for the approval by the government. General plan defines the common strategy and goals of water management in the basin. This is primarily a legal structure. Any decision that may affect the state of water resources must be compatible with the general plan. For the first time such schemes were developed after the adoption of the Water Law in 1992. Each of them has been revised to ensure the compliance with the EU Water Framework Directive.

At the local level (tributaries, sub-basin or ground waters) the Local Water Management Committee (LWMC) performs actions included in the general plan and develops plan for the development and management of water resources (SAGE). LWMC consists of representatives of local executive authorities (50%), water users and their associations (25%), state (25%). The Local Water Management Committee may implement plans via the established local civic basin authority or other local group. Inter-municipal organizations also can make researches and work at the level of sub-basin.

The water resources management may become a sensitive political issue. Therefore the basin authority must have a strong "voice" in the national decision-making. It means ensuring the direct connection with ministries and governmental committees related to the management of natural resources. Communication with a higher level of management provides the basin authority with solid position in the planning of economic development. The high support level is a key condition for the creation of juridical base, institutions and management structures that are required for the viable system of basin management.

An integrated approach will not work if the water resources management is built completely on a "top-down" principle and does not provide the participation of users in the management process. IWRM implies that those, who are interested in the decisions or are influenced by the decisions made regarding the water resources, should participate in the basin management while the information will be accessible for all interested in it. Opened information is important in finding the effective solutions. It is difficult to implement the IWRM principles there where are no transparency and accountability and those who are under the influence of economic activity in the basin are excluded from the decision-making or there where is corruption.

Integration should be implemented both vertically (between the different levels of executive power) and horizontally (between the water users and stakeholders). The key element of horizontal integration is the joining of efforts of ministries which are responsible for activities that affect the water resources: Ministries of Finance, Planning, Agriculture, Transport and Energy, as well as those ministries that are responsible for the state of public health and environmental protection. It is impossible to avoid the conflicts of interest in water use in any basin, for example, the water use for domestic purposes, irrigation, environmental protection, power generation and recreation, as well as the problems because of the water pollution and change of runoff regime of rivers.

The bodies that coordinate the ministries, such as the Cabinet of Ministers, are also important for the coordination of activities on the approved plans. However they function well only if ministers have authority and they are supported at the highest level (such as level of president or prime minister). These bodies should be established in order to have clear connection for reporting to the higher responsible governmental officials as well as the basin authorities, local governments and organisations of water users.

Summits and conferences of heads of states may jointly discuss and coordinate water problems in the transboundary basins if problems affect several countries.

The basin water management organizations established on the basis of adopted legislation have

mandate to govern the transboundary waters under international conventions and interstate agreements. Laws and water policy that explain roles, responsibilities and accountability of state and private sector create a platform (water resources management framework) for managing the basin as the part of existing national administrative systems.

Establishment and development of basin organization are the step by step processes, i.e. the search for new or the strengthening of existing structural elements that will help the basin organisation to operate more efficiently are provided simultaneously to the implementation of existing mechanism of water resources management.

The initiatives on creation of new basin organizations or reorganization of existing ones are required after determination if they allow (or not) to use resources (time and instruments) efficiently and to mobilize (if necessary) the political will for creation of new structures or strengthening of the existing ones. There where the framework for water resources management is weak or some elements are missing the following steps should be taken:

- inventory of state of water resources and ecosystems;
- assessment of needs and priority areas for improving the situation;
- inventory of all stakeholders, which is necessary to make the connection with;
- finding the possibilities to share the knowledge, data and information;
- developing the mechanism of coordination of different levels and persons in the decision-making;
- stimulating the dialogue of stakeholders;
- creation of mechanisms for water allocation;
- carrying out the measures on the reduction of pollution and restoration of ecosystems;
- implementation of measures on mitigating the effects of droughts and floods (climate variability);
- development of financial mechanisms for water resources management.

Basin organizations operate in accordance with their individual authorities that are usually determined at the highest level by central government for solving the problems and implementing the government policies. The authorities largely depend on the reasons why the implementation of basin initiatives has begun. They reflect the main problems that are being solved in the basin. It is very important to clearly define the limits of authority (in accordance with the law) and the reporting hierarchy, as well as to clarify who establishes the "rules" for the decision-making and public participation.

The main functions of basin organizations:

Monitoring, research, coordination and regulation:

- *Data collection.* Collection, management and transfer of data on the availability of water resources, water use (including environmental requirements) and quality of water for supporting different basin functions.
- *Monitoring, prevention and control.* Monitoring and control of use and pollution of water resources, mineralization and groundwater pumping that ensure their dynamics within certain limits; control over the implementation of relevant laws and regulations for preventing the degradation and overuse of natural resources, as well as for the restoration of ecosystems.
- *Coordination.* The harmonization of policies and activities by the state and non-governmental organizations for the appropriate management of land and water resources.
- *Conflict resolution.* Providing the mechanisms for negotiation and judicial review.

Planning and financing:

- *Water allocation.* Determination of mechanisms and criteria of allocation of water resources

among the industries (water users), as well as providing the compliance with the environmental requirements.

- *Planning*. Preparation of mid-term and long-term plans for the water resources management in the basin.
- *Resource mobilisation*. Funding, for example, with the help of water charges or water tax.

Development and management:

- *Construction of facilities*. Designing and construction of water management infrastructure.
- *Operation of facilities*. Operation of water management infrastructure.
- *Operation and management*. Providing the normal operation of dams, navigation canals and water-distributing infrastructure, as well as of water treatment works; ensuring the water delivery to the place of its use; providing the coordinated management of surface and ground waters.
- *Water damage effect control*. Flood protection and carrying out the anti-damage measures, planned struggle against droughts/floods and development of protection mechanism.
- *Protection and preservation of ecosystems*. Determination of priorities and implementation of measures for the protection of ecosystems, including campaigns on public awareness raising.

Considering that conditions at the regional and national level are changing, in time the basin organizations will also evolve. Basin organizations need to adapt to changes in policy approaches to the administrative reforms or changes in the relationship between the countries of basin. For example, it may be necessary to reform their management systems and structures, as well as to change their authorities. They should also be able to respond to the occurrence of new problems such as climate change, the necessity to protect ecosystems and other challenges.

There are various types of basin organizations. Basin organizations may be created from the ground up, but an evolutionary path of development in the form of reforming the existing institutions is more probable. It will allow to satisfy local needs and to adapt to the changing reality. The institutional system of basin organizations depends on the local legal systems and the work style of top-managers, so the authority that is called the basin council in one country may vary in forms and functions from the authority that is called the basin council in another country.

The key distinctive features are the following: whether the basin organization is an official governmental body according to the adopted law, temporary official organization but with the limited legal authority, or civic or non-governmental organization without the legal authority. Other distinctive features functions of basin organizations are the following: whether they are the owners of dams, canals, navigable canals, hydropower plants and irrigation facilities, as well as the builders and operators of this water management infrastructure or they are just responsible for its management.

Operational expenditure of basin organizations will depend on their authority and institutional system. It should be considered when making a decision regarding the type of necessary organization structure.

The basin management system, that should be established, requires adequate financing in order to performing its function. Although it seems obvious very often basin organizations are being created without a realistic statement of their tasks that is realistic taking into account the available funding.

Most part of basin organizations has limited financial autonomy and largely depends on funds allocated from the central government budget. These budget allocations vary from year to year when government determines other priorities.

However basin management is a "public good". Therefore, whether or not there is a formal basin organizations, governments still need fund the development and management of water resources. Basin organization should not duplicate, but is obliged to coordinate the activities of other agencies or take on new functions that until now no one had performed. This means that the funds should be allocated under clearly defined functions. Planning and implementation of appropriate financing systems based on the principles of "user pays" and "polluter pays" is one of the six basic principles of the International Network of Basin Organizations and a key element of IWRM.

Ukraine should create an integrated management model that would allow to:

- harmonise actions and unite efforts at all levels of governance;
- effectively use environmental, economic, social, and other information for the basin planning;
- involve in the process of basin management and decision-making to improve the ecological state of the basin the water users, public environmental organizations and local governments;
- delegate the significant part of administrative decisions of the central government to the basin level;
- consolidate and coordinate the efforts at regional, national and state levels;
- encourage the active collaboration with basin organizations of the European Union countries and implement the best world achievements.

It is obligatory to make step by step transition from the centralized sectoral management to the basin management principle within the institutional and functional reorganization of system of state governance on protection and use of water. For this purpose it is necessary to provide these activities:

- at the national level:
 - identification of “river basin area” concept as the main object of basin management of use and protection of waters, determination of river basin areas in Ukraine and establishment of their boundaries;
 - creation and organization of system of state river basin management (river basin area management) on the basic principles: a) the recognition of state executive bodies, water users and community (especially the scientific, technical and environmental) as the equal subjects of management of use and protection of waters; b) the system combination of the powers and functions of central and local (including the basin) bodies of state administration;
- at the international level:
 - integration and development of bilateral and multilateral international cooperation between Ukraine and other countries on the problems of protection and use of waters within the transboundary river basin areas and improvement of its institutional support.

The river basin area as the object of water management is considered as the territory of land and sea that includes the water bodies of one or more adjacent river basins with the linked coastal and ground waters. The hierarchical subcategories of water basins such as the river basin and the section (subbasin) of river basin or river basin area are also used for management purposes.

Determination of boundaries of river basin area (subbasin of river basin area, river basin) as the object of water management should be based on the following principles:

a) division of the territory of Ukraine into categories of river basins based on the hydrographic boundaries of catchment areas and taking into account the administrative territorial structure (administrative and hydrographic boundaries of the river basin);

b) priority of hydrographic zoning to administrative zoning at the national and regional levels and priority of administrative zoning to hydrographic zoning at the level administrative

region. The latter is considered as the primary and indivisible territorial unit in determining the administrative and hydrographic boundaries of river basin or river basin area.

The list and administrative and hydrographic boundaries of river basin areas, as well as of their subbasins and river basins, are established and changed by the Parliament of Ukraine. Procedure for determining the administrative and hydrographic boundaries of river basin area (subbasin, river basin) is established by the Cabinet of Ministers of Ukraine.

The system of state river basin management (as well as management of river basin areas) includes the representative national and basin structures (involving all agents of management of protection and use of waters) and specially authorized central and basin executive bodies as the state executive authorities.

The representative basin authority is established in the form Basin Council composed of a concentered ratio of representatives of central and local state executive bodies, local councils and governments, water users and community. The legal basis for the establishment and activities of Basin Council is the standard statute on the regional cooperation and Basin Council that is approved by the Cabinet of Ministers of Ukraine, agreement between the governing bodies of all aforementioned categories of water management in the river basin area, as well as other normative legal acts.

The basic authority of Basin Council includes: defining the directions and strategies for the water management in river basin area that is balanced by purposes, priorities, instruments and resources; development of strategy for achieving the priority goals and determination of economic and financial mechanisms for ensuring its implementation; consideration and approval of the Scheme of integrated water management in the river basin area and the Long-term target program of integrated development of waters in the river basin area.

The executive basin body (State basin authority) is formed for the implementation of state policy in the field of water management within the river basin area as a separate state executive authority. The State basin authority is created in accordance with the resolution of the Cabinet of Ministers of Ukraine. Its activity is directed (but is not strictly governed) by the specially authorized central executive authority on environmental protection through the implementation of relevant laws and regulations.

The main function of state water management in the river basin area is development and implementation of Plan of water management in the river basin area that is approved and controlled on its implementation by the corresponding Basin Council.

The State basin authority is formed according to the resolution of Cabinet of Ministers of Ukraine. Its creation is coordinated with the regional councils or Kyiv city council in accordance with the prescribed boundaries of river basin area (river basin).

The central executive government body, which is provided with the authority and functions of the national competent body for the implementation of integrated water use and protection management, is determined for the processing and implementation of national water management strategy as well as for providing the methodical guidance and coordination of State basin authorities. Such competent authority may operate in a system of specially authorized central executive body on the environmental protection.

At the same time a representative body at the national level (National Water Commission) is being formed. This commission is aimed at the coordination of Basin Councils, research and solving the common problems and challenges, especially for the harmonisation of projects of national target programs and approval of plans on the interbasin distribution of financial resources.

Reforming the system of management should be done not as a single act, but as a long process of step-by-step, coordinated and fully provided implementation of measures at all levels and in all

branches of the state water use and protection management. In particular, one of the first necessary steps of this process should be:

- setting up the regional (interregional, as well as interdepartmental, intersectoral and with the involvement of the community) cooperation on the collective water management in each river basin area of Ukraine, the establishment of basin councils providing them with authority of the competent coordinative management body.

At the same time, it is necessary to avoid permanent changes of the authority and functions entrusted in the use and protection of water to the specially authorized and other central executive bodies, as well as non-coordination or duplication of their activities.

In the international sphere a priority task of institutional adaptation and development of water management in accordance with the current and future needs and requirements should be ensuring the integration of target areas of organizational forms and methods of management institutions (mutual organizations) at all levels concerning the international cooperation of Ukraine with other countries. This cooperation should refer to the use and protection of water of transboundary watercourses (river basin areas) and other fields of international cooperation, especially the cross-border cooperation.

The main areas are the integration of:

- bilateral mechanisms, especially the cross-border and multi-basin (as part of regional) cooperation on the use and protection of waters of transboundary watercourses (river basin areas);

- activities of executive bodies (committees, commissions, working and expert groups, etc.) established for ensuring the implementation of provisions and requirements of international conventions and other agreements in the field of use, protection and restoration of waters and other elements of environment, protection from the damage effects of water, cooperation in the emergency situations;

- mechanisms of environmental, social and economic, political and other sectors of cooperation, especially in the cross-border cooperation at the national, regional (within river basin area) and local (between local communities and local authorities) levels.

In order to implement these tasks Ukraine should and may carry out a number of organizational initiatives at the national and interstate levels, including:

- ensuring the participation of authorized government representatives on the bilateral cross-border cooperation, national focal points and other authorized representatives of Ukraine from the executive authorities created for the implementation of joint bilateral and multilateral agreements as part of National Water Commission of Ukraine as well as the basin councils of transboundary river basin areas;

- conclude the multilateral interstate agreements for Integrated on goals, fields and objectives regional cooperation on the territories of allocated river basin areas, thus complementing the existing mechanisms of cross-border cooperation within administrative and territorial units or cross-border areas;

- establish the mechanism of systematic coordination of actions and constant information interaction of working bodies created to carry out tasks on the use and protection of aquatic environment, other components of the environment, on protection from damage effects of water, on cooperation in emergency situations, under bilateral and multilateral international agreements, programs and projects in which Ukraine participates or those that relate its areas of interest.

Financing of reorganization and establishment of basin organizations initially should be done within the available financial resources allocated from the state budget, local budgets and other sources.

At later stages the basin management budget should be formed at the expense of:

- government expenses through financing the activities of state target programs of complex development of Ukraine's separate river basins and related activities within other national programs;
- funds from the fees for special water use and pollutants discharge into the water bodies of river basin;
- investors that are involved in specific investment projects and target contributions of water users and other legal entities, including the subjects of general water use;
- local budgets;
- international investments, credits, grants, programs and projects provided by international bodies and organizations, as well as compensations for damage caused to the Ukrainian part of transboundary watercourses from neighbouring countries;
- other sources that are not prohibited by law.

Reforming the financial mechanism and economic stimulation of Plan's activities should be phased, systematic and coordinated at all levels.

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17. Verkhovna Rada of Ukraine "On recommendation by the parliamentary hearings on the implementation of the state policy of Ukraine's integration into the EU" from 17.01.2002 № 2999-III.
18. Decree of the President of Ukraine "On some issues of the organization of ministries and other central authorities "from 24.12.2010 № 1199/2010.
19. Decree of the President of Ukraine "On Regulation of the Ministry of Ecology and Natural Resources of Ukraine "dated 13.04.2011 № 452/2011.

Annex 1**On amending the Water Code of Ukraine (concerning the implementation of integrated approach to the water resources management on the basin principle)**

Draft (unofficial text)
September 10, 2013

THE LAW OF UKRAINE***On amending the Water Code of Ukraine (concerning the implementation of integrated approach to the water resources management on the basin principle)***

The Parliament of Ukraine **decrees**:

I. Amend the Water Code of Ukraine (Bulletin of The Parliament of Ukraine, 1995., # 24, p. 189) as follows:

1. In Article 1:

the term "water balance" read as follows:

water balance – the ratio between inflow and discharge of water on any part of the earth's surface in a definite time considering the human economic activities;

exclude the term “catchment area”;

supplement with the terms of the following content taking into account the alphabetical order:

“**basin management principle** is the complex integrated water resources management within the territory of the river basin”;

“**basin council** is an advisory body that is established to resolve issues of water usage, protection and restoration of water resources within the territory of the river basin”;

“**water management region** is a defined part of the river basin, which water balances, limits on intake and withdrawal of water resources from the water body and other parameters of water body usage are developed and fixed for”;

“**water economy system** is a complex of interlinked water bodies and waterworks designed for water resources management”;

“**redistribution of water resources** is a supply (pumping) of water from one river basin to another or within the same river basin meeting the requirements of water resources of water users in the water-scarcity regions”;

“**river basin management plan** is a strategic document that estimates the ecological condition of water bodies in the river basin and determines the environmental, economic and social measures aimed at implementing the national policy in the field of the use, protection and restoration of water resources”;

“**river basin region** is a main administrative unit in the use, protection and restoration of water resources. It consists of a river basin (adjacent river basins) and groundwater aquifers and estuaries which are linked to it within the territory of Ukraine”;

“**river basin** is a part of the earth’s surface, runoff water from which flows into the sea or lake through sequentially linked water bodies and watercourses”;

“**sanitary flow** is a minimum calculated water discharge that is discharged from the reservoir to the river in low-flow period according to the established operating modes or the operating regulations of these reservoirs (ponds) in order to increase the water level of river downstream and prevent deterioration of water quality of the sources of centralized domestic water supply”;

“**subbasin** is a part of the river basin, water runoff from which flows into the main river of basin or water management area downstream through linked water bodies and watercourses”.

2. Paragraph 7 of Article 8 after the words “in the field of sanitary and epidemiological public welfare” supplement with the words “central executive authority that implements the national policy in the field of water management”.

3. Paragraph 14 of Article 8¹ the words “public health authorities and environmental protection authorities” replace with the words “central executive authority that implements the national policy in the field of sanitary and epidemiological public welfare, central executive authority that implements the national policy in the field of water management and regional, Kyiv and Sevastopol city state administrations respectively”.

4. Supplement Article 11 with the new Paragraph 8 of this content:

“8) participate in the preparation of the river basin management plans and promote their implementation”.

Regarding this the paragraph 8 shall be considered as the paragraph 9 respectively.

5. The word “etc.” in the second part of Article 12 supplement with the words “as well as the river basin management plans”.

6. First part of Article 13 supplement with the words “as well as the river basin management plans”.

7. Supplement with the Articles 13¹, 13², 13³ and 13⁴ of this content:

“Article 13¹. Hydrographical and water management zoning of the territory of Ukraine

1. Hydrographical zoning of the territory of Ukraine is the division of the territory of Ukraine on hydrographical units that is carried out for development of the river basin management plans.

2. Hydrographical units is the regions of main river basins and subbasins in their boundaries.

Regions of main river basins are the principle administrative unit in the field of use and protection of water bodies that are consisted of the basins of corresponding rivers and groundwater aquifers that are linked to them.

There are 9 regions of main river basins established in Ukraine:

- Dnipro basin region;
- Dniester basin region;
- Danube basin region;
- Southern Bug basin region;
- Don basin region;
- Vistula basin region;
- Crimea rivers basin region;
- Black Sea area rivers basin region;
- Azov Sea area rivers basin region.

Subbasins may be distinguished within the areas of main river basins.

3. Water management zoning of the territory of Ukraine is the division of hydrographical units for water management areas which is carried out for the development of water balances.

4. Quantity, names and boundaries of hydrographical units and water management areas are approved by the central executive authority that forms and implements the national policy in the field of environmental protection.

The boundaries of hydrographical units and water management areas are determined according to the basin management principle, administrative-territorial system, physiographical conditions and anthropogenic activities.

Article 13². River basins management plans

1. River basins management plans are developed in order to achieve the water quality standards, safe water use, sustainable ecological state in the river basin, water and biodiversity conservation of the aquatic ecosystems.

2. River basins management plans establish:

- 1) water quality targets in water bodies for the period of these plans;
- 2) list of the organizational environmental and water management measures at the water bodies and river basins;
- 3) approximate amount of the water withdrawal and use, the discharge of return waters and pollutants within the boundaries of river basins, subbasins, water management areas depending on water content;
- 4) list of measures for reducing the negative effects of seasonal and rainfall floods as well as other harmful effects of water;

5) approximate amount of financial resources for the implementation of measures that are established by the river basin management plans.

3. River basins management plans are approved by the central executive authority that forms and implements the national policy in the field of environmental protection after the submission of the central executive authority that implements the national policy in the field of water management.

4. Development procedure and form of the river basin management plan are approved by the central executive authority that forms and implements the national policy in the field of environmental protection

5. River basin management plans are revised and, if it is necessary, updated every six years after their approval.

Article 13³. Basin councils

1. Basin councils are created in order to ensure the integrated management in the field of rational use, protection and restoration of water resources. They develop proposals and provide harmonization of interests of enterprises, institutions and organizations in the field of use, protection and restoration of water resources within the basin.

2. Decisions of the basin councils are considered during the development of basin management plan and implementation of measures for the rational use, protection and restoration of water resources.

3. The structure of the basin councils includes representatives of the central and local executive authorities, local government, community and other interested organizations, institutions and enterprises.

4. The procedure of the establishment and functioning of the basin councils is approved by the central executive authority that forms and implements the national policy in the field of environmental protection.

Article 13⁴. Water balances

1. Water balances are designed to estimate the availability and possibility of the use of water resources within the water management areas

2. Water balances are approved by the central executive authority that implements the national policy in the field of water management.

3. The procedure of the water balances designing is approved by the central executive authority that forms and implements the national policy in the field of environmental protection.

9. Article 15 supplement with new paragraphs 2, 4, 6 and 7 of this content:

“2) approval of quantity, names and boundaries of the hydrographical units and water management areas;

4) approval of procedure of the water balances designing;

- 6) approval of procedure of establishment and functioning of the basin councils;
 - 7) approval of development procedure and form of the river basin management plan;”.
 9. The words “forming the long-range forecasts” in paragraph 12⁸ of Article 16 replace with the word “approval”.
 10. Supplement first paragraph of Article 21 with the new sentence of this content:
“The state monitoring of waters consists of hydrochemical, hydromorphological and hydrobiological monitoring.”
 11. Supplement third paragraph of Article 48 with the new third paragraph of this content:
"water removal from the water bodies for maintaining the sanitary discharge in river and preventing the occurrence of hydrodynamic accidents;".
- Regarding this consider the paragraphs 3rd – 11th as the paragraphs 4th – 12th respectively.

II. Final clauses

1. This Law shall come into effect from the date following the day of its official publication.
2. Within six months from the day when this Law comes into effect Cabinet of Ministers of Ukraine shall:

harmonize its normative legal acts in accordance with this Law;

provide the revision and cancellation of normative legal acts of the central executive authorities that are contrary to this Law;

provide the adoption of normative legal acts that are stipulated by this Law.

**Chairman of the Verkhovna Rada of
Ukraine**

The Basic Plan on adaptation of environmental legislation of Ukraine to the European Union legal framework (order of Ministry of Environmental Protection of Ukraine, 2012)

EU legal act	Measures	Responsible authorities	Responsible Departments	Dead-lines
<p>Directive 2000/60/EC – WFD, according to decision № 2455/2001/EU</p>	<p>To amend the Water Code of Ukraine (aligning terminology, appointment of the relevant competent authority(ies) on river basin management). To amend the Land Code and Water Code of Ukraine (on upgrading of the mechanism for dedication and putting in place the coastal and water protection zones). Put the sections «Surface water» and «Groundwater» of the State Water Cadaster in compliance to the requirements of the relevant sections of the Directive Approve the mandate of the Basin departments of water management with responsibilities defined by the Directive. To ensure proper implementation of river basin management principle: by recognition in law the zoning of the territory of Ukraine based on basin principle; by identifying the units of hydrographic regionalization of the territory of the country; Ensure the development of the working structure of water resources management according to basin approach; Develop and legalize the criteria for the river basin status assessment; Develop and approve the provision on River Basin Management Plan and methodology of its development; To develop River Basin Management Plans (in compliance with requirements of Article 14 of WFD on public participation and information, consultations); Develop the methodology of the Programme of measures development according to Article 11 of the Directive; Deep special analysis of the possibilities for usage existed water classifications according to the categories for the purposes of WFD is needed. Provisions of WFD Annexes II-V, VIII and X are needed the additional research by Ukrainian water experts. Additional experts research/analysis of the requirements of other EU Directives, mentioned in Art. 10.2 and Annexes VI and IX of WFD is needed. The amendments to the existed regulations for the transposition provisions of WFD and in relation with new approved law have to be done.</p>	<p>MENR, State Agency of Water Resources, Ministry of health Protection, State Services of emergency situations, Ministry of Justice, State Agency of land resources</p>	<p>Department of nature resources protection of MENR</p>	<p>December 2017</p>
<p>Directive 91/271/EEC concerning urban wastewater treatment with amendments provided by Directive 98/15/EC and Regulation (EU)</p>	<p>To revise current legislation and approve new regulation on responsibilities of authorities to ensure access to sewer in cities and townships, development list of vulnerable zones according to the criteria lay down in Annex II of WFD (possible additional categorization), introduction of the principle of obvious wastewater treatment before discharging into vulnerable zones; approval prohibition of sediment discharges into surface water from ships, pipelines or in any other ways. Develop draft regulation on specifics of Directive 91/271/EEC requirements application for the mountain settlements. Approve the Technical and Investments Programmes for</p>	<p>Minregion MENR State Agency of water resources Ministry of justice</p>		<p>December 2017</p>

EU legal act	Measures	Responsible authorities	Responsible Departments	Deadlines
1882/2003 (UWWT Directive)	<p>implementation of the Directive provisions and approval the responsibility of water utilities to report regularly and publish the reports about wastewater discharging and sediments displacement in the areas which are under their responsibilities.</p> <p>Unify methodology for determining the load on wastewater treatment facilities and their technical characteristics used in Ukraine and EU;</p> <p>Bring the relevant provisions of the State water monitoring System and related components of the State Environmental Monitoring system with the requirements of Part D of Annex I. The provisions of Annex I (Tables 1 and 2) require further investigation by specialists.</p>			
Directive 98/83/EU on the quality of water intended for human consumption with amendments and additions approved by Regulations EU 1882/2003 (Drinking Water Directive)	<p>Clarify provisions of the Order of the Ministry of Health (MoH) of Ukraine "On approval of the State sanitary rules and regulations" Hygienic requirements for drinking water intended for human consumption" (DSanPiN 2.2.4-171-10) from 12 May2010 № 400 related to "points of accordance" (Art. 6 Directive).</p> <p>Develop methods of drinking water quality monitoring in residential areas.</p> <p>Check the compliance of procedures and standards for determination of the safety and quality of drinking water, provided in a tentative list of Annex 5 to State Standards 2.2.4-171-10, with requirements of Annex III and other relevant provisions of Directive</p>	MoH MENR Ministry of regional development, building and communal services		December 2017
Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources, with amendments and additions by Regulation EU 1882/2003 (Nitrate Directive)	<p>Align with the terminology and legalize it.</p> <p>Adopt a regulatory act to determine zones vulnerable to (accumulation) nitrates (including the mechanisms of cooperation in transboundary context).</p> <p>To adopt action plans for zones vulnerable to (accumulation) nitrate</p> <p>Adopt codes of best agricultural practices and programs to facilitate the implementation of these codes.</p> <p>Take into account the requirements of Annex III to the Directive during the Programme of Measures drafting and adoption according to paragraph. 4. 5 of the Directive.</p> <p>To amend the related regulations taking into account the aim of Directivetransposition and the adoption to the new legislation.</p>			December 2017
Council Directive 92/43/EEC of 21 May 1992 on the	To amend the Law of Ukraine «on environmental network of Ukraine» of 24 June 2004 № 1864-IV; the Law of Ukraine «on Nature Reserve Fund of Ukraine» from 16 June 1992 № 2456-XII in relation with networking establishment according to Directive requirements,	MENR, Ministry of agricultural politics, State Agency	Department of natural resources protection Department	December 2017

EU legal act	Measures	Responsible authorities	Responsible Departments	Dead-lines
conservation of natural habitats and of wild fauna and flora, with amendments and additions made by Directives 97/62/EU, 2006/105/EU and Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003	especially in terms of the criteria of establishment of ecological networks based on habitat selection as the basis of selection of the constituent elements of the ecological network and / or adopt new legislation to protect habitats. To detail and agree with the provisions of the Directive and its Annexes the provisions for the protection of natural habitats, mentioned in the Laws of Ukraine "On Wildlife" December 13, 2001 № 2894-14; "On Flora" of 9 April 1999 № 591-XIV; "On fisheries, commercial fisheries and conservation of aquatic biological resources" of 08 July 2011 № 3677-VI; "On the Red Book of Ukraine" of 07 February 2002 № 3055-14 and "On Hunting Economy and Hunting" of 02 February 2000 № 1478-14-III .	of forest resources, State Agency of fish resources, National Academia of Sciences of Ukraine, Ukrainian Academia of Agrarian Sciences	of Reservation	
Directive 2007/60/EC on the assessment and management of flood risks	Align with the terminology and legalize it. Update and amend the current legislation to ensure effective flood forecasting and flood and emergency response	MENR, State Agency of Water Resources, State Service of emergency situation		December 2017.